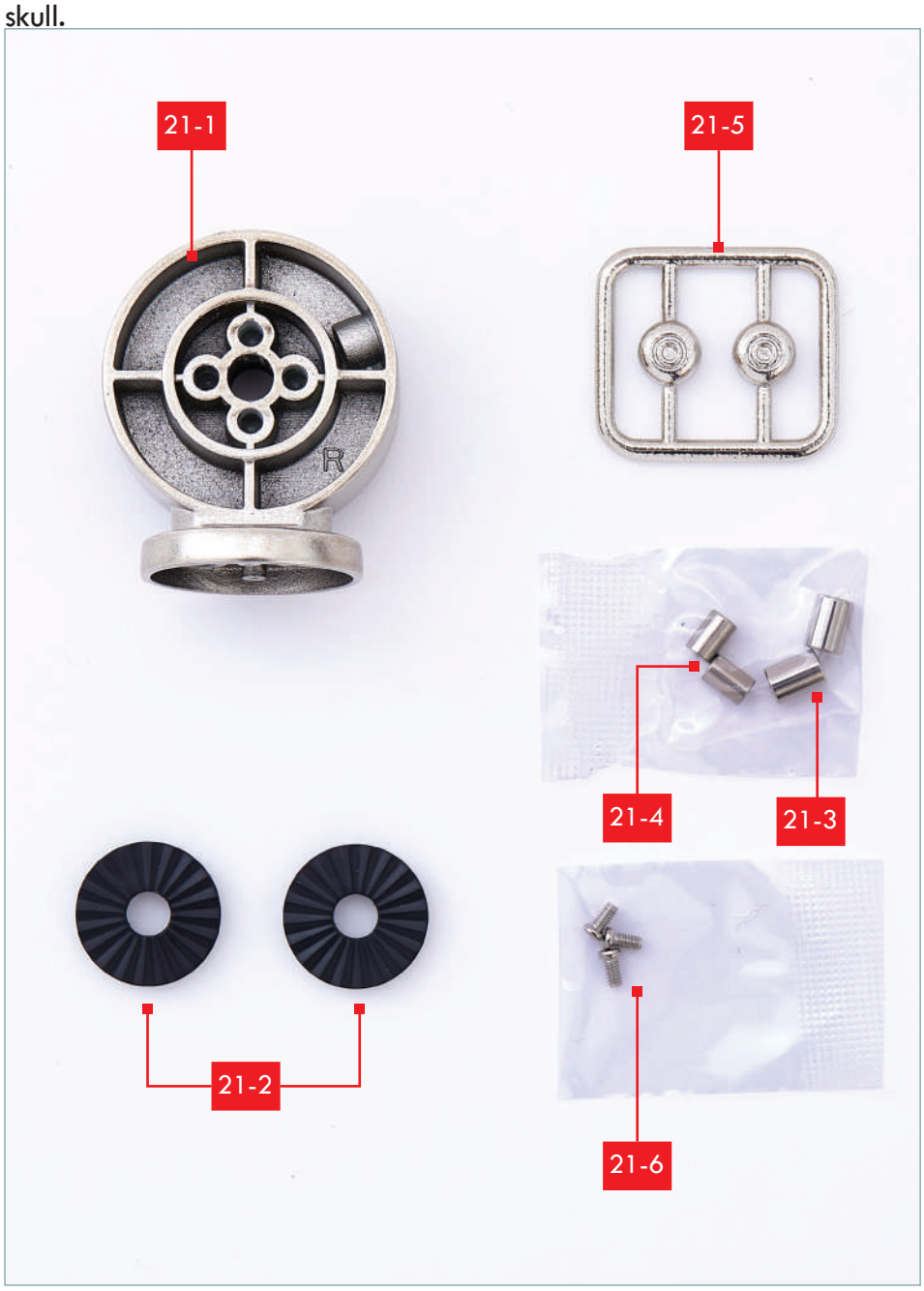
STAGE 21: ASSEMBLE THE RIGHT SHOULDER JOINT AND CONNECT UP THE SKULL

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.

