

PACK 3

THE TERMINATOR™

BUILD THE T-800

**1:2
SCALE**

THE MOST
LEGENDARY
CYBORG IN
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THE TERMINATOR™

BUILD THE T-800

PACK 3

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IDENTIFYING YOUR COMPONENTS: Each of your Terminator packs is divided into stages. Each stage contains a number of components, and can be identified by referring to the images in your assembly guide or the number located on the sticker on the back of each stage. Each number begins with '77' and is followed by a further three digits. The last three digits indicate the number of each stage. For example, 77 001 indicates stage 01, 77 002 indicates stage 02, etc.

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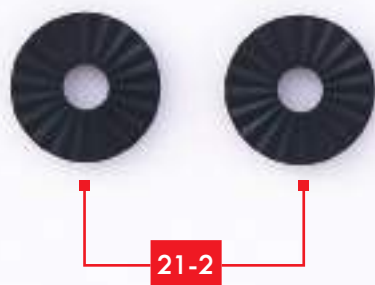
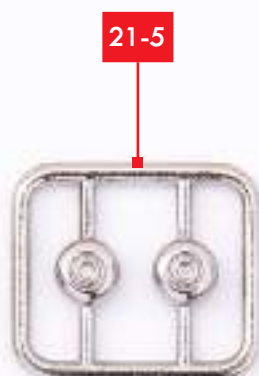
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Not suitable for children under the age of 14. This product is not a toy and is not designed for use in play. Keep the parts out of the reach of small children. Some parts may have sharp edges. Please handle them with care.

STAGE 21: ASSEMBLE THE RIGHT SHOULDER JOINT AND CONNECT UP THE SKULL

In this stage, you'll begin building the right shoulder, tidying up the jaw joint, and connecting the head to the top of the skull.



LIST OF PIECES

- | | |
|------|------------------------------------|
| 21-1 | Right shoulder joint |
| 21-2 | Right shoulder joint fitting (x 2) |
| 21-3 | Metal shaft (larger, x 2) |
| 21-4 | Metal shaft (smaller x 2) |
| 21-5 | Lower jaw joint cover (x2) |
| 21-6 | 3 x PM 2 x 4mm screws (1 spare) |

YOU WILL ALSO NEED

A cross-head screwdriver.

Tweezers.

Craft knife and cutting mat.

Superglue gel.

Cocktail sticks or similar.

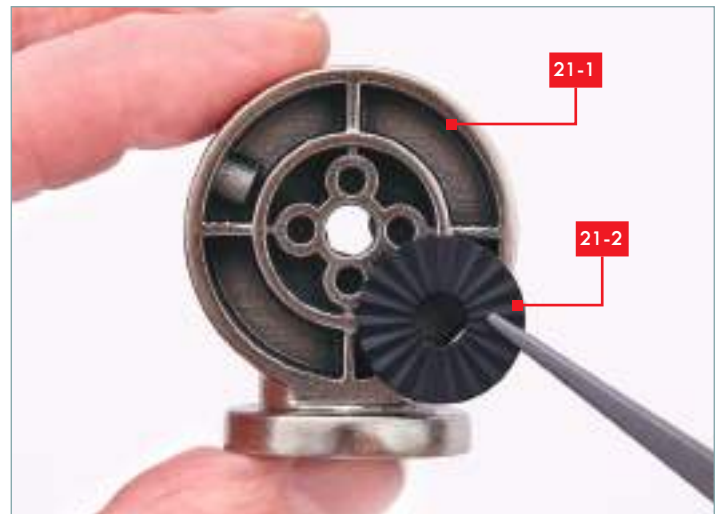
The skull assembly from stage 17.

The head assembly from stage 20.



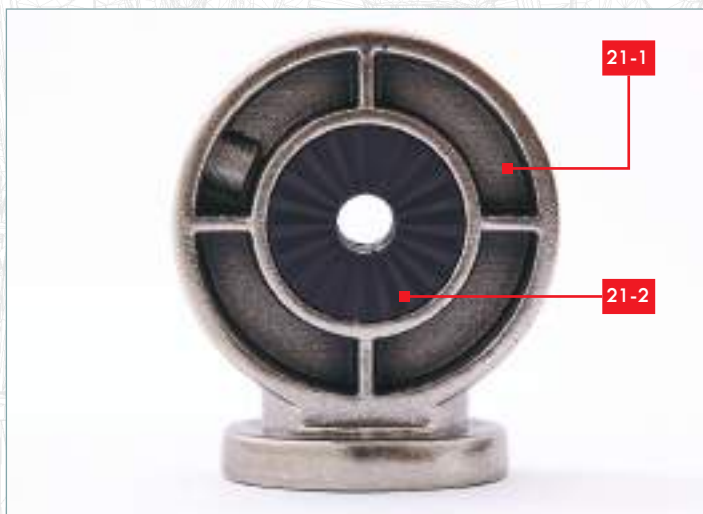
STEP 1

After test-fitting the parts, apply a tiny drop of superglue to the sides of the four studs (circled) on the back of one of the shoulder joint fittings **21-2**.



STEP 2

Fit the shoulder joint fitting **21-2** into the center of the shoulder joint **21-1**, ensuring that the four studs on part **21-2** fit into the four sockets in part **21-1**.



STEP 3

Repeat steps 1 and 2 with the second shoulder joint fitting **21-2** to fit it into the recess on the other side of the shoulder joint **21-1**.



STEP 4

Cut the two lower jaw joint covers **21-5** from the plastic frame. Take care when using a craft knife; it is advisable to work on a cutting mat or other suitable surface.



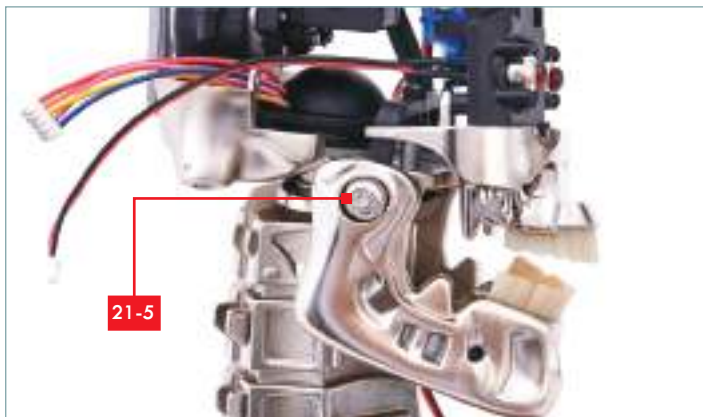
STEP 5

Apply a tiny drop of superglue to the studs on the back of the jaw joint cover **21-5**. It is important to keep the recess in part **21-5** free of glue.



STEP 6

Take the head assembly from stage 20. After checking the screw is fully tightened, fit the jaw joint cover **21-5** over the screw and washer in the recess at the top of the lower jaw.



STEP 7

Repeat steps 5 and 6 to fit the second jaw joint cover **21-5** on the other side of the head. Grip the two covers in place while the glue dries.



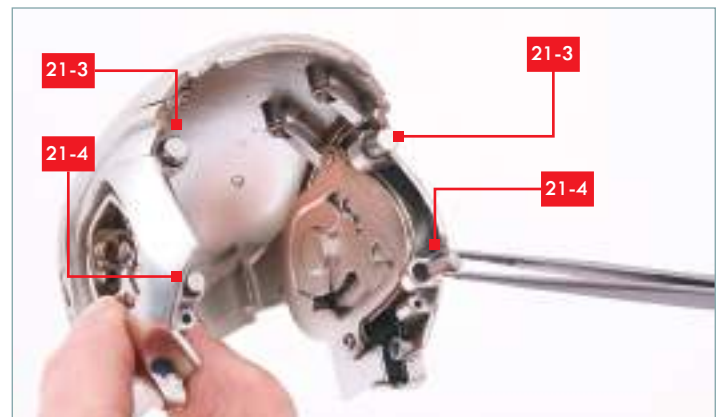
STEP 8

Check the fit of the larger metal shafts **21-3** in the holes near the top of the skull. If necessary, use a suitable fine file to make the holes a little larger and remove any excess materials left in the hole in the finishing process.



STEP 9

Remove the shafts and apply a little adhesive to the sides of one hole. Fit the first metal shaft **21-3** into the hole.



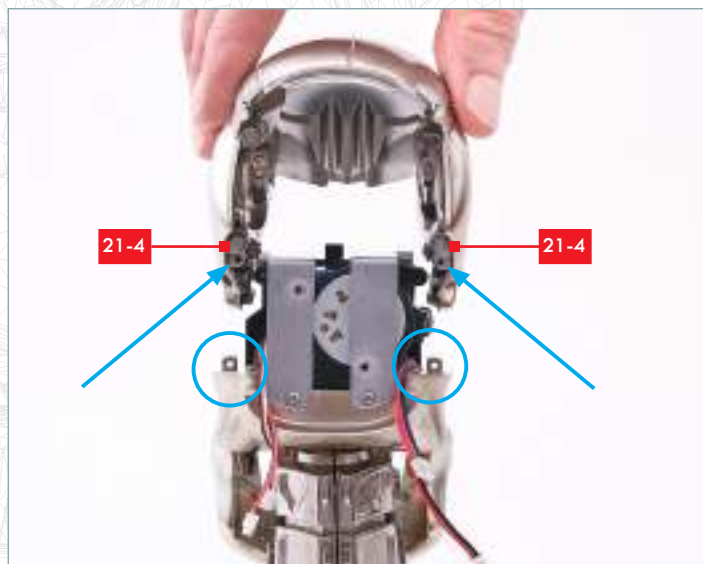
STEP 10

Repeat step 9 to fit the second shaft **21-3** into the hole on the other side of the skull. Check the fit of the smaller metal shafts **21-4** in the holes near the lower edge of the skull.



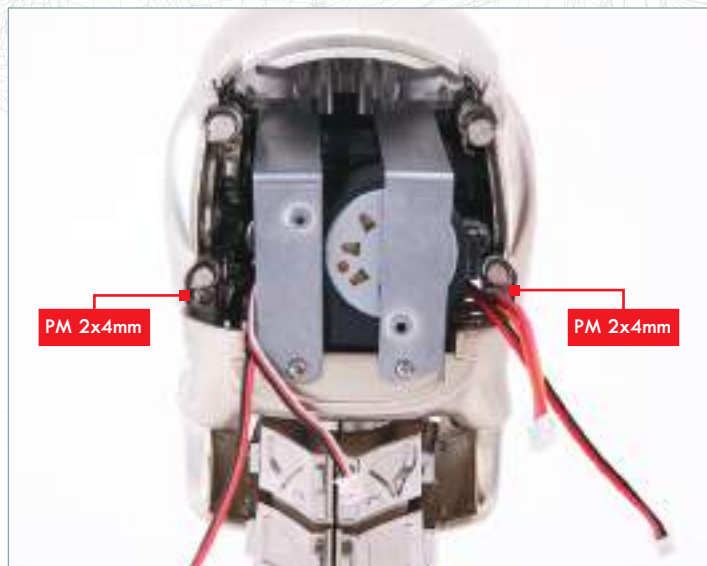
STEP 11

Apply a little superglue to the inside of the holes at the lower edge of the skull and glue the two smaller shafts **21-4** in place.



STEP 12

Take the skull from step 11 and fit it over the head assembly from stage 20 as shown. Note the fixing points on the jaws (circled). The fixing points on the skull are just beneath the two smaller metal shafts **21-4**



STEP 13

Use two PM 2 x 4mm screws **21-6** to fix the skull to the lower jaw. The screw on the left side of the head is circled.



STAGE COMPLETE

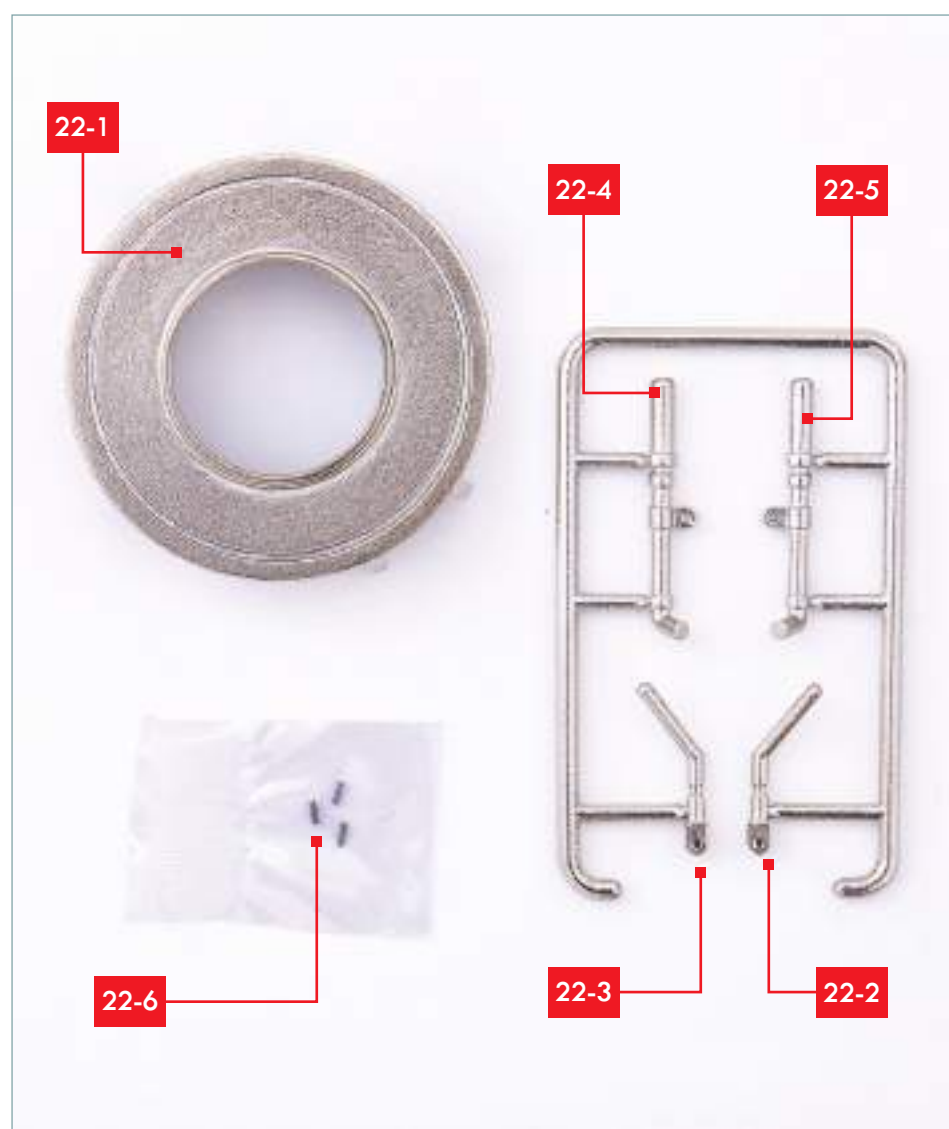
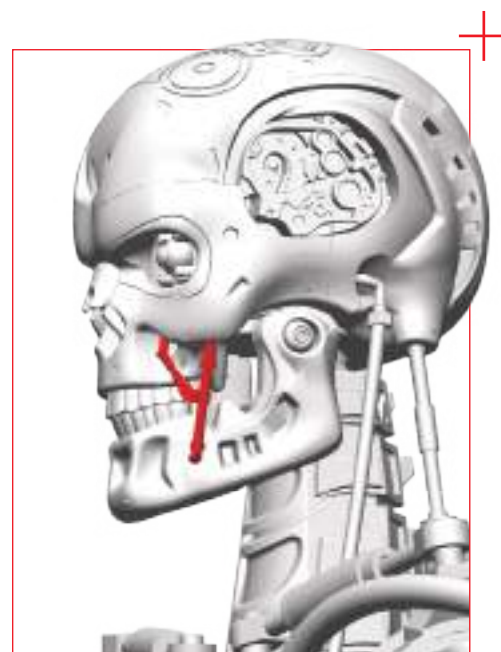
Details have been added to the head and the skull has been fitted to the top of the head. You have also made a start on the right shoulder joint.

! NOTE

Make sure the cables are all accessible at the rear of the head.

STAGE 22: CONNECT THE JAW, ASSEMBLE THE HEAD

In this stage, you will collect another piece of the right shoulder, connect the jaw together, and place the eye sockets onto the skull.