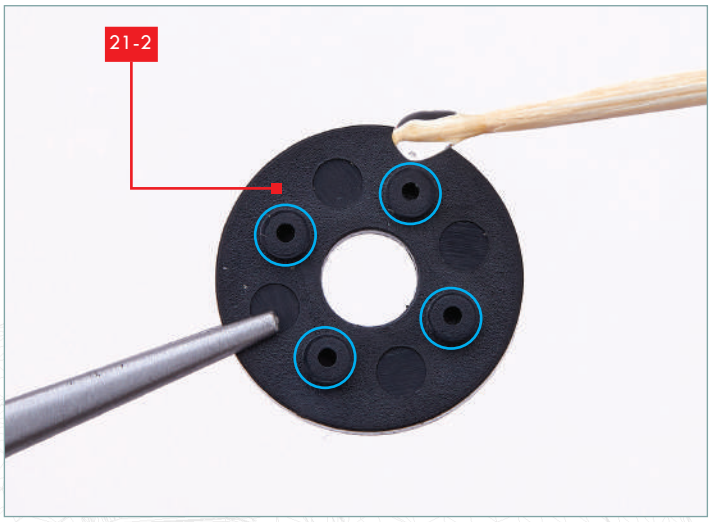


LIST OF PIECES

21-1	Right shoulder joint
21-2	2x Right shoulder joint fitting
21-3	2x Metal shaft (larger)
21-4	2x Metal shaft (smaller)
21-5	2x Lower jaw joint cover
21-6	3x PM screw (2x4 mm) (1 spare)

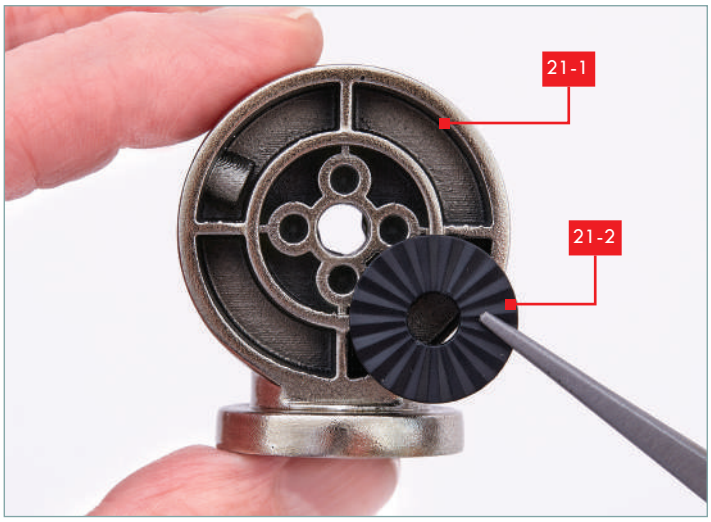
YOU WILL ALSO NEED

A cross-head screwdriver, tweezers, a craft knife and cutting mat, superglue gel and cocktail sticks or similar, the skull assembly from stage 17, the head assembly from stage 20.