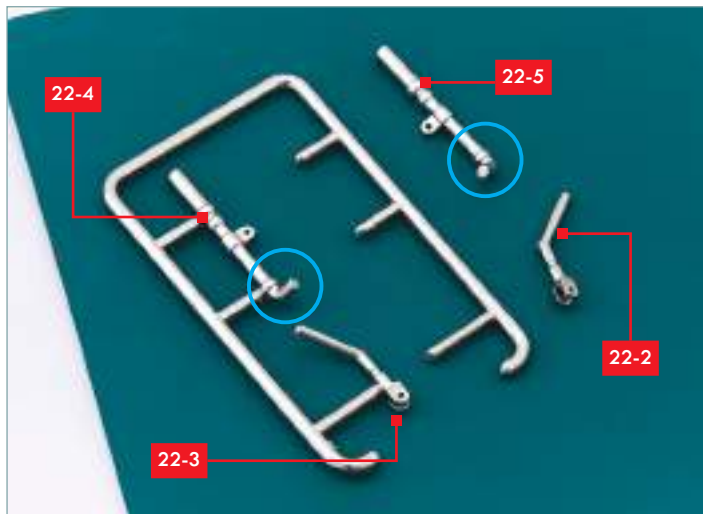


LIST OF PIECES

- | | |
|------|-----------------------|
| 22-1 | Right shoulder |
| 22-2 | Right jaw connector A |
| 22-3 | Left jaw connector A |
| 22-4 | Left jaw connector B |
| 22-5 | Right jaw connector B |
| 22-6 | Jaw pin x 3 (1 spare) |

YOU WILL ALSO NEED

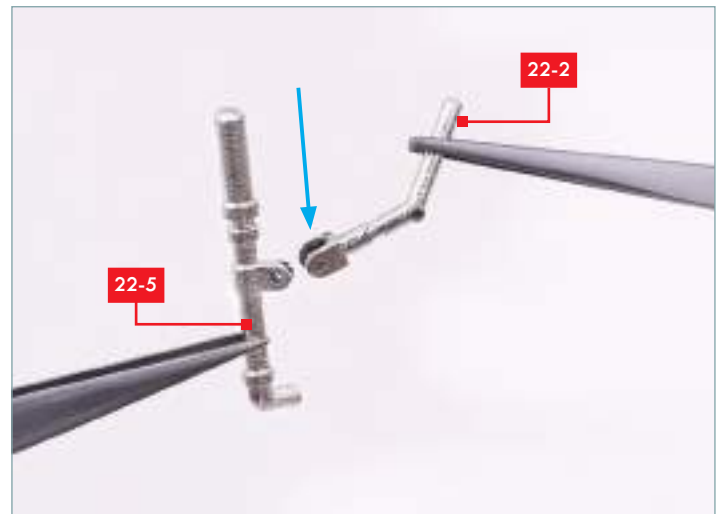
Cutting mat or suitable surface.
Tweezers.
A fine dressmaking pin or needle.
Superglue.
Head assembly from stage 21.
Faceplate assembly from stage 10.



STEP 1

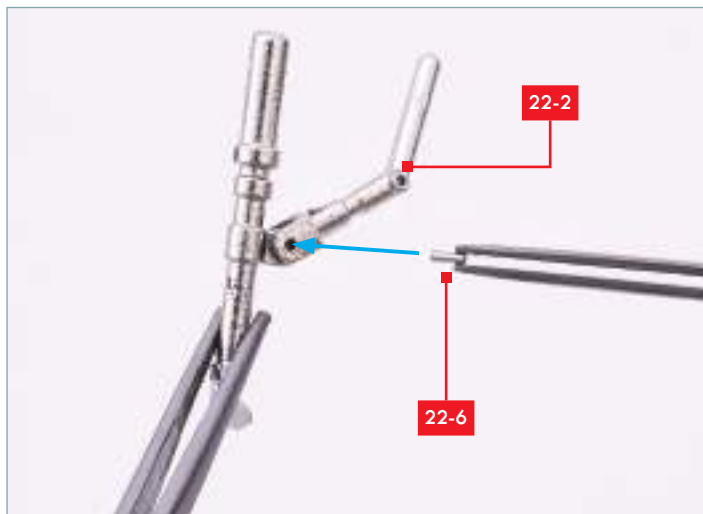
Place the plastic frame on a suitable cutting surface in the orientation shown. NOTE: the frame has been positioned so that the pegs at the bottom of parts **22-4** and **22-5** turn upwards (circled above).

Cut the right jaw connectors, **22-2** and **22-5** from the frame. Leave the other connectors in place on the frame so that you do not get them mixed up.



STEP 2

Check the fit of the bracket on the end of right jaw connector A **22-2** over the tab on the side of right jaw connector B **22-5**. If it does not fit, use a fine file to remove excess finishing material between the brackets on part **22-2** (indicated by the arrow). It is important not to remove too much material, as the joint should be a snug fit.

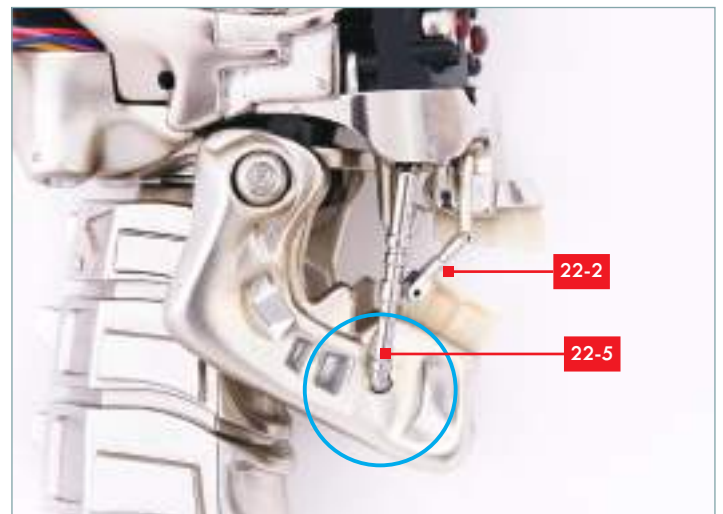


STEP 3

Grip one of the jaw pins **22-6** in a pair of tweezers or forceps. Insert the end of the pin into the hole in the joint. Apply gentle pressure to the pin to ensure that it sits right in the joint, with the ends flush with the outside of the brackets on part **22-2**.

EXPERT TIP!

Insert a fine needle or dressmaker's pin into the holes in the joint as indicated by the arrow to ensure all three holes are aligned..



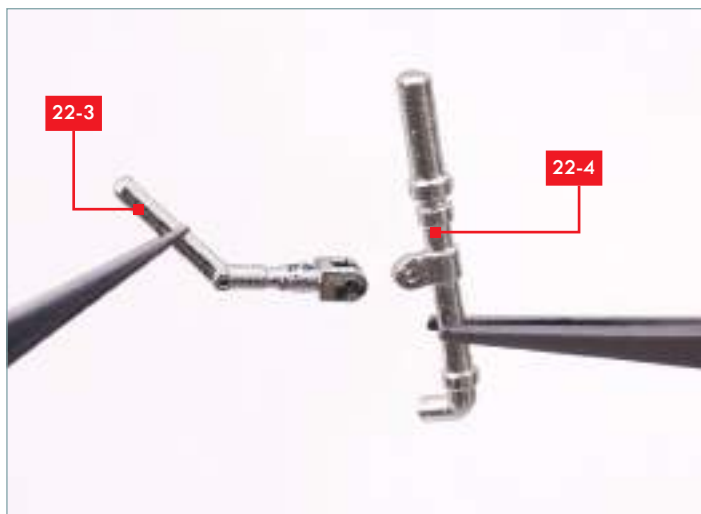
STEP 4

Check the fit of the right jaw connectors **22-5** and **22-2** in the side of the head assembly from stage 21: the peg at the lower end of part **22-5** fits into a hole in the lower jaw (circled).



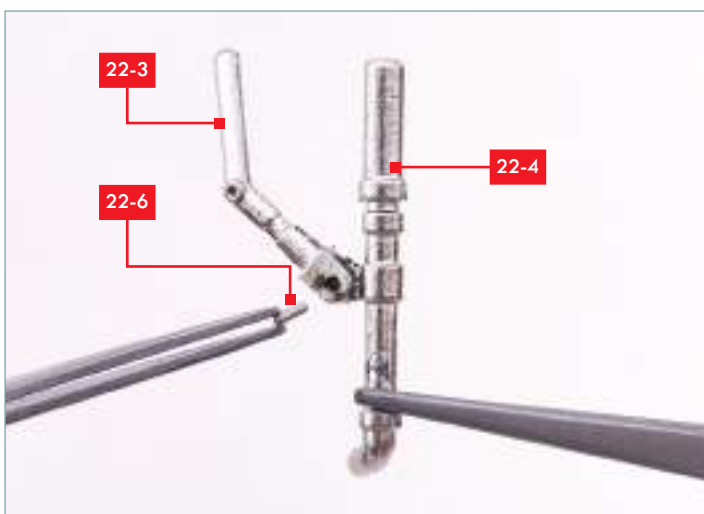
STEP 5

As the jaw closes, the upper ends of the jaw connectors **22-5** and **22-2** fit into holes beneath the eye sockets. When you are happy with the fit, remove the jaw connectors from the head. Apply a little superglue to the peg on the end of part **22-5** (circled) and fix it back in place.



STEP 6

Remove the left jaw connectors **22-3** and **22-4** from the frame. Check the fit of the bracket and tab and align the holes, as described in step 2.



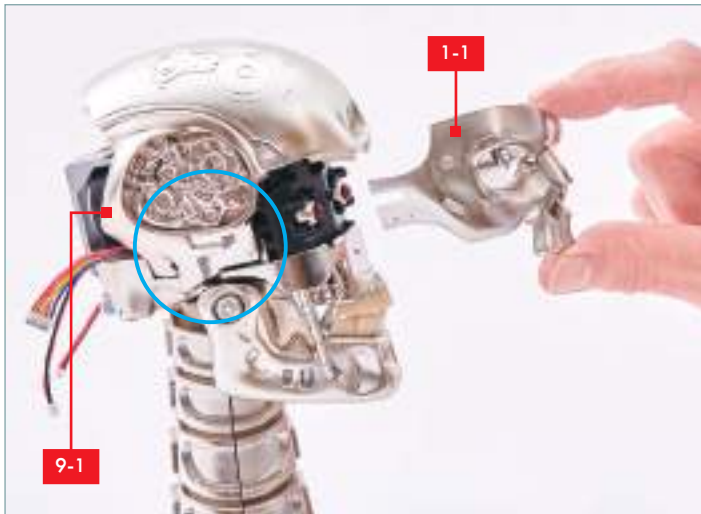
STEP 7

Fit the second jaw pin **22-6** to hold parts **22-3** and **22-4** in place, as described in step 3.



STEP 8

After test-fitting, apply a little superglue to the peg at the base of part **22-4** and fit it to the left hand side of the head, as described in steps 4 and 5.



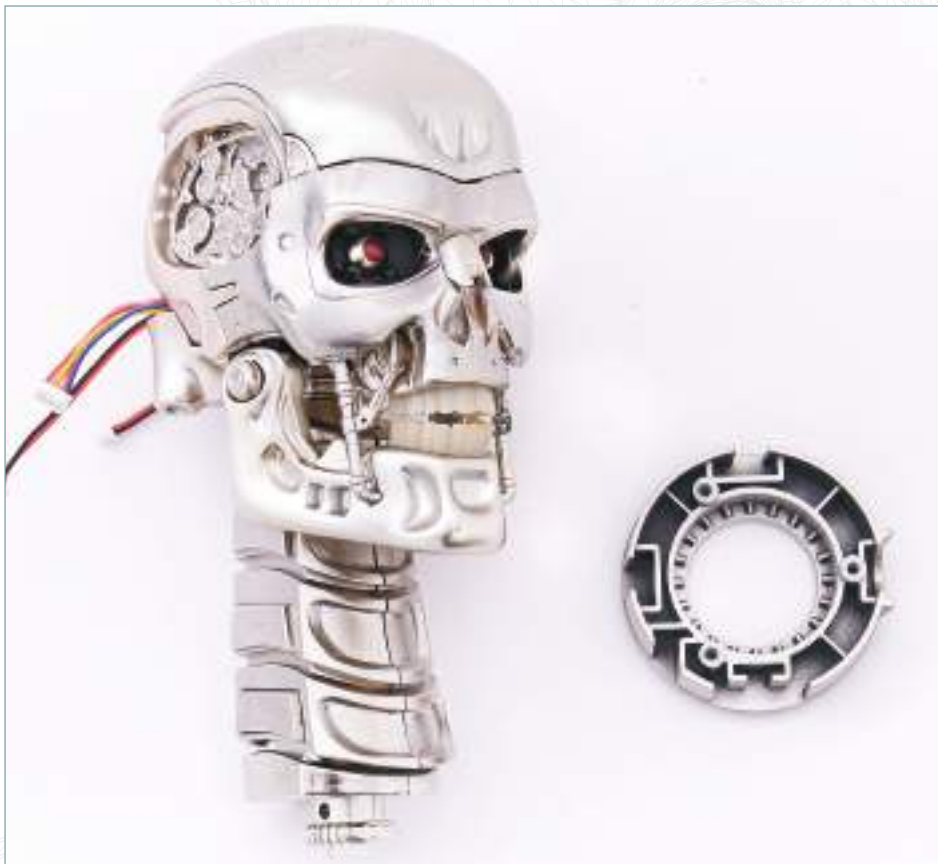
STEP 9

Take the faceplate/eye socket assembly from stage 10. Fit the side pieces of part **1-1** in place so that the flat prongs fit on either side of the raised area on the side of the head (part **9-1**, circled). At the same time, matching prongs on the other side fit around the raised area on the other side of the head.



STEP 10

Make sure that the faceplate fits snugly in place.



STAGE COMPLETE

Jaw connectors have been fitted between the lower and upper jaw, and the faceplate has been fitted to the front of the head. The shoulder parts from this stage and stage 21 will be fitted at a later stage.

STAGE 23: ASSEMBLE THE RIGHT SHOULDER JOINT

In this stage, you'll combine shoulder elements from stage 21 and stage 22 with new components to form the right shoulder joint.



LIST OF PIECES

- | | |
|------|--------------------------------|
| 23-1 | Right shoulder joint |
| 23-2 | Right shoulder joint (inner) |
| 23-3 | 3 x PM 3 x 6mm screw (1 spare) |

YOU WILL ALSO NEED

A cross-head screwdriver.

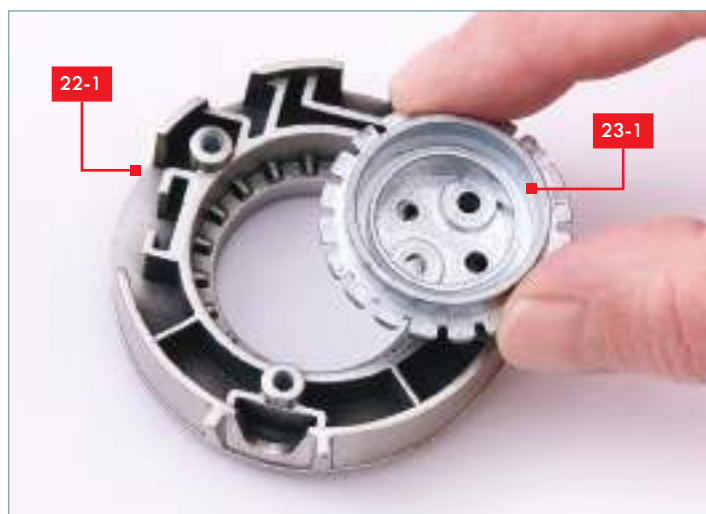
Shoulder joint assembly from stage 21.

Shoulder part from stage 22.



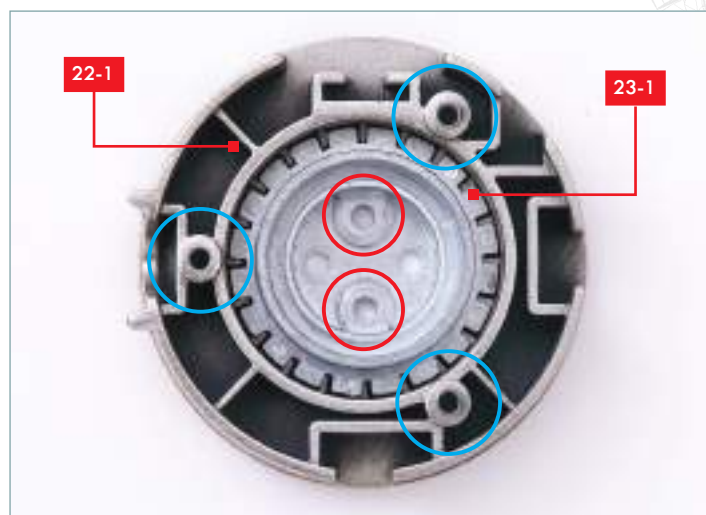
STEP 1

Take the right shoulder assembly from stage 21 (part **21-1** with black fittings inserted) and the shoulder part from stage 22 (**22-1**).



STEP 2

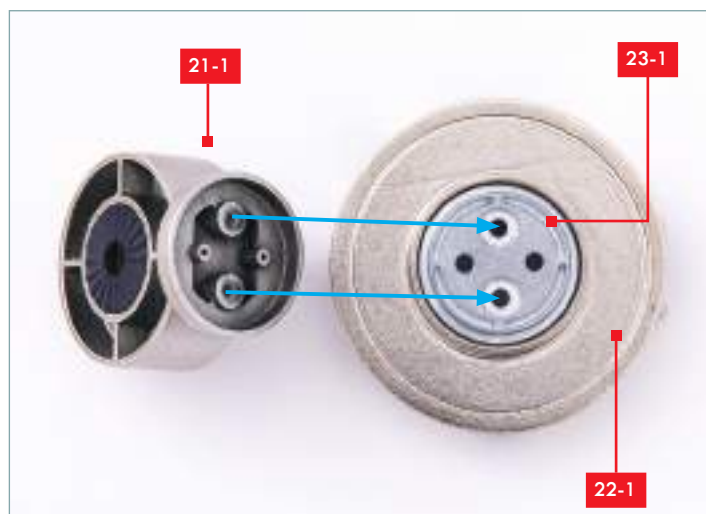
Fit the inner part of the right shoulder joint **23-1** into the shoulder part **22-1**. Ensure the teeth around the outer edge of part **23-1** fit into the recesses in part **22-1**.