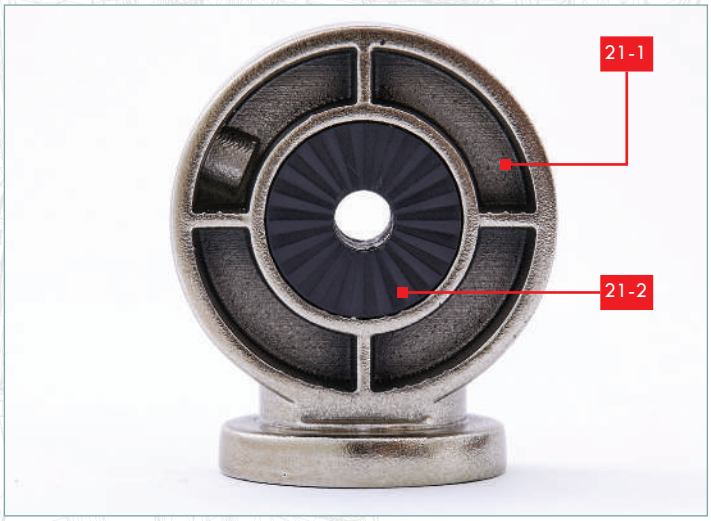
STEP 1

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

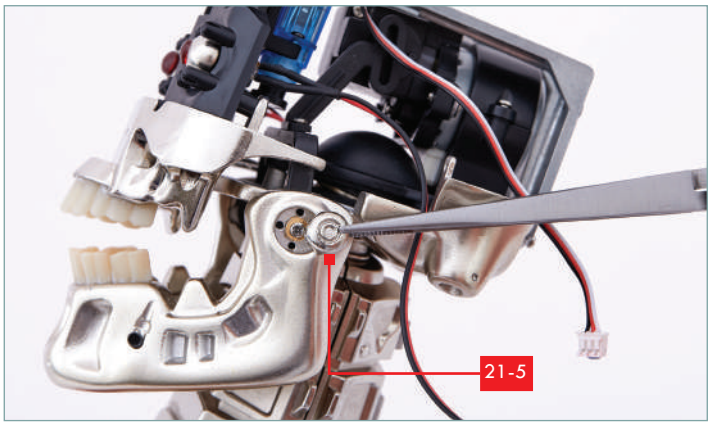
Repeat steps 1 and 2 with the second shoulder joint fitting **21-2** to fit it into the recess on the other side of the shoulder joint **21-1.**

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.

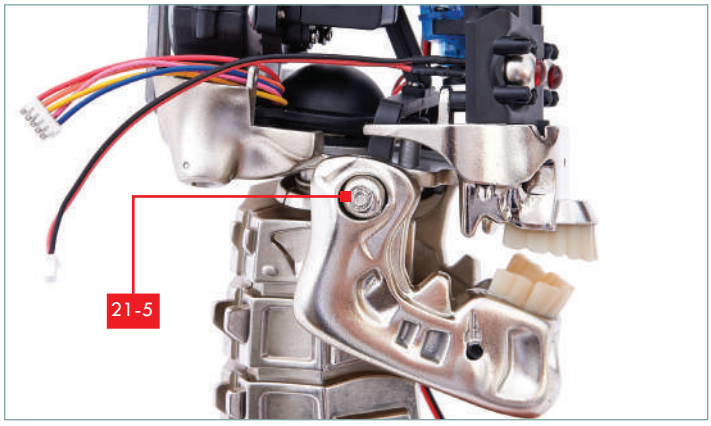
STEP 5

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.



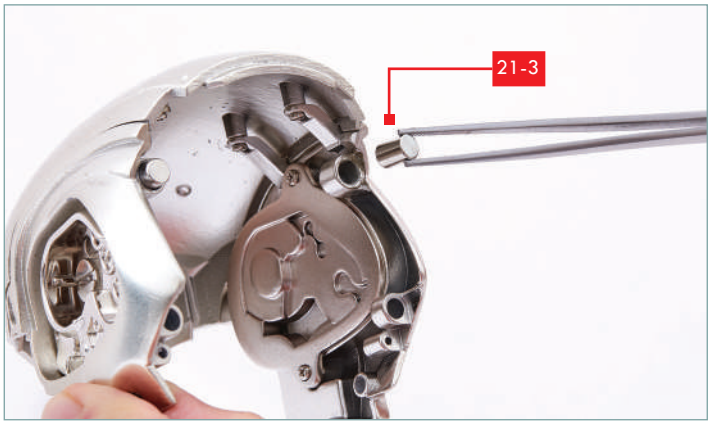
STEP 6

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.



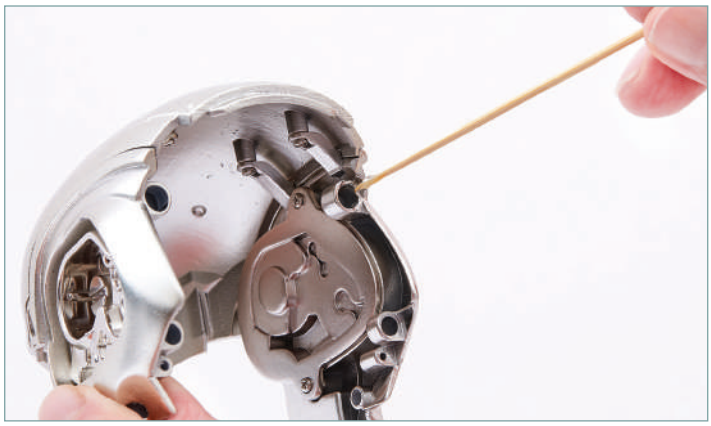
STEP 7

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.



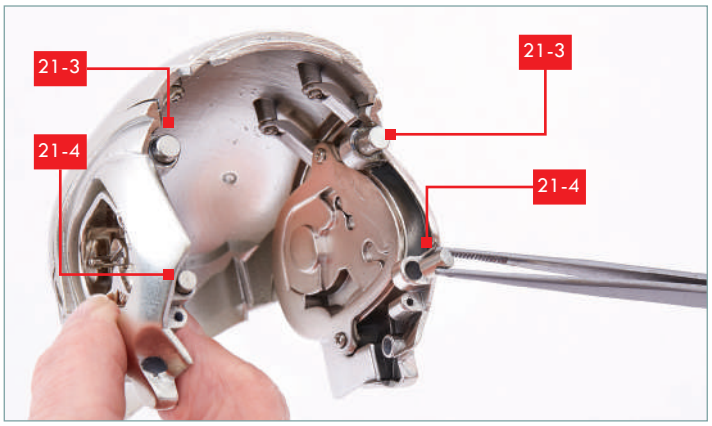
STEP 8

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.

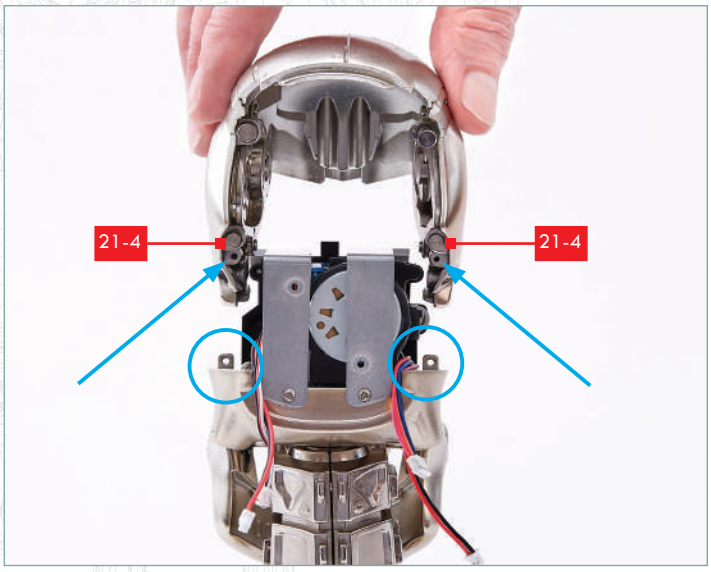


STEP 10

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.