STEP 3

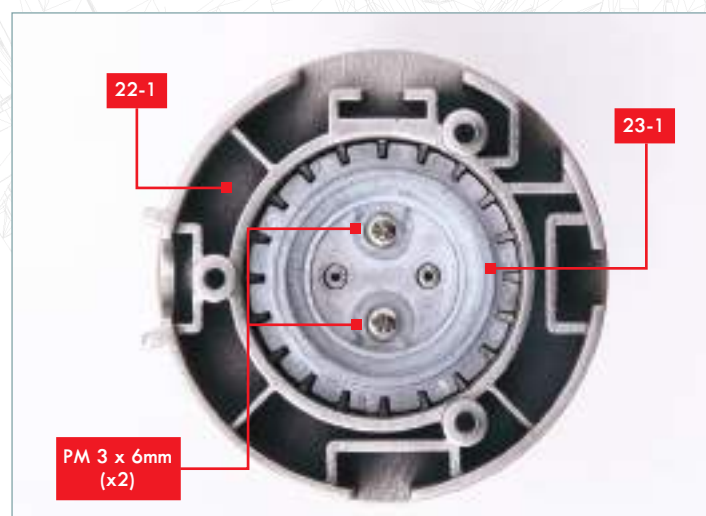
Note the orientation of the parts: ensure that the three screw holes in part **22-1** (circled in blue) are arranged as shown, with the raised screw sockets in part **23-1** (circled in red) vertically aligned.

These parts may slip out of place from time to time, so check back to this diagram to realign them if necessary. Mark with a pencil to aid the correct orientation.



STEP 4

Turn parts **22-1/23-1** over and take the shoulder assembly from stage 21. Align the holes on the base of part **21-1** with the holes in part **23-1**, as indicated by the arrows.



STEP 5

From behind, fix the shoulder part **22-1** in place from the inside of part **23-1** using two **PM 3 x 6mm** screws (parts **23-3**).



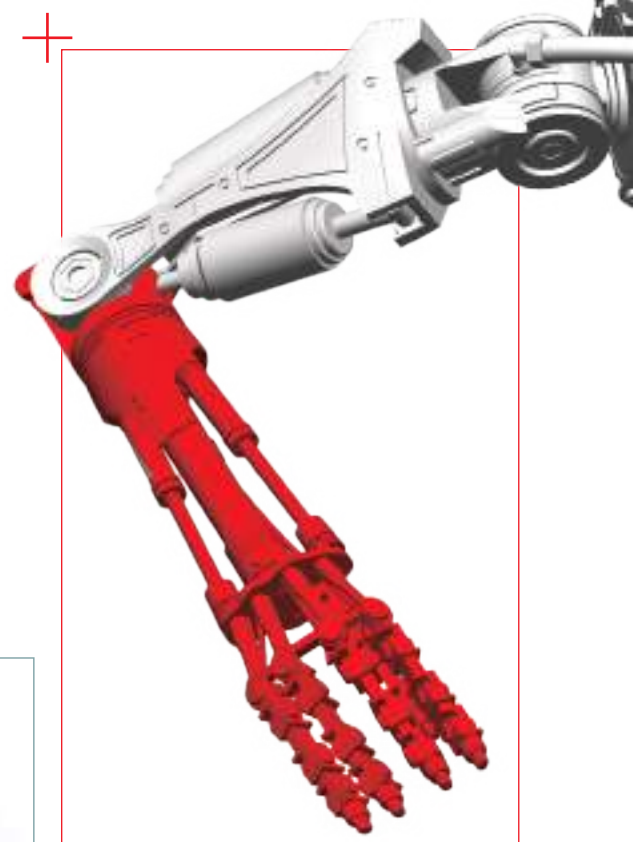
STAGE COMPLETE!

The shoulder joint parts have been assembled. At this stage, the assembly is not firmly fixed together, but the shoulder part **21-1** will be secured at a later stage. Part **23-2** will be fitted in a future stage.



STAGE 24: CONNECT THE RIGHT HAND TO THE RIGHT ARM

Combine the first complete limb, and collect the right shoulder plate.



LIST OF PIECES

- | | |
|------|----------------------------------|
| 24-1 | Right shoulder plate |
| 24-2 | Right hand ball joint A |
| 24-3 | Right hand ball joint B |
| 24-4 | Right hand muscle connector (x4) |
| 24-5 | 2 x KB 2 x 6mm screws (1 spare) |
| 24-6 | 2 x PB 2 x 6mm screws (1 spare) |

YOU WILL ALSO NEED

A cross-head screwdriver

Cutting mat or suitable surface and craft knife.

Superglue.

Tweezers.

Hand assembly from stage 15.

Lower arm assembly from stage 16.



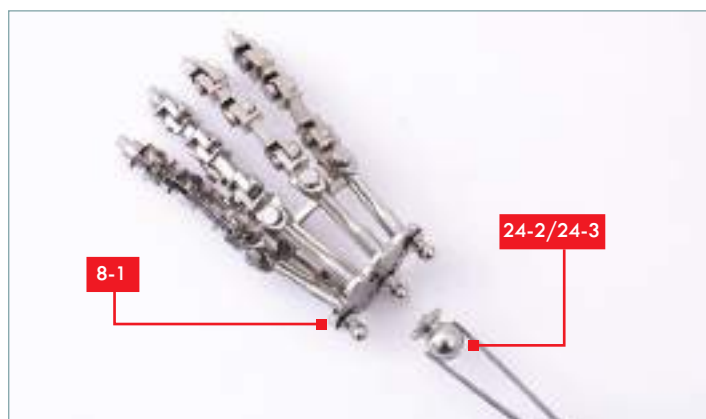
STEP 1

Take the two halves of the ball joint **24-2** and **24-3**. Check how the parts fit together.



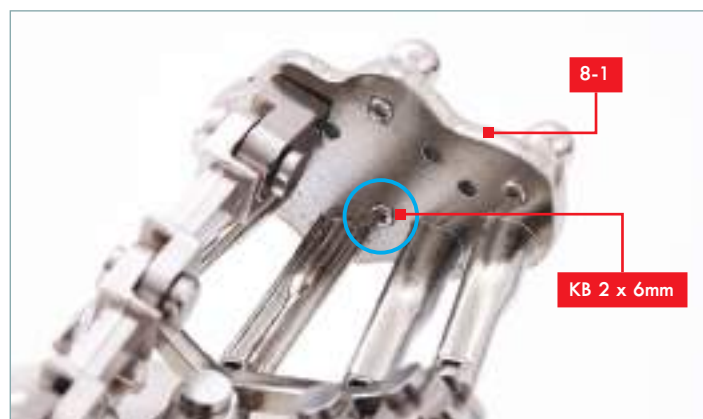
STEP 2

Use a **PB 2 x 6mm** screw to fix the parts together. A PB screw has a pan head whereas a KB screw, used in step 4, appears smaller and has a countersunk head.



STEP 3

Take the hand assembly from stage 15. Identify the fixing point for the large ball joint **24-2/24-3** on the base of the hand **8-1**. Fit the peg on the ball joint into the fixing point.



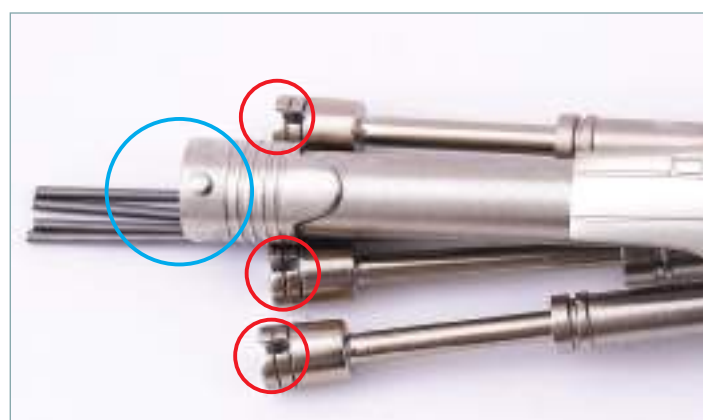
STEP 4

Screw the ball joint in place from the inside of the hand assembly, using a **KB 2 x 6mm** countersunk screw.



STEP 5

This shows the ball joint **24-2/24-3** fixed in place.



STEP 6

Take the upper arm assembly from stage 16. Identify the large socket (circled in blue) and three smaller sockets (circled in red) which will fit onto the balls on the base of the hand assembly.



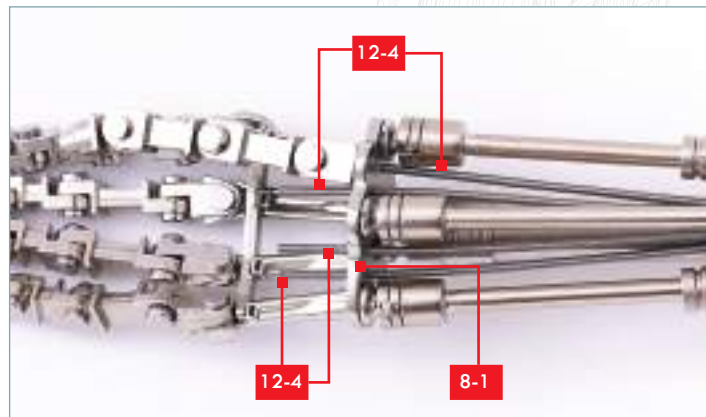
STEP 7

Fit the large socket on the lower arm **12-2** over the ball joint on the base of the hand (**24-2/24-3**). This is a push-pit connection that needs firm force to join the parts together. Take care and make sure the parts are fully supported whilst this is done. For additional strength on the ball joint, apply a small quantity of superglue before you screw it home in step 4.



STEP 8

With the larger ball and socket joint connected, turn the assembly over and adjust the length of the three smaller socket arms so that you can fit them over the smaller balls on the base of the hand. These are push fit connections.



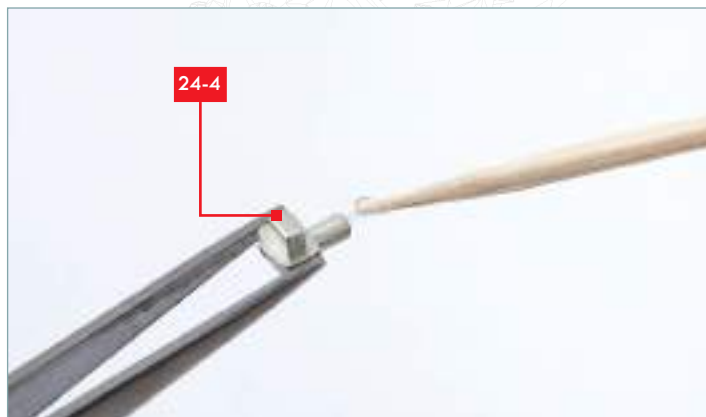
STEP 9

With the ball and socket joints assembled, thread the muscle springs **12-4** through the four remaining holes in the base of the hand **8-1**. Take care to keep the muscle springs in line so that they do not cross over each other.



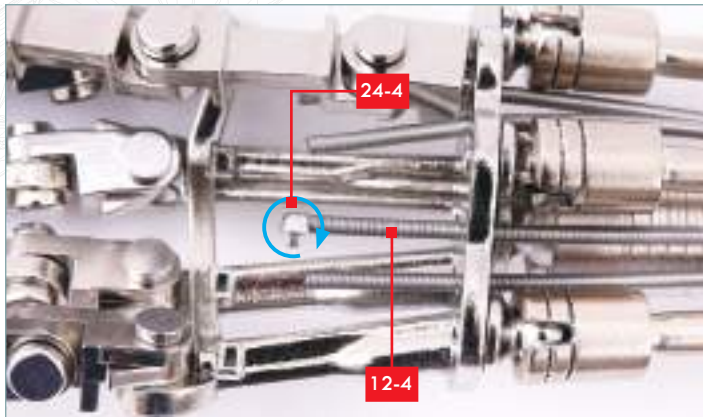
STEP 10

Cut the four connector parts **24-4** from the plastic frame, making sure that you include the long pegs at the base of the connectors and smooth any rough edges.



STEP 11

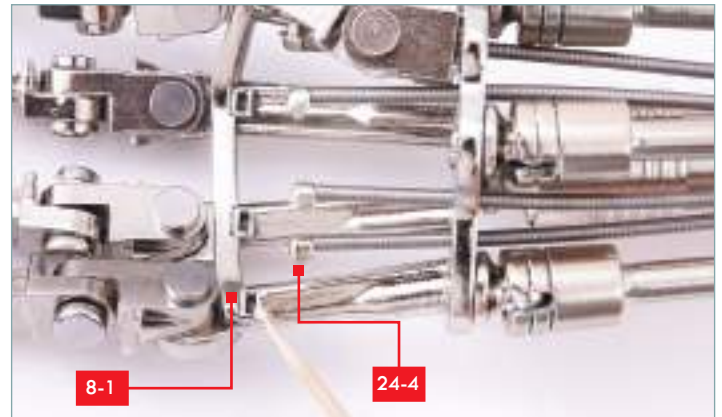
Take the first connector **24-4** and apply a tiny drop of superglue to the sides of the long round peg.



STEP 12

Fit the connector peg (**24-4**) into one of the spring muscles (**12-4**), turning it clockwise so that it fits snugly into the end of the spring (indicated by the blue arrow).

Repeat steps 11 and 12 to fit all four connectors **24-4** into the ends of the spring muscles.



STEP 13

Check that the rectangular pegs on the ends of the connectors **24-4** fit into the rectangular sockets in the hand **8-1** at the base of the four fingers. You will need to stretch the spring muscles slightly in order to do this. If necessary, use a fine file to enlarge the rectangular sockets. Working on one connector at a time, apply a little superglue in the rectangular socket.



STEP 14

Fix the peg into the socket: you will need to hold it firmly in place until the glue has dried. Repeat steps 13 and 14 to fit all the connectors **24-4** in place.

EXPERT TIP!

It may help to anchor the stretched springs to the base of the hand with a little pressure sensitive putty (Blu Tack) while you work. This will stop the springs from pulling at the connectors and make it easier to hold the springs in place while the glue dries.

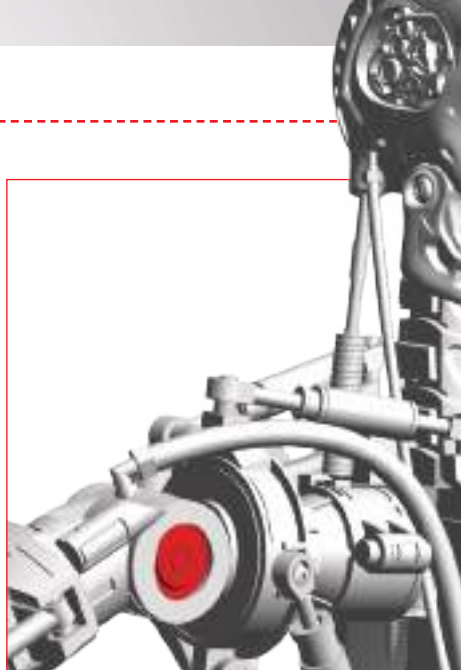


STAGE COMPLETE

The lower arm and muscles have been connected to the hand. Save part **24-1** for use in a future stage.

STAGE 25: ASSEMBLE THE RIGHT SHOULDER

Combine the right shoulder accessories, including the joint and internal spring.



LIST OF PIECES

- 25-1 Right shoulder spring
- 25-2 Right elbow pin
- 25-3 Right shoulder accessories
- 25-4 Right shoulder accessories
- 25-5 3 x PM 3 x 8mm screws (1 spare)
- 25-6 4 x PM 3 x 6mm screws (1 spare)

YOU WILL ALSO NEED

A cross-head screwdriver

Cutting mat or suitable surface and craft knife.

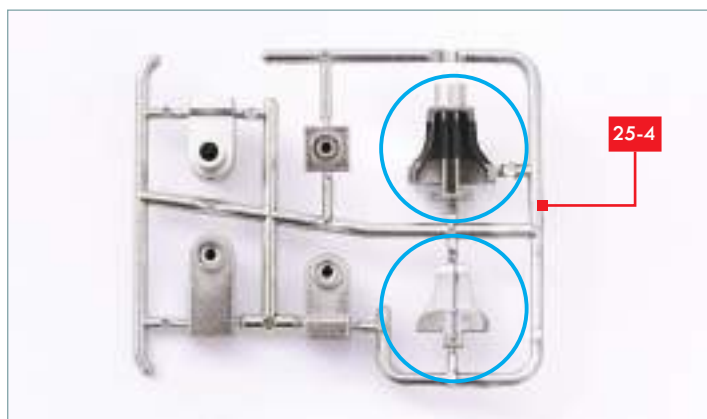
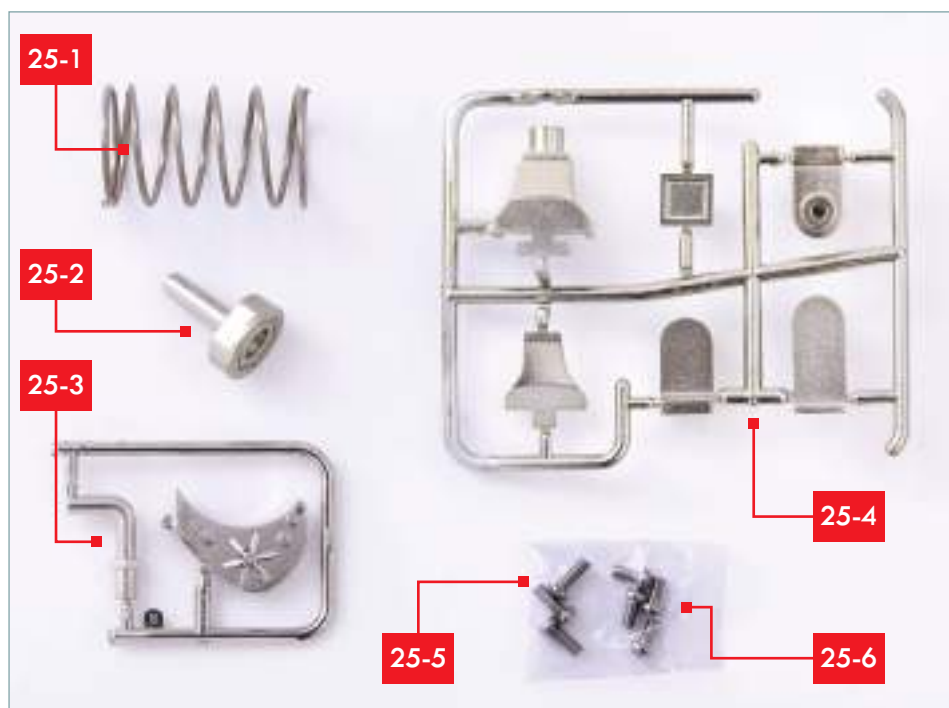
Superglue.