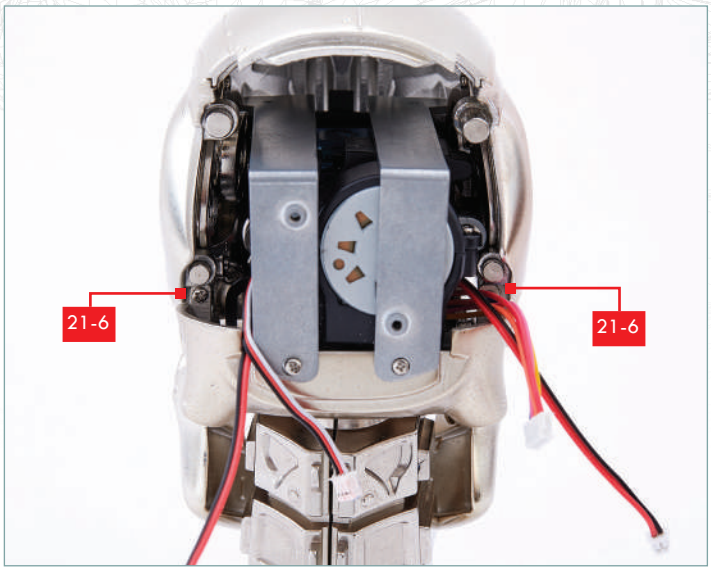
STEP 11

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**

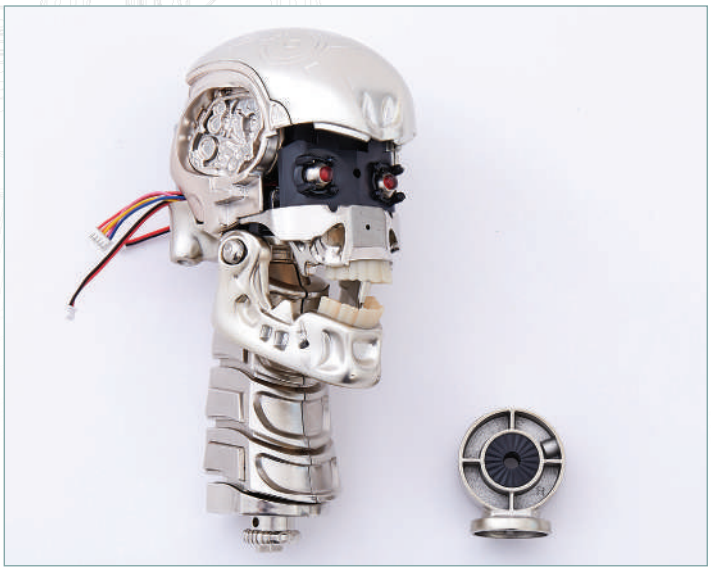


STEP 13

Use two PM 2x4 mm screws **21-6** to fix the skull to the lower jaw. The screw on the left side of the head is circled.