Tweezers.

Shoulder assembly from stage 23

Shoulder joint part 23-2

Shoulder plate 24-1



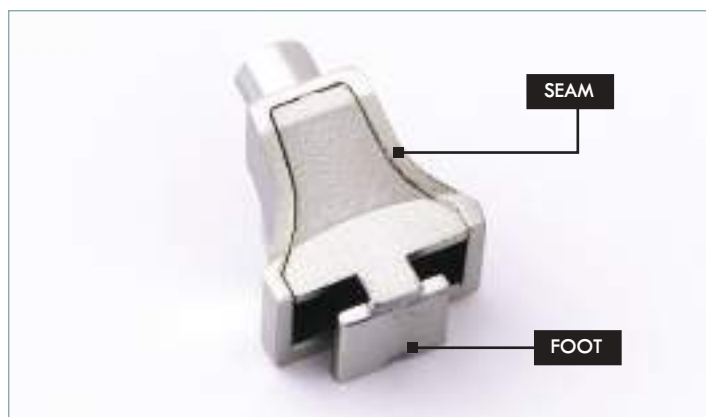
STEP 1

Cut the two large shoulder accessories (circled) from the plastic frame **25-4**. Smooth any rough edges with a fine file or sandpaper after cutting from the frame. Check how the parts fit together.



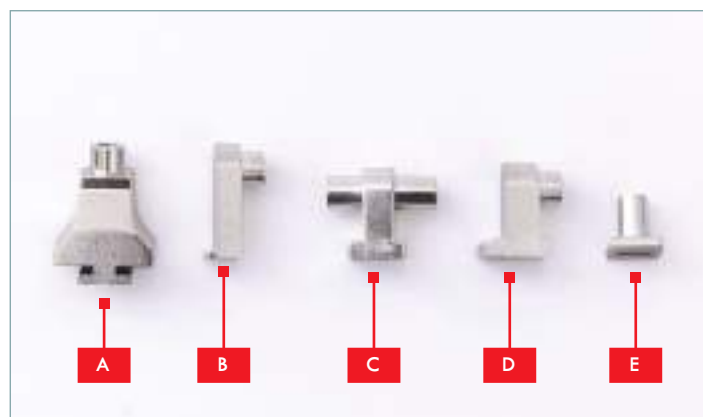
STEP 2

Apply a little superglue to the raised spine on the smaller part.



STEP 3

Fix the two parts together as shown, to make shoulder accessory **A**. Identify the 'seam' and the 'foot' of this shoulder accessory.



STEP 4

Cut the remaining parts from the first frame and arrange them in the order shown. We have assigned a letter to each of them for reference. It is always good practice to test-fit parts if possible before applying glue.



STEP 5

Take the shoulder joint assembly from stage 23, containing part 22-1, and position it in the orientation shown. Apply a little superglue to the 'foot' of accessory **A** and fit it into the top socket of part **22-1**. Viewed from this angle, the 'seam' of part **A** is facing away from you.



STEP 6

Apply a little superglue to the foot of part **B** and fix it into the corresponding socket in part **22-1** as shown.



STEP 7

Apply a little superglue to the foot of part **C** and fix it into the socket on the right-hand side of part **22-1**.



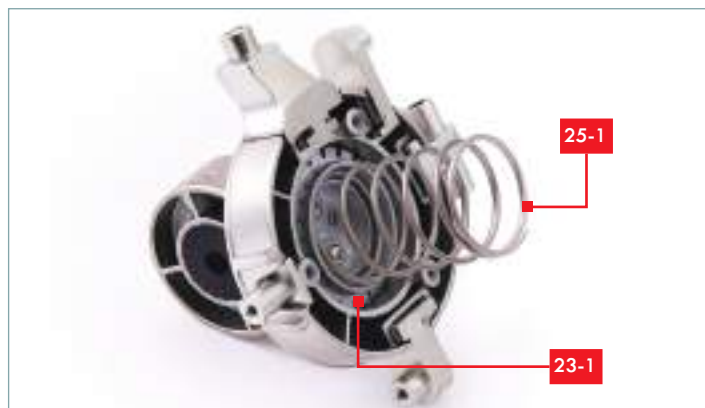
STEP 8

Apply a little superglue to the foot of part **D** and fix it into the socket at the bottom of part **22-1**.



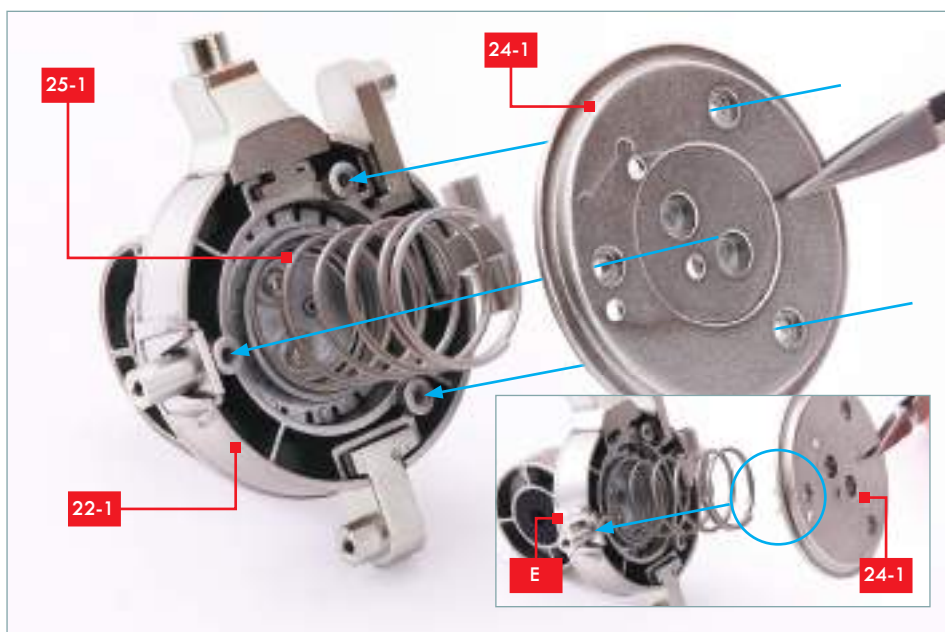
STEP 9

Again check the orientation of part **23-1** inside part **22-1**. Check the screws are aligned as shown circled in blue. (See also step 3 of stage 23) Apply a little superglue to the foot of part **E** and fix it into the socket on the left-hand side of part **22-1**.



STEP 10

Take the shoulder spring **25-1** and fit it into the center of the shoulder joint, within the rim on part **23-1**.

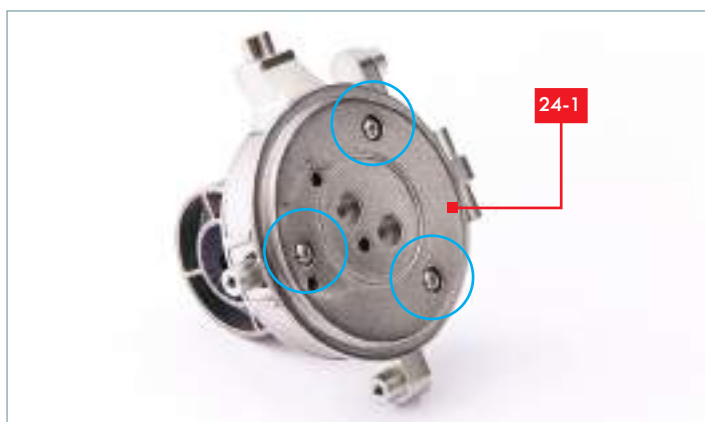


STEP 11

Take part **24-1** (supplied with the previous stage) and check how it fits over the spring **25-1**. Note that three of the screw holes in part **24-1** align with the screw sockets in part **22-1** (indicated by the blue arrows).

EXPERT TIP!

Note that there is a notched tab on one side of part **24-1** (circled), which fits over the arm of part **E**, as indicated by the arrow.



STEP 12

When you have the alignment correct, fix part **24-1** in place using three **PM 3 x 6mm** screws (circled).



STEP 13

Cut the shaped part from the plastic frame **25-3**. Apply a very small amount of superglue to the two raised pegs on the back of the part (circled).



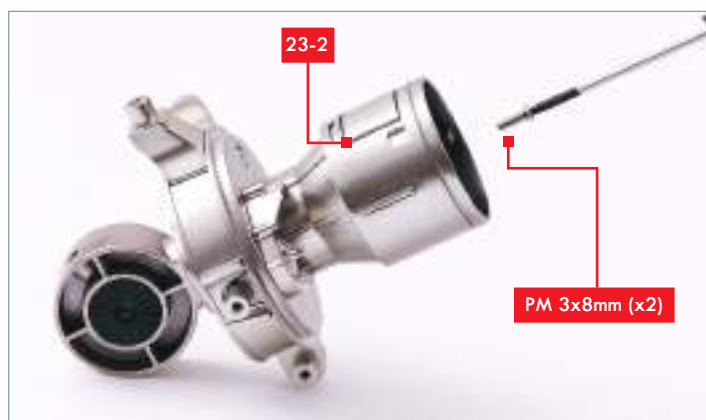
STEP 14

Fix the part into the recessed area on part **24-1**.



STEP 15

Take part **23-2** (supplied with stage 23) and identify the two raised screw sockets on the end (circled). Check how these fit into two recessed screw sockets in the center of part **24-1** (see previous step).



STEP 16

With shoulder part **23-2** positioned on the shoulder joint assembly, use two **PM 3 x 8mm** screws to fix it in place.



STEP 17

Cut the pipe from the frame **25-3**. Cut the pipe from the frame and after test-fitting (see next step) apply a tiny amount of superglue to the notched end, as shown.



STEP 18

Fix the pipe in place, with the glued end in the hole in the side of part **21-1**.

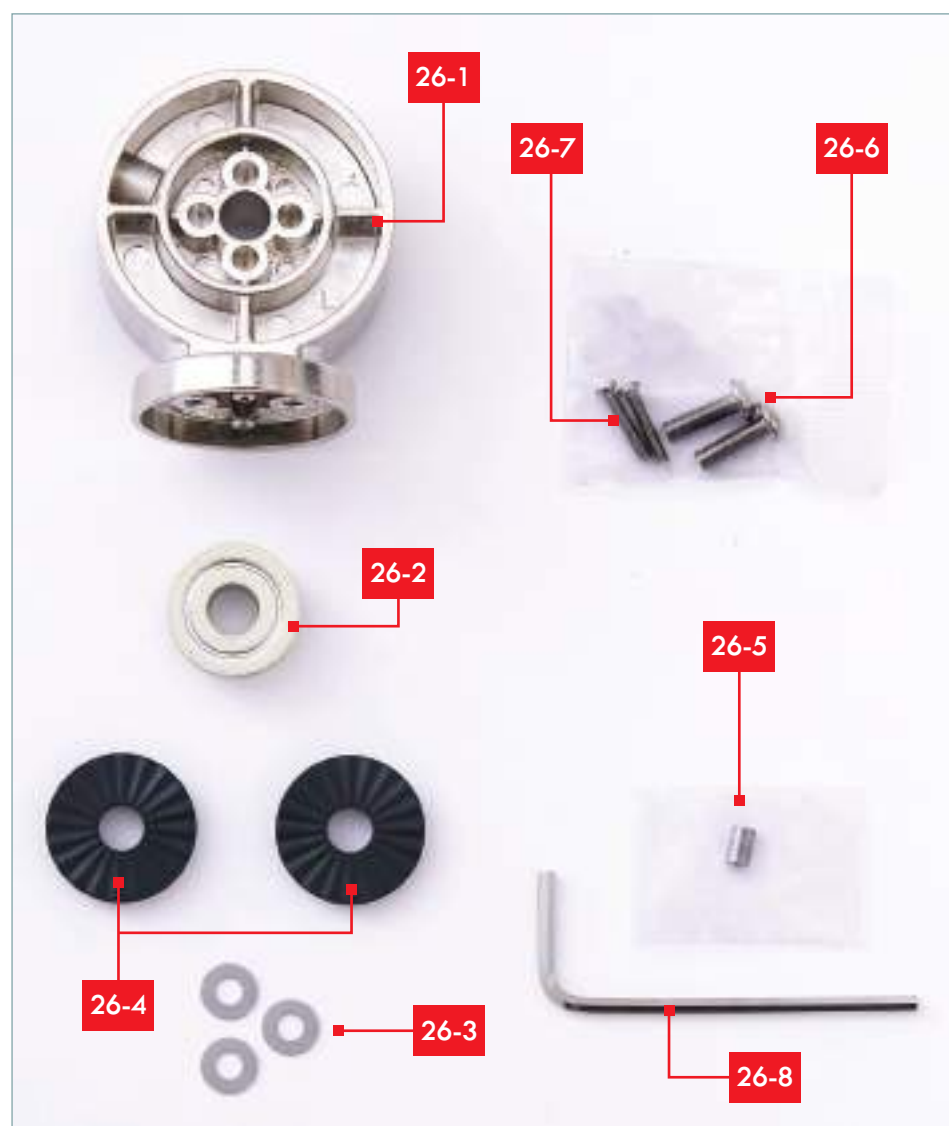


STAGE COMPLETE

The shoulder joint has been assembled: part **21-1** is now fixed so that it cannot come out of alignment. Part **25-2** will be used in the next stage.

STAGE 26: CONNECT THE RIGHT ARM WITH THE ELBOW JOINT

Combine the upper and lower right arm segments, and collect a component for the left shoulder.



LIST OF PIECES

26-1	Left shoulder
26-2	Right elbow part
26-3	3 x Right elbow washers
26-4	2 x Right elbow parts
26-5	Small cylinder
26-6	2 x PM 3 x 10mm Allen screws (1 spare)
26-7	2 x PM 2 x 10mm screws (1 spare)
26-8	Allen key

YOU WILL ALSO NEED

A cross-head screwdriver.

Superglue.

Hand and lower arm assembly from stage 24.

Upper arm assembly from stage 07.

Right elbow pin, 25-2, from stage 25.



STEP 1

Take the lower arm and hand assembly from stage 24. Identify the two **PM 2 x 6mm** screws (circled) that hold part **7-3** in place.



STEP 2

Undo the screws to release part **7-3**. Put the screws safely to one side.



STEP 3

Take one of the black discs for the right elbow (**26-4**) and apply a little superglue to each of the four studs.



STEP 4

Fix the black disc into the recess in the top of the lower arm (**7-2**). The four studs fit into recesses in the part. Repeat step 3 with the second rubber disc **24-6** and fit it into part **7-3**. In this case, the studs fit into four holes in the part.



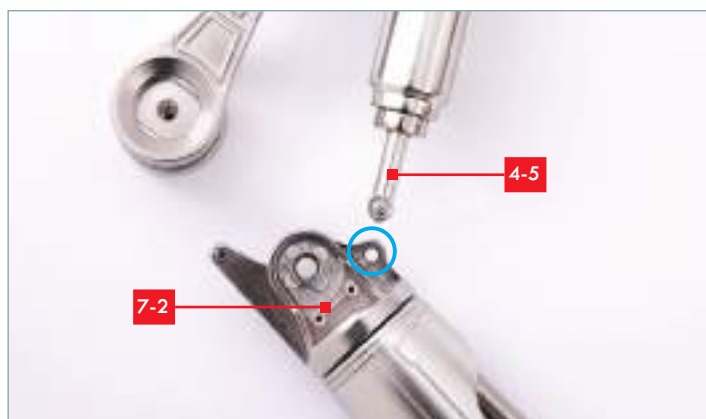
STEP 5

Fit the small cylinder **26-5** into the hole at the top of part **7-2**. The cylinder only fits loosely, so you will need to hold it in place. You may prefer to fit it in step 10.



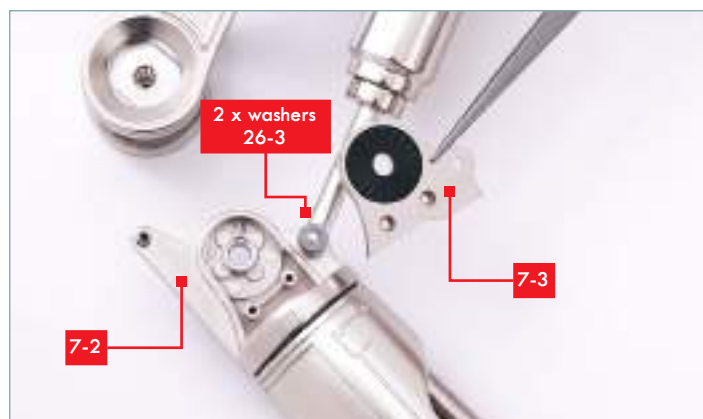
STEP 6

Take the upper arm assembly from stage 07. Note that the two arms on this part have different types of connection on the free ends (**4-5** and **4-6**).



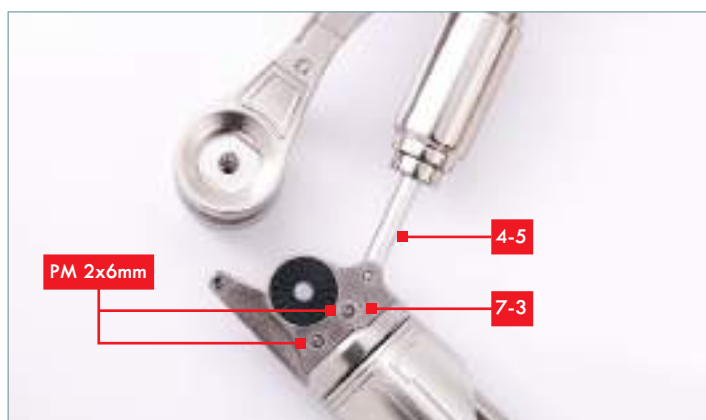
STEP 7

Fit one of the pegs on the end of part **4-5** down through the hole on the side of part **7-2** (circled).



STEP 8

With the arm in place, fit two washers **26-3** on to the peg of the arm **4-5**. Then fit part **7-3** back in place on part **7-2**.



STEP 9

The second peg on part **4-5** is held in place in the hole on the side of part **7-3**. Replace the two **PM 2 x 6mm** screws.



STEP 10

Turn the assembly over and fit the central part of the upper arm over the top of the lower arm. Ensure that the cylinder **26-5** is in place on part **7-2**.



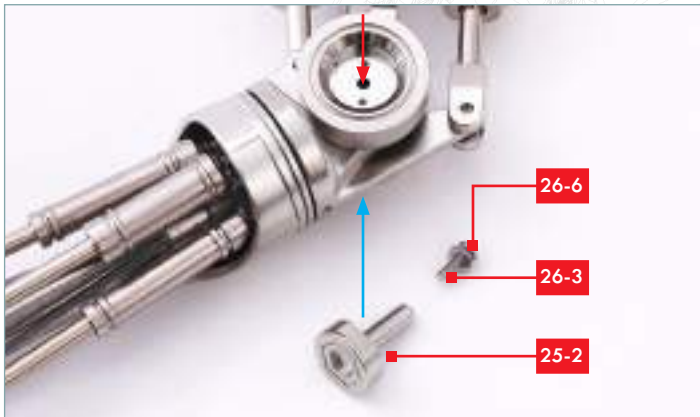
STEP 11

Note that on one side of part **4-6** there is a slight recess around the hole. This side should be uppermost as it is fitted.



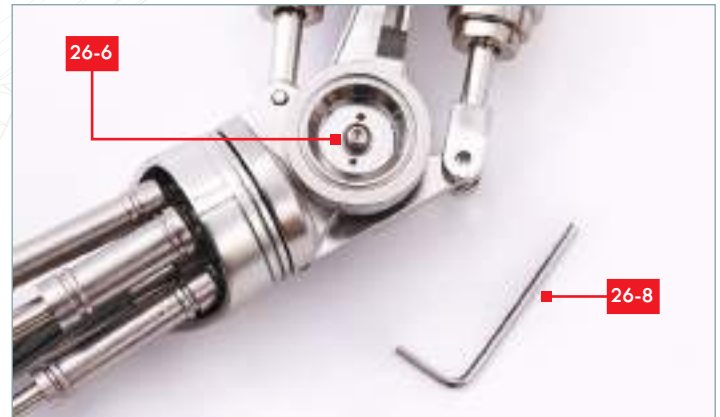
STEP 12

Adjust the length of part **4-6** so that you can fit it over the cylinder in the hole on part **7-2**. At the same time, ensure that the central part of the lower arm is sandwiched between the central parts of the upper arm. Fix part **4-6** in place with a **PM 2 x 10mm** screw. The pan head of the screw fits in the recess in part **4-6**.



STEP 13

Fit the washer **26-3** over the **3 x 10mm Allen** screw **26-6**. Take part **25-2** supplied with the previous stage and push the shank up through the elbow joint, as indicated by the blue arrow. Fit the screw into the hole in the center of the elbow joint, indicated by the red arrow.



STEP 14

Fix the joint together using the Allen key **26-8**. The screw adjusts the tightness of the joint and enables it to be locked in position.



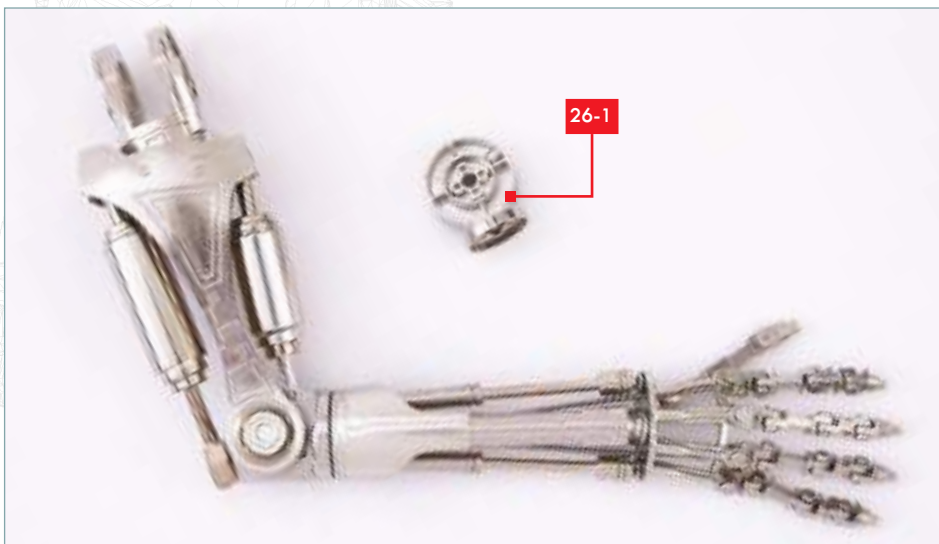
STEP 15

Take part **26-2** and check how it fits into the center of the elbow joint (see next step). Apply a little superglue to the two raised pegs on part **26-2**.



STEP 16

Fix part **26-2** into the center of the elbow joint as shown.



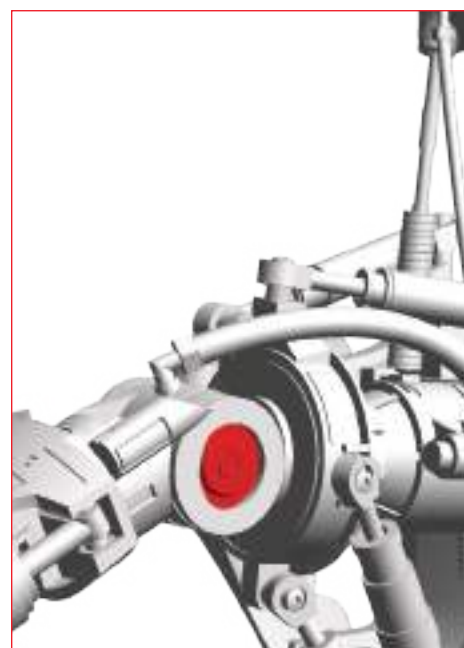
STAGE COMPLETE!

The upper arm and lower arm have been connected at the elbow. The left shoulder part **26-1** will be used in a future stage.



STAGE 27: ASSEMBLING THE LEFT AND RIGHT SHOULDERS

Fitting the left-hand shoulder inserts and assembling the right shoulder socket.



LIST OF PIECES

- | | |
|------|----------------------------|
| 27-1 | Left shoulder plate |
| 27-2 | Left shoulder inserts (x2) |
| 27-3 | Right shoulder socket |
| 27-4 | Right shoulder socket cap |

YOU WILL ALSO NEED

A cross-head screwdriver

Superglue and a cocktail stick

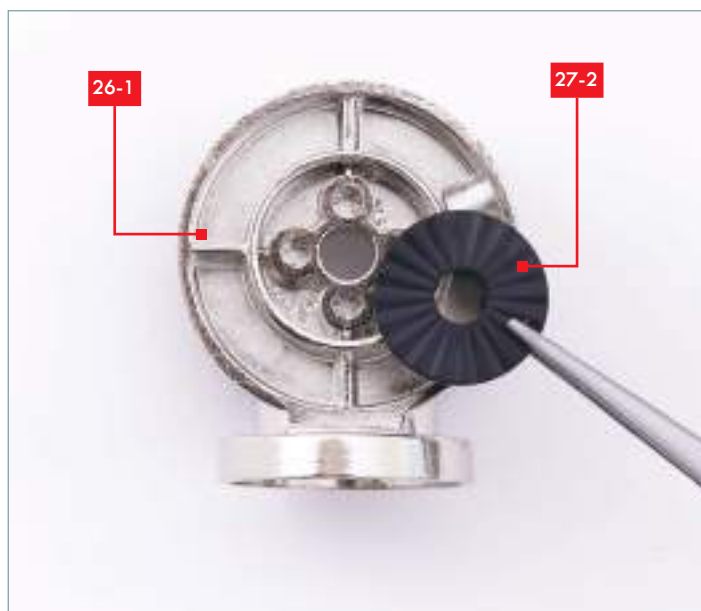
Part **26-1**, supplied with the previous stage

Right shoulder assembly from stage 25



STEP 1

Take part **26-1** supplied with the previous stage and one of the left shoulder inserts **27-2**. After test-fitting, apply a little superglue to the sides of the four raised areas on part **27-2**.



STEP 2

Fix insert **27-2** into the center of one side of part **26-1**.



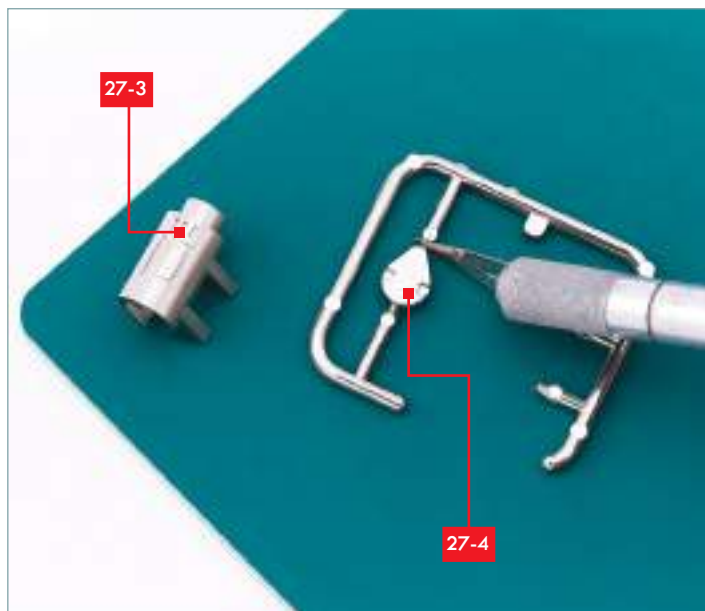
STEP 3

Take the second part **27-2** and apply a little superglue to the four raised areas.



STEP 4

Fix part **27-1** into the other side of part **26-1**.



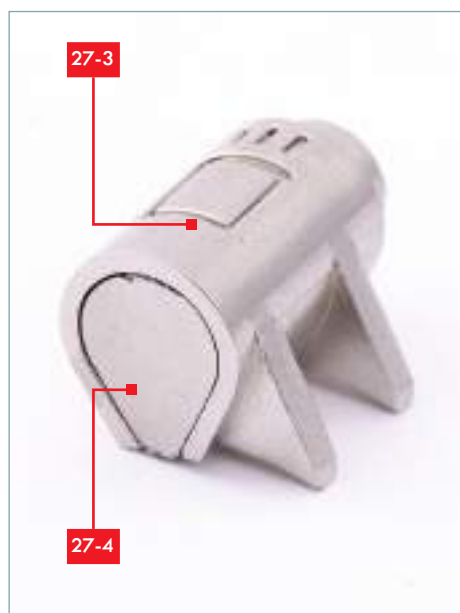
STEP 5

Cut parts **27-3** and **27-4** from the frame and smooth any rough edges.



STEP 6

After test-fitting, apply a little superglue to the recesses on the back of part **27-4**.



STEP 7

Fix part **27-4** into the end of part **27-3**.



STEP 8

Take the right shoulder assembly from stage 25. Check how the slot in part **27-3** fits onto the ridge on the side of part **23-2**. Make sure you have the correct orientation (see inset).



STEP 9

Apply superglue to the sides of the ridge on part **23-2**.



STEP 10

Glue part **27-3** on to the ridge.



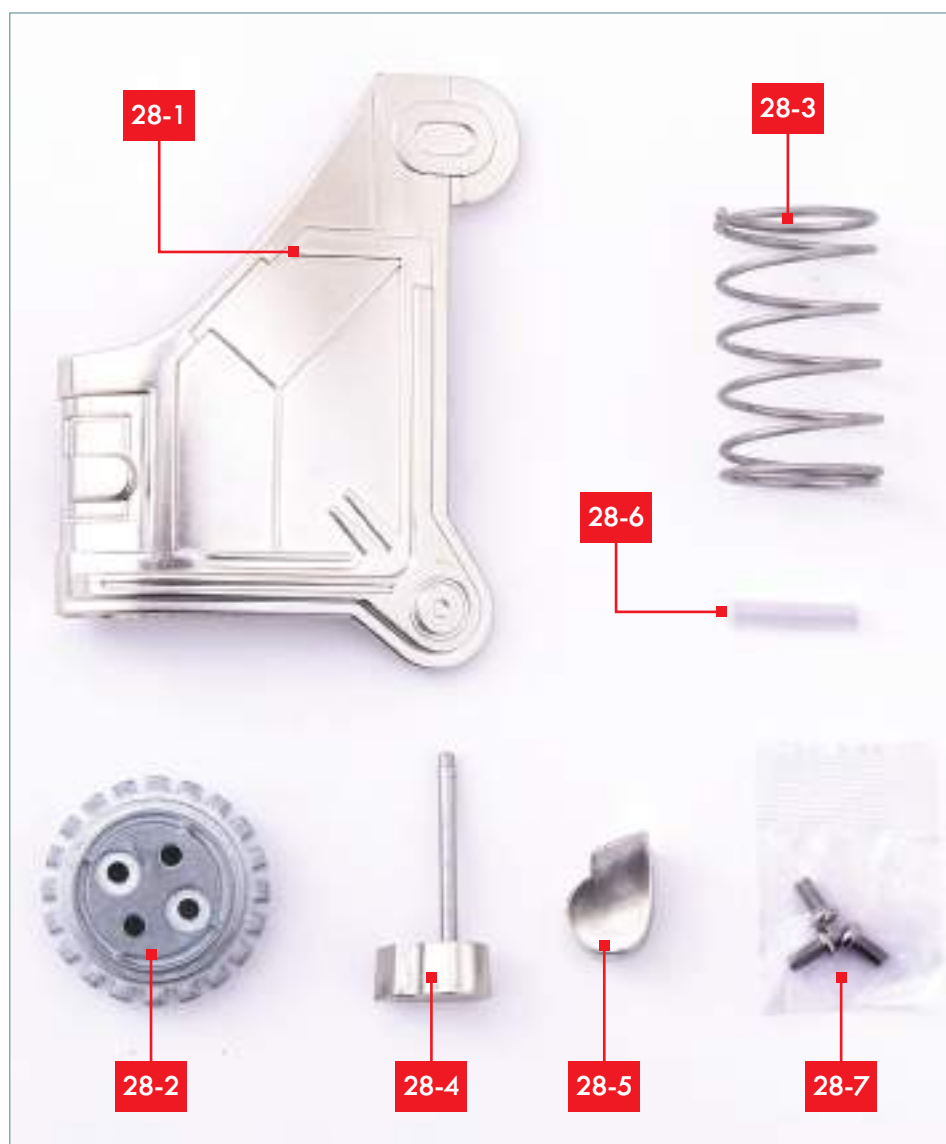
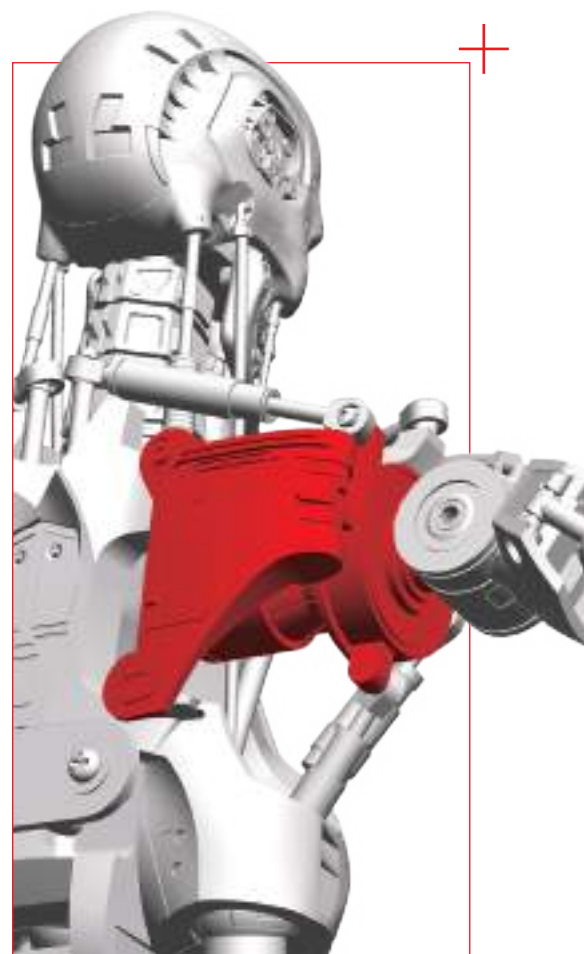
STAGE COMPLETE

The centers of the left shoulder have been fitted into the main part of the left shoulder. A socket has been fitted to the right shoulder. Part **27-1** will be used in a future stage.



STAGE 28: CONTINUING ASSEMBLY OF THE LEFT AND RIGHT SHOULDERS

Fitting the right-hand shoulder plate and caps,
and building out the left shoulder.



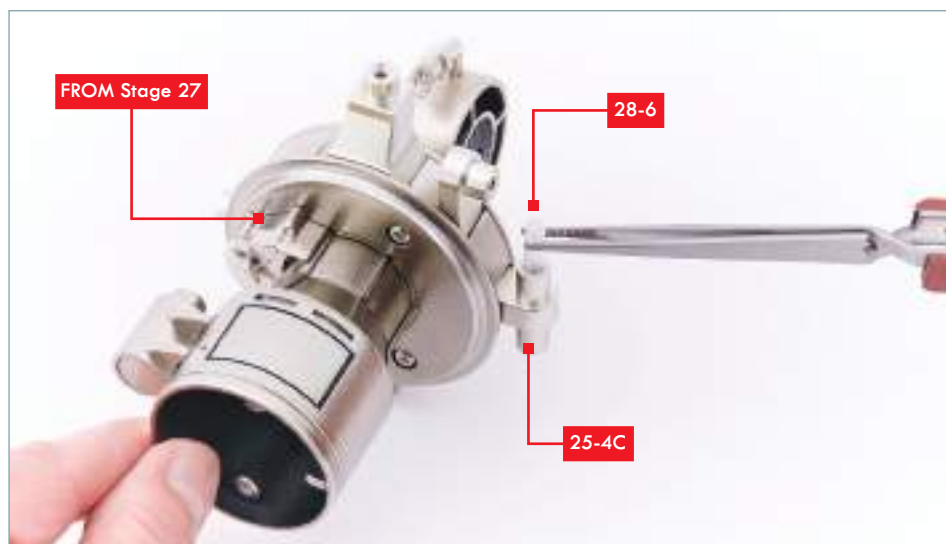
LIST OF PIECES

- | | |
|------|-----------------------------|
| 28-1 | Right shoulder plate |
| 28-2 | Left shoulder cog |
| 28-3 | Left shoulder spring |
| 28-4 | Right shoulder cap with rod |
| 28-5 | Right shoulder cap |
| 28-6 | Right shoulder tube |
| 28-7 | Three 3 x 6mm PM screws |

YOU WILL ALSO NEED

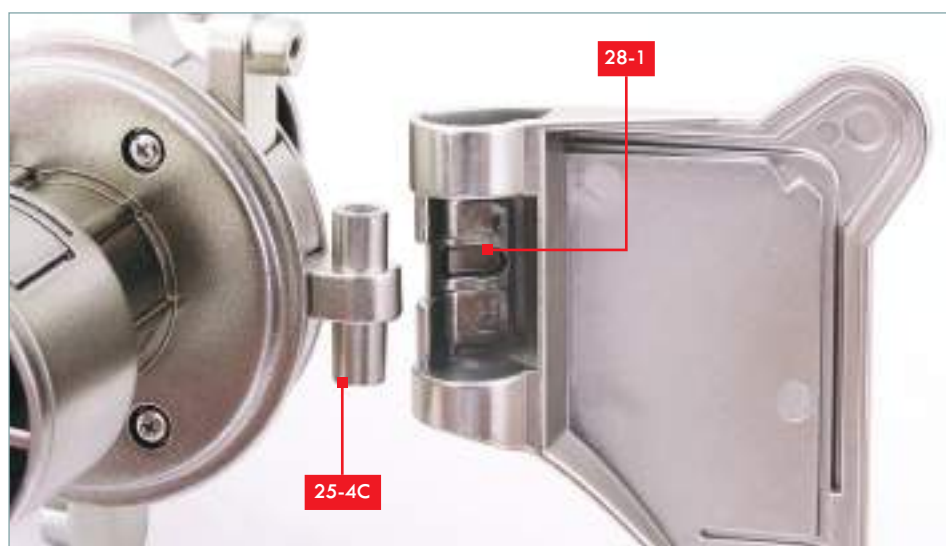
A cross-head screwdriver

Left and right shoulder assemblies
from stage 27



STEP 1

Take the assembly from stage 27 and insert the plastic tube **28-6** into the side socket (**25-4C**) as shown.



STEP 2

Fit the socket (**25-4C**) on the shoulder assembly into the recess in the shoulder plate **28-1**.



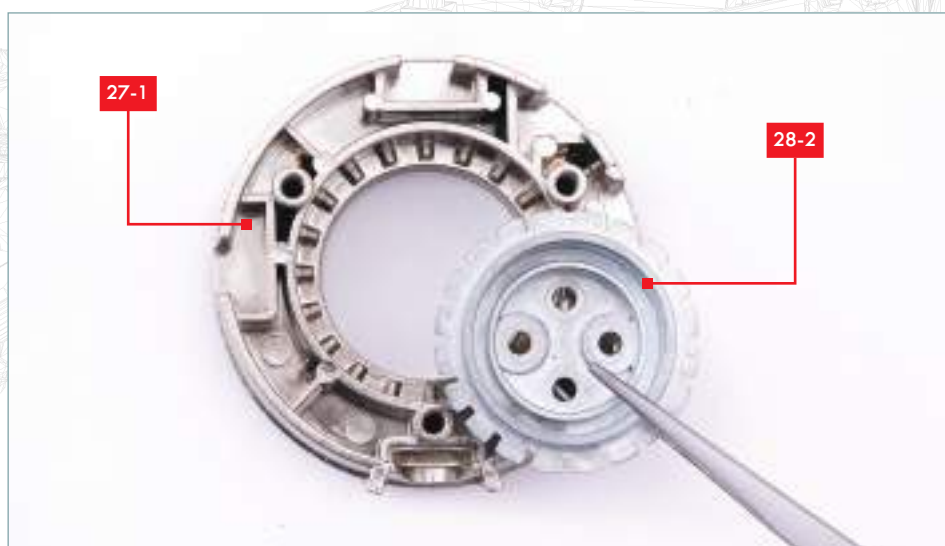
STEP 3

Fit the rod of part **28-4** into the joint that was assembled in step 2, fitting it into the plastic tube **28-6** so that the joint is held together.



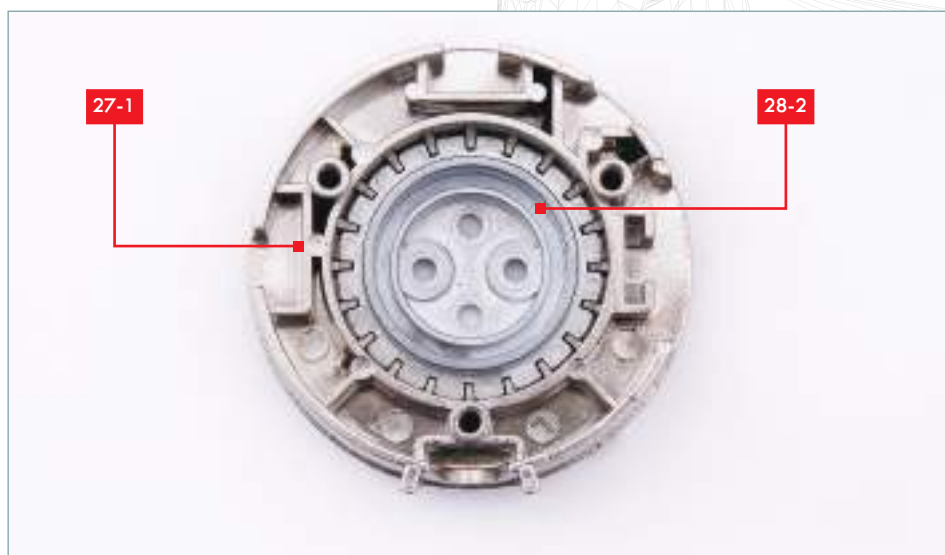
STEP 4

Fit the right shoulder cap **28-5** into the lower end of the joint. This is a push-fit connection.



STEP 5

After checking the orientation of the parts, fit the left shoulder piece **28-2** into the center of the left shoulder piece **27-1**, supplied with the previous stage.



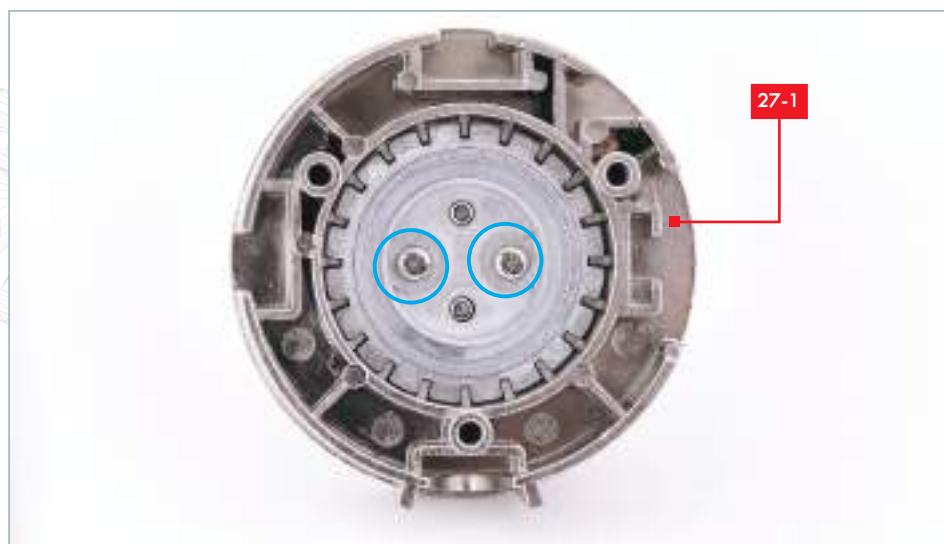
STEP 6

When fitted, the notches in part **28-2** fit over the raised parts in the center of **27-1**.



STEP 7

Take the assembled shoulder parts from stage 27 (**26-1** and 2 x **27-2**) and fit the assembly of parts **28-2** and **27-1** on to the end, so that the screw sockets are aligned, as indicated by the red arrows, and the raised pegs on part **26-1** fit into the holes in part **28-2**. See the Stage Complete photograph to note the orientation of part 26-1 relative to part 27-1.



STEP 8

Fix in place with two 3 x 6mm **PM** screws (circled).

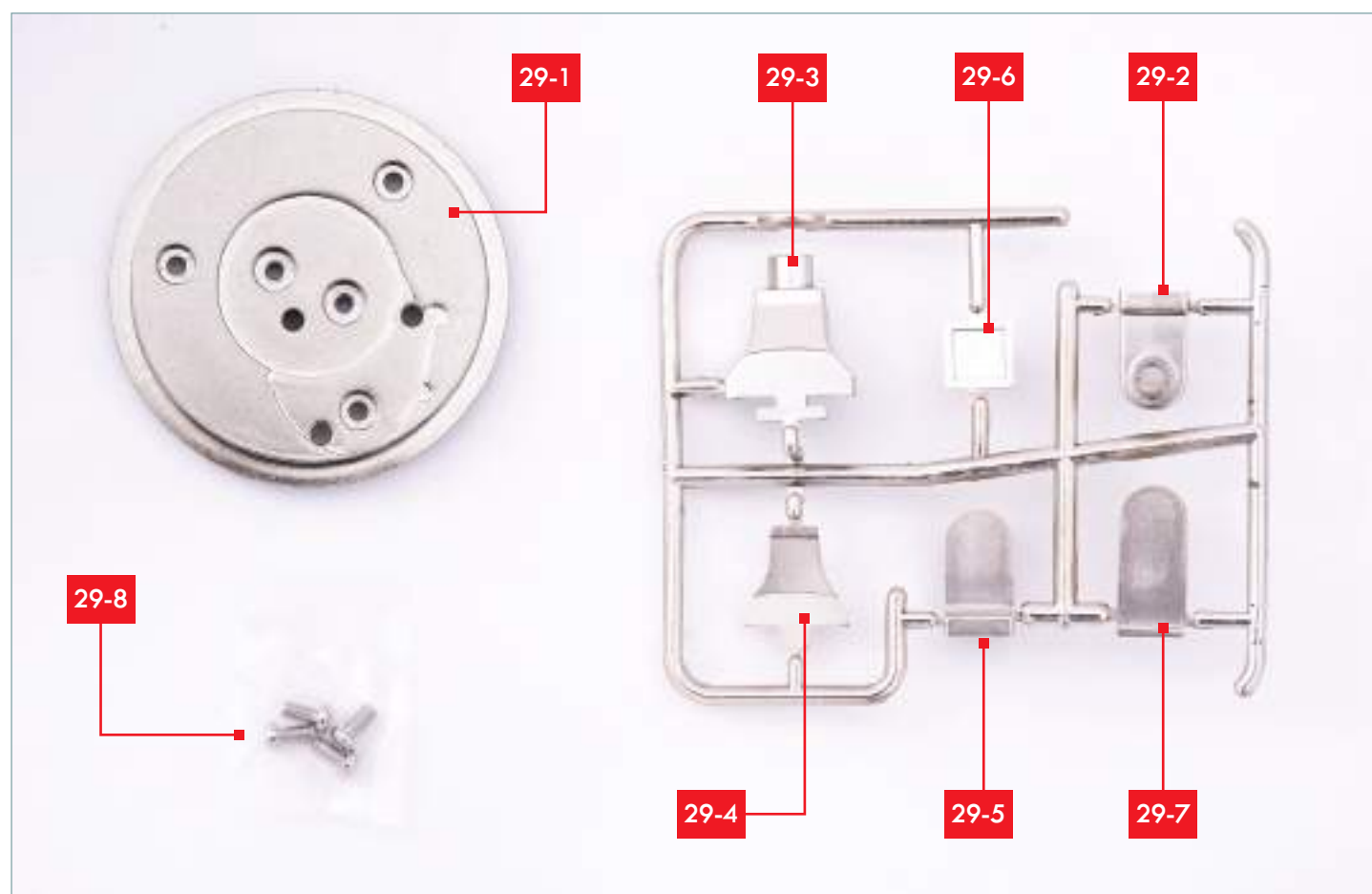
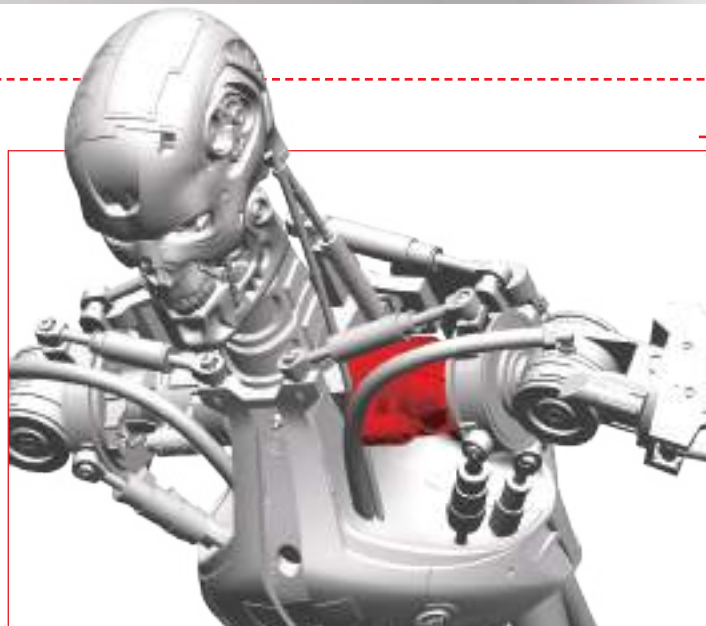


Parts of the left and right shoulders have been assembled. The spring will be fitted in a future stage.



STAGE 29: THE LEFT SHOULDER BUILD CONTINUES

Combining the new components with the left shoulder assembly from last stage, you'll complete part of the left shoulder joint.

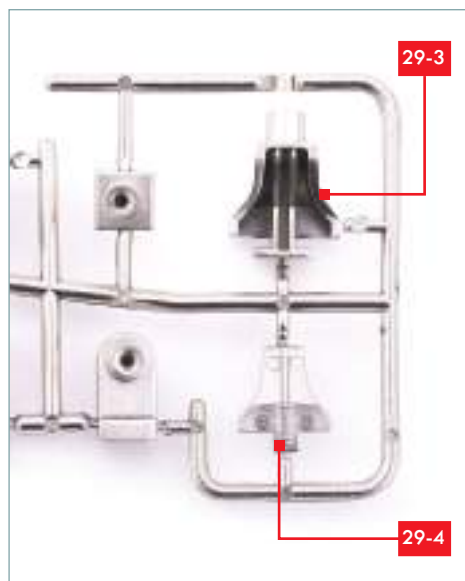


LIST OF PIECES

29-1	Left shoulder plate	29-5	Left shoulder accessory
29-2	Left shoulder accessory	29-6	Left shoulder accessory
29-3	Left shoulder accessory	29-7	Left shoulder accessory
29-4	Left shoulder accessory	29-8	Three 3 x 6mm PM screws

YOU WILL ALSO NEED

A cross-head screwdriver
Superglue and a cocktail stick
Left shoulder assembly from stage 28



STEP 1

Identify parts **29-3** and **29-4** and carefully cut them from the frame. Smooth any rough edges.



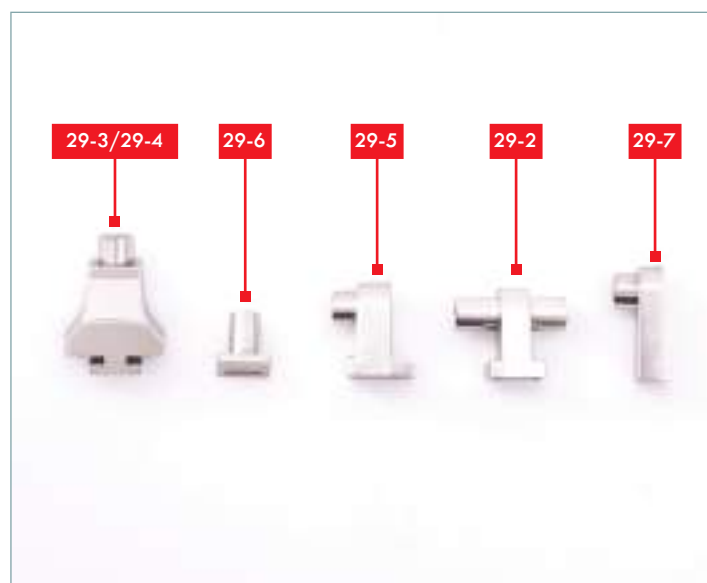
STEP 2

After test-fitting, apply a little superglue to the ridge on the inside of part **29-4**.



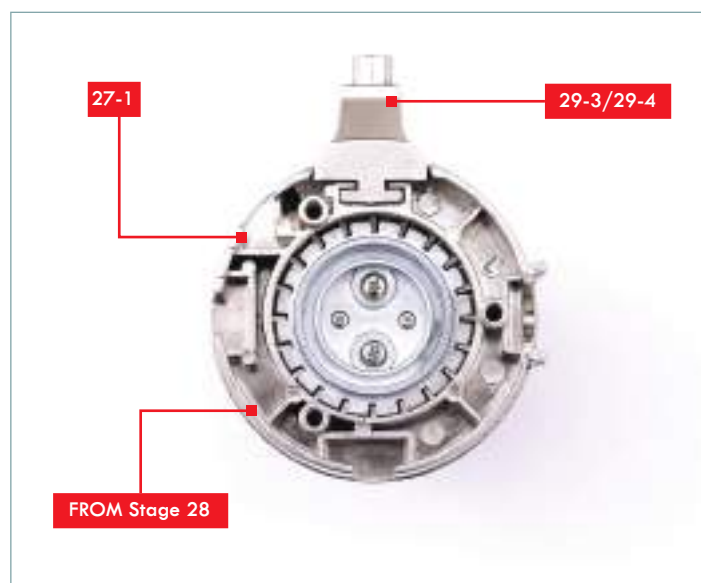
STEP 3

Fix the two parts together as shown to make the shoulder accessory. Note that there is a 'seam' on one side, and the part has a 'foot'.



STEP 4

Cut the remaining shoulder accessories from the frame and arrange them in the order shown.



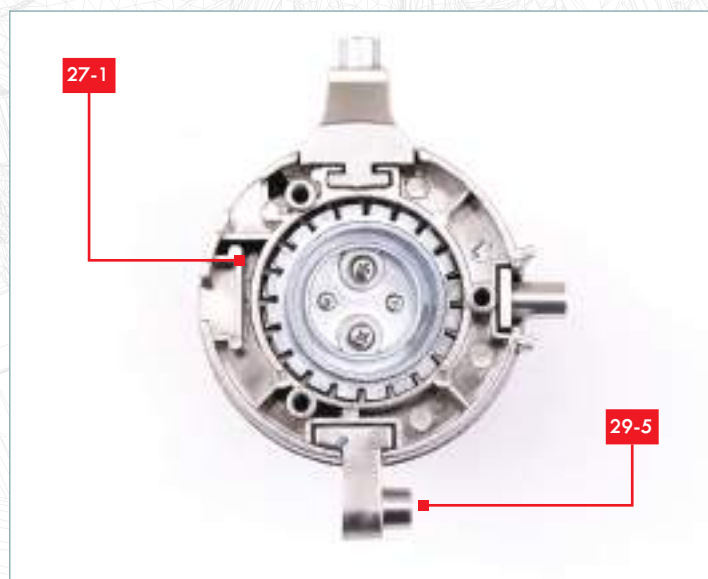
STEP 5

Take the shoulder assembly from stage 28 and position it in the orientation shown. Apply some superglue to the foot of the assembled parts **29-3** and **29-4** and fit it into the socket in part **27-1** in the shoulder assembly. Viewed from this angle, the 'seam' of part **A** is facing away from you.



STEP 6

Apply superglue to the foot of part **29-6** and fit it in the next socket in part **27-1**.



STEP 7

Apply a little superglue to the base of the foot of part **29-5** and fit it into the bottom socket of part **27-1**.



STEP 8

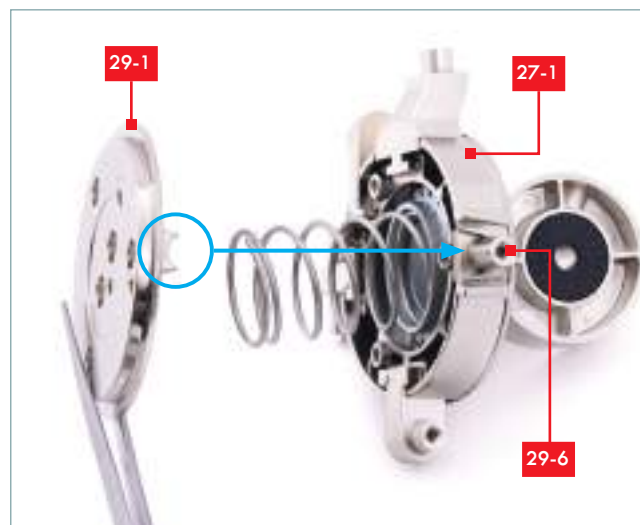
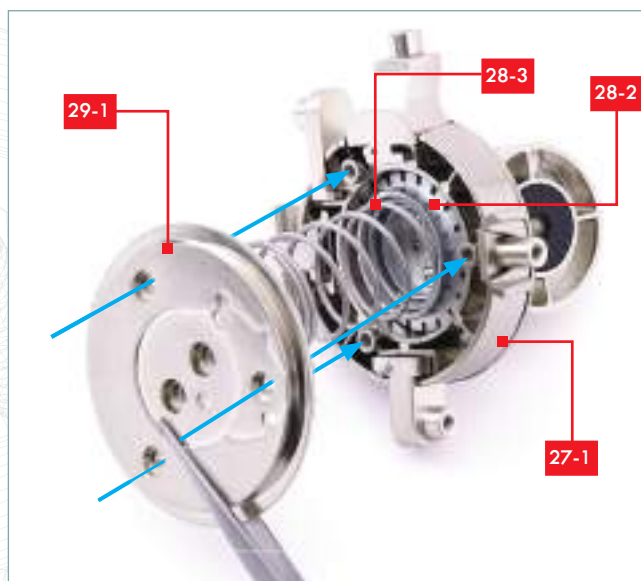
Apply a little superglue to the base of part **29-2** and fit it into the next socket on part **27-1**.



STEP 9

Apply a little superglue to the base of part **29-7** and fit it into the last socket on part **27-1** as shown.





STEP 10

Take the left shoulder spring **28-3**, supplied with the previous stage, and fit it into the center of the shoulder assembly, so that it is held inside the rim on part **28-2**. Take the shoulder plate and check how it fits over the end of the spring, so that the screw holes on part **29-1** are aligned with the sockets in part **27-1**. Note that there is a notched tab on part **29-1** (circled), which fits over the neck of part **29-6**.

EXPERT TIP!

It is important that part **28-2** is correctly positioned within part **27-1**. Carefully study the photographs above and below to check the orientation of these parts. Also, make sure all previously fitted screws are tight.



STEP 11

Fix the left shoulder plate **29-1** in place with three **PM 3 x 6mm** screws (circled).



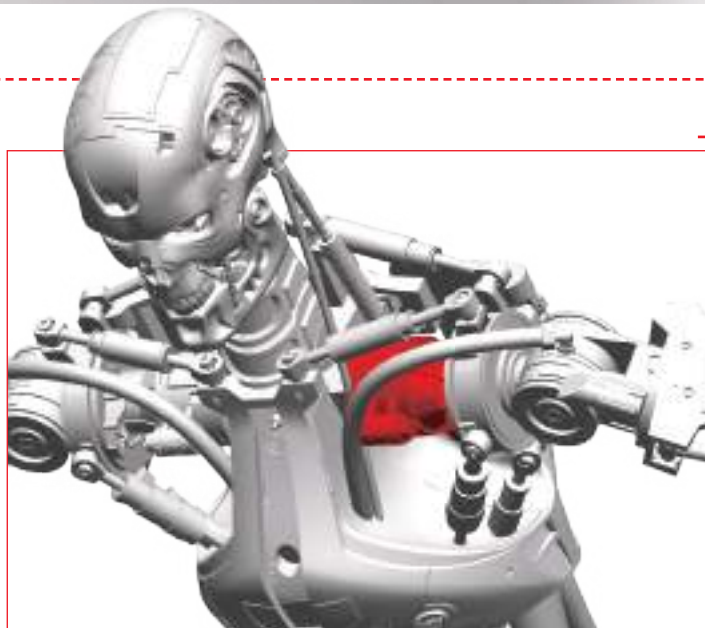
STAGE COMPLETE

The left shoulder joint has been assembled.



STAGE 30: EXTEND THE LEFT SHOULDER

Connect the existing left shoulder assembly with the left shoulder extender, to add the parts that will anchor it to the T-800 Endoskeleton's scapula and spine.



LIST OF PIECES

- | | |
|------|-------------------------|
| 30-1 | Left shoulder part |
| 30-2 | Left shoulder accessory |
| 30-3 | Three 3 x 8mm PM screws |

YOU WILL ALSO NEED

- A cross-head screwdriver
- Superglue and a cocktail stick
- Left shoulder assembly from stage 29



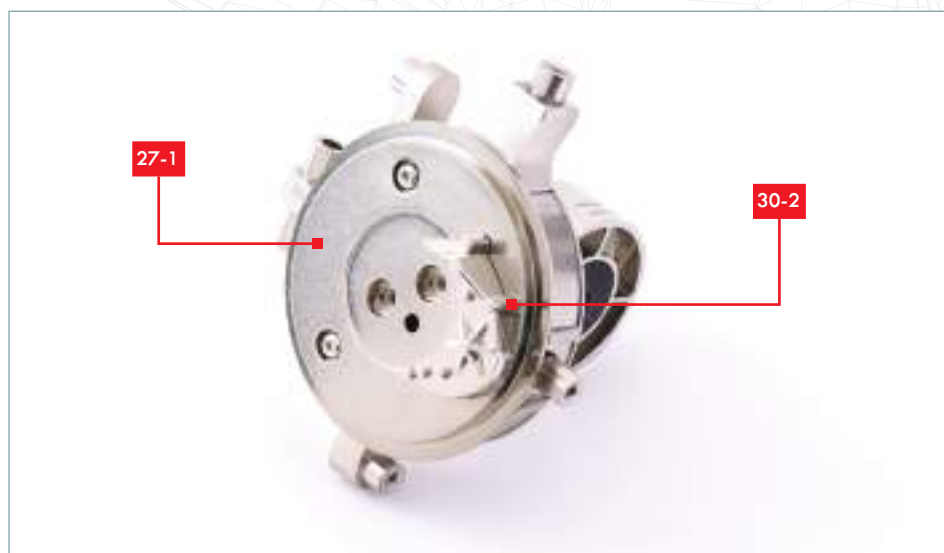
STEP 1

Take the shoulder assembly from stage 29 and identify the two fixing points on part **27-1** (circled) for part **30-2**.



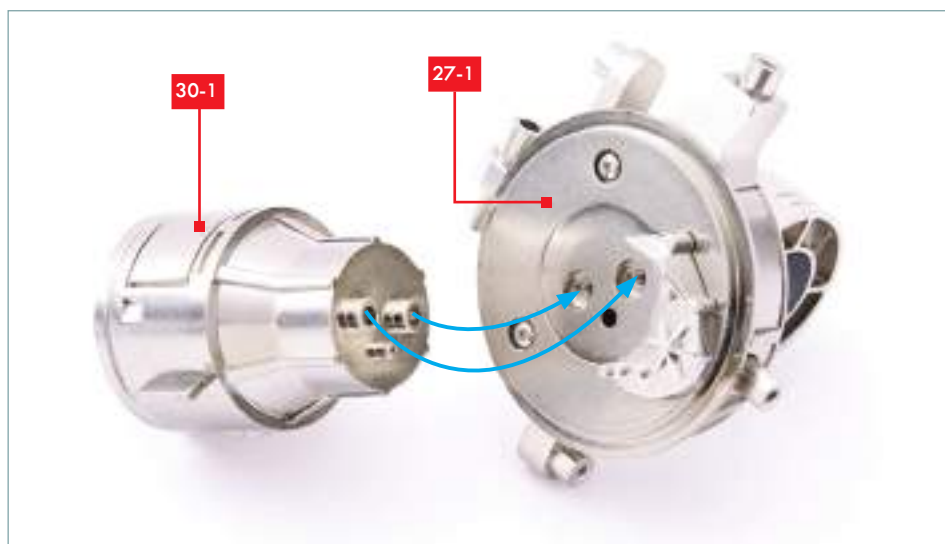
STEP 2

After test-fitting, apply a little superglue to the pegs (circled) on the back of part **30-2**.



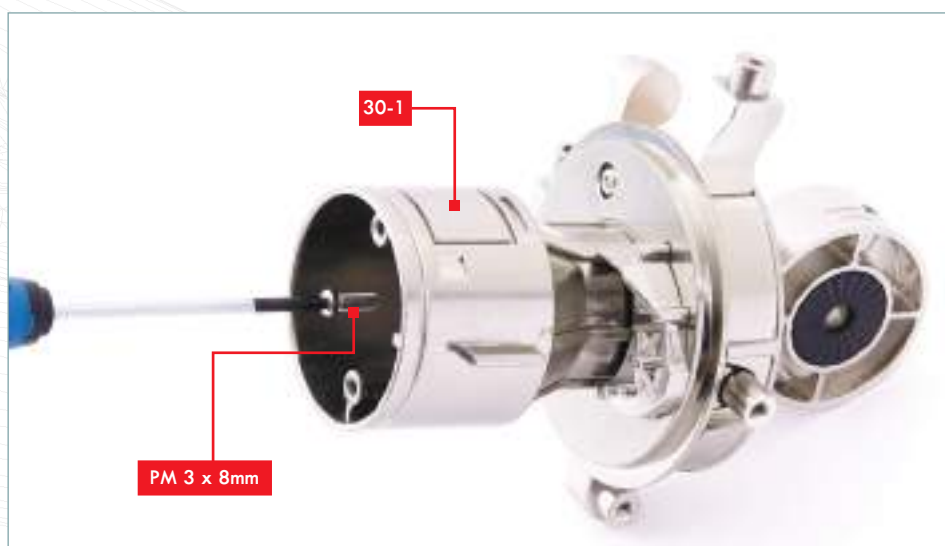
STEP 3

Fix part **30-2** in place on part **27-1**.



STEP 4

Take the shoulder part **30-1** and check how the raised screw sockets fit into the recesses in part **27-1**, as indicated by the arrows.



STEP 5

Fix part **30-1** in place with two **PM 3 x 8mm** screws.



STAGE COMPLETE!

The left shoulder has been extended, with an extra detail added.



A.I. ARTIFICIAL INTELLIGENCE

Blending Kubrick's grim future vision with Spielberg's humanist sentiments, this bittersweet fable from two of cinema's leading filmmakers offers an unprecedented exploration of love, life, and the human condition.

It's difficult to imagine two directors with such opposing approaches to film than Steven Spielberg and Stanley Kubrick. While the former is best known for heartening family-friendly fare, the latter's offerings gravitate towards a more introspective, even cynical approach. The culmination of a three-decade-spanning effort, *A.I. Artificial Intelligence* represents the marriage of two seemingly incompatible stylistic schools, succeeding in a compelling exploration of the complex relationship between man and machine.

Set in a dystopian world where global warming has devastated population levels, and advanced robotic humanoids have risen to fill the gap, the film tells the tragic story of David, a child-like artificial lifeform, spectacularly brought to life by Haley Joel Osment, and programmed with the capacity to love. Gifted to the Swintons as a replacement for their terminally ill child, the family — particularly mother Monica — struggle to accept David, but

upon activating his imprinting protocol — instilling within him an enduring, child-like love — the parents warm to their robotic offspring, who develops his own friendship with Teddy: his flesh-and-blood brother Martin's robotic cuddly toy.

When Martin miraculously recovers and is brought back into the family home, he quickly develops an intense rivalry with David, and manipulates the innocent Mecha into breaking his safety parameters. Growing concerned for their own wellbeing, the Swinton's decide to send David back to his manufacturer, but, unable to reconcile her feelings towards him, his 'mother' Monica ultimately chooses to abandon him in a forest rather than condemn him to destruction.

Alone, David — along with Teddy — sets out upon a quest to find Pinocchio's Blue Fairy, in the hopes of becoming a real boy. He is soon captured and imprisoned

ABOVE: Haley Joel Osment's David faces numerous deadly challenges on his quest to become a real boy. [Photo: United Archives GmbH / Alamy Stock Photo]

FILM DATABLAST

Director: Steven Spielberg

Screenplay: Steven Spielberg, Ian Watson (based on a short story by Brian Aldiss)

Producers: Kathleen Kennedy, Steven Spielberg, Bonnie Curtis

Composer: John Williams

Director of Photography: Janusz Kamiński

Editors: Michael Kahn

Cast: Haley Joel Osment (*David*), Jude Law (*Gigolo Joe*), Francis O'Connor (*Monica Swinton*), Sam Robards (*Henry Swinton*), Jake Thomas (*Martin Swinton*), William Hurt (*Professor Allen Hobby*), Brendan Gleeson (*Lord Johnson-Johnson*), Jack Angel (*Teddy*), Robin Williams (*Dr. Know*), Ben Kingsley (*Specialist*), Meryl Streep (*Blue Fairy*)

Year: 2001

Duration: 146min

Aspect Ratio: 1.85 : 1

Country of Origin: USA

“THEY MADE US TOO SMART, TOO QUICK, AND TOO MANY. WE ARE SUFFERING FOR THE MISTAKES THEY MADE BECAUSE WHEN THE END COMES, ALL THAT WILL BE LEFT IS US. THAT’S WHY THEY HATE US.” — GIGOLO JOE

at a Flesh Fair, an anti-A.I. gauntlet where obsolete Mecha are mutilated before cheering crowds of human spectators. David is able to escape with the help of a sympathetic crowd and, escorted by a sex-bot named Gigolo Joe, makes his way to the decadent Rouge City in search of answers. On the advice of Doctor Know — a holographic answer engine — the two Mecha travel to the submerged ruins of Manhattan, where David encounters duplicates of himself, along with his creator, Professor Hobby, who informs him of the truth behind his creation. Realizing that he is not unique, and that his journey has all been part of an elaborate test to evaluate his development, David throws himself into the ocean, where he discovers a statue of the Blue Fairy, in a now sunken Coney Island.

After two thousand years — the oceans now frozen — David and Teddy are discovered and revived by a race of advanced Mecha, who, following the extinction of humanity, have evolved into a sophisticated, silicon-based form. Understanding David’s importance as an early-era Mecha and the hardships he faced, the beings recreate the Swinton family home from his memories, along with a clone of Monica, with the proviso that, after 24 hours, she will cease



to exist. His dreams achieved, David spends one last, joyous day with Teddy and his mother. She finally reciprocates his love, and the two fall peacefully into an eternal sleep.

A post-contemporary promethean tale, set in an ailing world where happy endings are few and far between, *A.I.* is arguably one of its director's most underrated efforts, the film's curious mix of Kubrickian melancholia and Spielbergian sentimentality offering a contemplative, enduring, and unique analysis of what it really means to be human.

IT TAKES TWO

A.I.'s journey from page to screen is long and arduous, beginning with Brian Aldiss' 1969 short-story *Supertoys Last All Summer Long*. Acting as a dystopian treatise on artificial life, loneliness, and the struggles of parenthood, Aldiss' tale struck a chord, and captured the attention of the genre's leading cinematic trailblazer Stanley Kubrick. Acquiring the rights in the early 70s and hiring Aldiss for the film treatment, development slowed to a standstill, despite gaining the financial backing of Warner Brothers. Creative differences eventually led to Aldiss' dismissal, leading Kubrick to test the waters with several writers, the director eventually settling on Aldiss' literary rival Ian Watson.

Though Watson completed his treatment by the early 90s, Kubrick's interest in the project had waned, the director convinced that computer animation had not yet reached the levels required to realistically render David — a role Kubrick believed could never be convincingly portrayed by a living child actor.

ABOVE: Gigolo Jane [Ashley Scott] and Gigolo Joe, shortly before their existence is turned upside-down. [Photo: United Archives GmbH / Alamy Stock Photo]

The director's assumptions were drastically altered by the release of *Jurassic Park* in 1993. Galvanized by Spielberg's ground-breaking dinosaur extravaganza, which proved the potential of modern-day special effects, Kubrick was soon back onboard, with pre-production beginning early the next year. As the project progressed, Kubrick quickly realized his movie was closer to the sensibilities of his dino-minded contemporary, and attempted to hand directorial duties over to Spielberg, while staying on as producer. Though initially reluctant, Spielberg took over following Kubrick's death in 1999, promising to stay true to the original director's vision.

What's especially interesting is how *A.I.* manages to retain the often-polarizing aesthetics of its two filmmakers, though not exactly in the fashion you might expect. While Spielberg built his name on sentimentality, big-budget effects, and the importance of family, Kubrick's works explore the darker sides of our humanity, adhering to more methodical approaches than his contemporary. It may come as a surprise, then, that the majority of the film's more empathetic elements — from its familial first act, the bittersweet finale, and the cutesy character of Teddy — were all a product of Kubrick's original treatment, while its sinister side came directly from Spielberg.

Unfortunately, this subversion of expectations led to widespread misunderstanding of the movie, at least critically, with many accusing Spielberg of sugarcoating Kubrick's original intentions. The film still enjoyed a warm reception upon its release, and has since been reassessed as a masterpiece of sci-fi cinema, with several of its former detractors later recanting their original assessments.

THE ORIGIN OF SPECIES

In addition to its source material, the film also borrows heavily from Osamu Tezuka's seminal 1950s series *Astro Boy* — David's origin and rejection mirroring that of the manga's central character — along with Phillip K. Dick's *Second Variety*. More obvious are the influences of Yeats' *The Stolen Child*, with the movie prominently featuring excerpts from the poem, *Frankenstein*, and of course *The Adventures of Pinocchio*, whose story is both mirrored by and prominently featured in the film's narrative. But in spite of its youthful inspirations and child-like protagonist, *A.I.* is by no means a children's film, its melancholic narrative digging into deep philosophical territories.

Various thematic interpretations have been made since the film's release, from biblical to more psychoanalytical readings, the spread in the discourse attributable to its twin creators, with Spielberg adhering to a more humanist perspective, and Kubrick trending towards analytical detachment. Arguably one of its director's darkest efforts, the film is ultimately a story of humanity's self-imposed destruction, flying in the face of his usual optimistic approach — yet it retains a semblance of hope, in spite of its prevailing message that a life without love can be cold and unforgiving.



“UNTIL YOU WERE BORN, ROBOTS DIDN'T DREAM, ROBOTS DIDN'T DESIRE UNLESS WE TOLD THEM WHAT TO WANT. DAVID, DO YOU HAVE ANY IDEA WHAT A SUCCESS STORY YOU'VE BECOME?” — PROFESSOR HOBBY

Biblical elements are present in the Cain and Abel-esque relationship of David and his brother, as well as the Blue Fairy's Madonna-like significance, but it's David's personal struggle that most closely echoes our own search for love, acceptance, and existential understanding. His treatment — and that of his robotic brethren — shines an uncomfortable light on our throwaway culture and the responsibility owed to that which we have created.

A.I.'s visual and emotional aesthetic offers a lot to its viewers, and its marriage of two distinct and contrasting points of view provides an unprecedented cinematic experience. ■

TOP: Trapped in the Flesh Fair, Joe and David await their destruction in front of baying human crowds. [Photo: United Archives GmbH / Alamy Stock Photo]

ABOVE: The Mechas' journey takes in many unexpected sights. [Photo: Moviestore collection Ltd / Alamy Stock Photo]

ALIEN

A YOUNG WOMAN WITH A CAT BECOMES THE ULTIMATE SURVIVOR OF A “HAUNTED HOUSE IN SPACE” IN *ALIEN*.



Between its unforgettable creature and its iconic survivor, Ripley, *Alien* has contributed a great deal to science fiction culture.

Ripley, played by Sigourney Weaver, is the prototypical science fiction feminist hero — and a character type we still don't see enough of on screen, over thirty years later.

Though she gets a more militaristic upgrade under the direction of James Cameron in *Aliens* (1986), in the first film, Ripley is no gun-toting survivor. She's an accomplished young woman, disrespected by her peers, who outlasts her crew through grit, determination, and an ability to think on her feet.

Following the grubby, lived-in feel of *Star Wars*, the characters in *Alien* are not legendary heroes — they're long-haul truckers in a minimum wage job.

This is a class parable in space: the crew of the *Nostromo* used by the corporate head honchos as disposable bodies. The Weyland-Yutani corporation shows it is more interested in maximising profits than in preserving human life.

As to the story itself: a science fiction horror classic begins when the crew of the commercial ship *Nostromo* awaken from cryo-sleep halfway through their journey

FILM DATABLAST

Director: Ridley Scott

Screenplay: Dan O'Bannon, from a story by Dan O'Bannon & Ronald Shusett

Producers: Gordon Carroll, David Giler, Walter Hill

Composer: Jerry Goldsmith

Director of Photography: Derek Vanlint

Editors: Terry Rawlings, Peter Weatherley

Cast: Tom Skerritt (*Dallas*), Sigourney Weaver (*Ripley*), Veronica Cartwright (*Lambert*), Harry Dean Stanton (*Brett*), John Hurt (*Kane*), Ian Holm (*Ash*), Yaphet Kotto (*Parker*), Bolaji Badejo (*Alien*)

Year: 1979

Duration: 116min

Aspect Ratio: 2.20:1 (70mm), 2.39:1

Country of Origin: USA

home, contractually obliged to investigate a mysterious distress signal.

After a damaging landing on a backwater planet, three of the *Nostromo's* crew discover a derelict alien vessel, a mummified pilot and a vast colony of extraterrestrial eggs.

Back on the *Nostromo*, Ripley, with assistance from the computer, MOTHER, decodes the signal — it's a warning.

But it's too late: Kane investigates one of the eggs — and is attacked by a crablike parasite that attaches itself to his face. Breaching all the regulations of quarantine, Kane is speedily brought back to the *Nostromo's* infirmary.

Attempting to remove the creature, Ash and Dallas discover it bleeds acid, which burns through several decks before it loses its potency.

Eventually, the creature detaches, and Kane revives.

Soon the *Nostromo* is spaceworthy again. The crew gather for one last meal before re-entering hypersleep. That's when Kane starts choking — which turns into violent convulsions, followed by a small, snake-like creature bursting out of his ribcage and escaping into the ship.

After a funeral, the crew assembles to hunt the creature... but they are hunted by the xenomorph in their turn. It sheds its snakelike skin and rapidly evolves into a dual-mouthed, chitin-skinned predator of terrifying cunning and size.

As her colleagues are picked off one-by-one, Ripley discovers Special Order 937: the *Nostromo* was deliberately re-routed to acquire the deadly lifeform now on board.

She is confronted by Ash, revealed to be an android and determined to stop her alerting the crew, but Ripley is saved and Ash is beheaded.

The surviving crew decide that the only way to escape the xenomorph is to set the *Nostromo* to self-destruct and escape on the shuttle.

But the alien aboard is too clever for them, and soon it's only Ripley and the ship's cat, Jones, left alive.

At the end, only quick thinking and compressed air, a harpoon, the vacuum of space, and the burning flames of the shuttle's engines can finally kill the alien.

Before she and Jones enter hypersleep, Ripley logs one final entry: Kane, Lambert, Parker, Brett, Ash, and Captain Dallas are dead.

The iconic alien xenomorph went through multiple iterations. Director Ridley Scott originally wanted the creature to be an animatronic puppet: his mind was changed after meeting the near-7ft tall Bolaji Badejo, a Nigerian dancer and artist, who wore the final suit.

The nightmarish, sexually-charged designs of H.R. Giger, too, went through varying degrees of horrific explicitness. The nature of the xenomorph's blood — that it bleeds acid — came from Conceptual Artist Ron Cobb, solving the narrative loophole of why the *Nostromo* crew can't just shoot the alien.

Wisely, like Spielberg and the shark in *Jaws*, Scott shot



**"IT'S GOT A WONDERFUL DEFENSE MECHANISM. YOU DON'T DARE KILL IT."
— PARKER**

the alien in deep shadow, letting the imagination of the audience do most of the work. The creature appears on screen for just over *four minutes* in the final film, and doesn't appear in its final form for over an hour.

HIDDEN ANDROIDS

Unlike in *The Terminator*TM, where the T-800 Endoskeleton is human at a glance, but with robotic movements that give it away under scrutiny — the android Ash is indistinguishable from a human until he attacks Ripley, bleeding a milky and inhuman liquid.

From Ridley Scott's perspective, the *Alien* films and *Blade Runner* are set in the same universe. There's much to suggest that Ash is the latest in a long line of replicants — but his presence begs a key question.

If androids can do everything that humans can do, with no qualms or inconvenient morals to get in the way... why are there humans aboard the *Nostromo* at all?

It likely comes down to a matter of expense. Even in the future, androids remain expensive to build, while humans — especially in an overpopulated and under-resourced future — are far easier to come by. And, as Special Order 937 illustrates, much more disposable.

Ripley's survival also shows that humans may also have the edge over androids in this kind of life-or-death scenario — her constant on-the-spot improvisations exceeding the bounds of Ash's more limited programming. ■

OPPOSITE: The fearsome, acid-blooded xenomorph emerges from the shadows to take another victim. [Photo: Moviestore Collection Ltd, Alamy Stock Photo]

ABOVE: Ripley [Sigourney Weaver] forces the android Ash [Ian Holm] to tell her the truth about the corporation's plans. [Photo: Moviestore Collection Ltd, Alamy Stock Photo]

THE TURING TEST

CAN MACHINES THINK?

The Terminator™ T-800 Endoskeleton is driven by an independent consciousness. It thinks in ways that are different to humans, but can mimic many human behaviours, even being perceived as human under certain circumstances... before its robotic nature gives itself away.

Several years before the term 'artificial intelligence' was coined by the American computer expert John McCarthy (in 1955), Alan Turing, in his paper *Computing Machinery and Intelligence* (1950) reflected on whether or not machines would be one day able to think for themselves. His paper begins by defining some simple parameters by which machines could be tested.

Turing proposed that a person sat in front of a computer screen would maintain two parallel conversations, one with another person, and one with a machine. As both person and machine would be hidden from the human tester, and their answers communicated to the tester only by text, if the machine was able to fool the person into thinking they were human, it could be argued that the machine had the capacity to think.

To be clear, the Turing Test, or 'The Imitation Game', does not test whether a computer or machine is truly

WHO WAS ALAN TURING?

As well as his contributions to the theory of computing, Alan Turing played a fundamental part in the Allied victory in the Second World War. Working out of the codebreaking hub of Bletchley Park, he helped break the encryption on the Enigma machine, a fiendishly difficult encoding device used by the Germans.

Having broken the codes, the machine allowed the Allies to anticipate Nazi attacks — meaning Turing's team managed to save millions of lives and may have shortened the war by up to four years.

Despite his life-saving work, Turing's life ended in sorrow. His career was cut short when he was arrested for homosexuality (on charges of gross indecency). Rather than prison, he chose chemical castration. Unable to face life after the changes the sentence wrought on him, he died after eating an apple laced with cyanide, at just 41 years of age.

Turing received a posthumous royal pardon in 2013, and his name now graces the Alan Turing Law, passed in January 2017, which pardons men similarly affected by unjust charges.





“THE ORIGINAL QUESTION, “CAN MACHINES THINK?” I BELIEVE TO BE TOO MEANINGLESS TO DESERVE DISCUSSION.” — ALAN TURING

intelligent in and of itself, but rather, whether it is possible to fool a human interrogating an unseen intelligence into believing a machine is a human.

The test itself is only a small part of a paper that ultimately dismisses the question of “Can machines think?” as meaningless — as Turing predicts that “in about fifty years’ time” computers will be able to play the game so well that people won’t be able to tell person from machine more than 70% of the time, even after over five minutes of questioning, and that not long after, machines will be so sophisticated that the question will become not *can* they think, but *how* do they think?

BOT TO BOT

If you have ever visited a commercial website and typed in one of the helpful chat boxes that pop up, you may have been participating in a Turing Test of your own. Many companies now use sophisticated Chat Bots as the first line of customer service, with the bots coded to escalate any queries they cannot easily parse to a human operator, who can then seamlessly take over.

Given a database pooled from the most common queries, many bots can now deal easily with everyday inquiries like, “Do you have this item in stock?”, “Where is my order?”, or “I want to return an item”.

Companies that use bots also go out of their way to

put us at our ease. Have a look at the graphics on the help boxes when next they pop up — they’re usually illustrated with smiling images of employees, and the bot may even introduce itself with a first name, and a “How may I help?”

With only a picture and a name, we humans are trained to create a mental image of a real person at the other end of the line. Many customers go through entire interactions of this kind without realising they are talking to a bot.

TEST-PASSING ASSISTANTS

In the light of how sophisticated consumer AI is becoming — would Alexa, Siri, Cortana, or the Google Assistant pass the Turing Test? As their language simulation becomes ever-more natural, it’s possible that they already do, thousands of times a day. It’s *also* possible that a more modern version of the Turing Test, with the subject of the Test communicating with the tester over telephone or Skype, could now be passed on a regular basis.

Going yet further, with the rise of ‘DeepFake’ technology, a form of AI-powered image replacement where video footage of people can be altered and placed into entirely new contexts, we are entering a period where a video-based Turing Test is now entirely plausible. To pass such a test *today* would be exceptionally difficult — but within two, five, ten years? The simulation could be completely seamless.

But — and this is still the most important part — just because the human tester cannot tell that a computer isn’t a human, that doesn’t mean that the computer can truly *think*, nor that the computer has a sense of self. Those considerations are outside of the parameters of the Turing Test, which is as much a test of human cognitive biases as anything else. ■

OPPOSITE: A photo portrait of Alan Turing. [Photo: Science History Images / Alamy Stock Photo]

ABOVE: An original Enigma Machine, as used to decode enemy messages during WWII. Taken in Bletchley, England, in June 2015. [Photo: Shutterstock]

A close-up of a LEGO Terminator T-800 head and upper torso. The figure is dark grey with visible mechanical details like pipes and joints. It is surrounded by a shower of bright orange and yellow sparks, suggesting it is being built or modified. The background is dark with some faint horizontal lines on the left side.

THE TERMINATOR™

BUILD THE T-800