NOTE

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

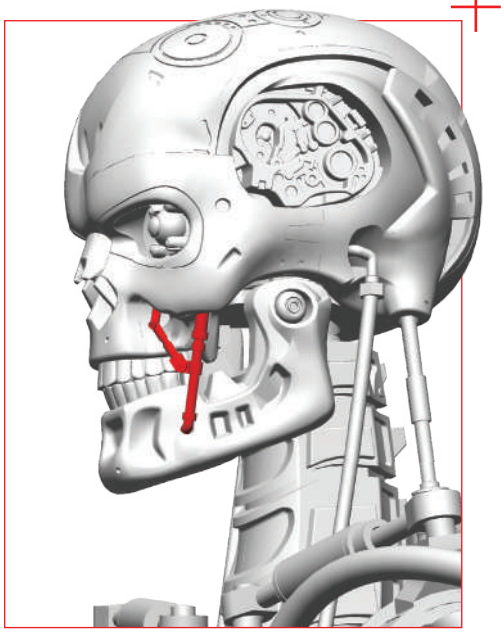


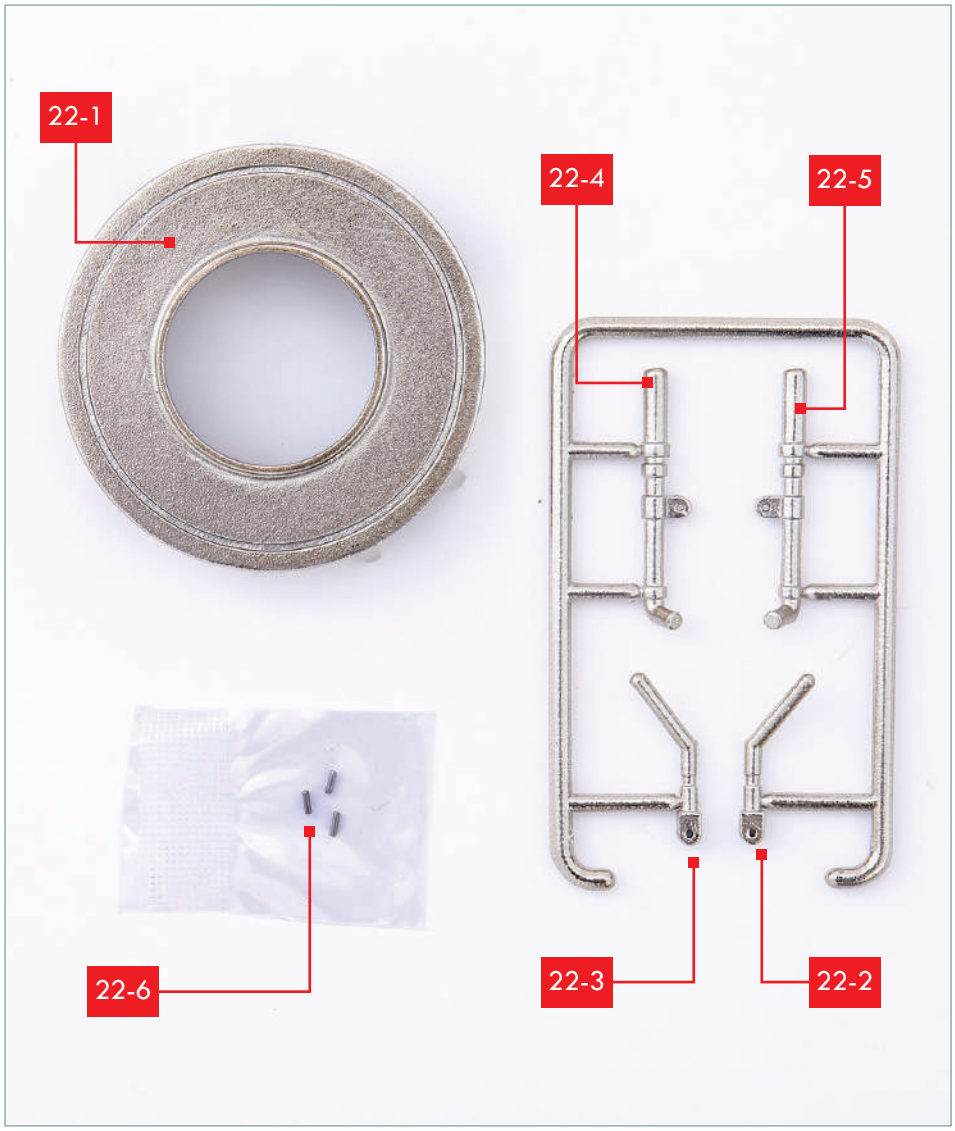
STAGE COMPLETE

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.

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.



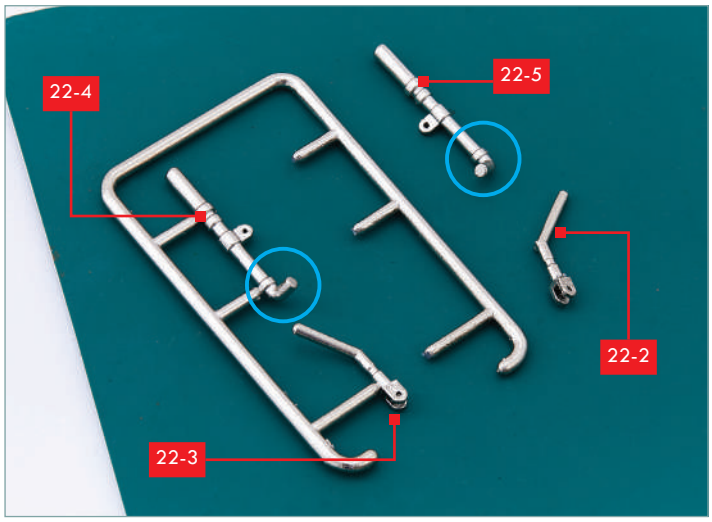


LIST OF PIECES

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	3x Jaw pin (1 spare)

YOU WILL ALSO NEED

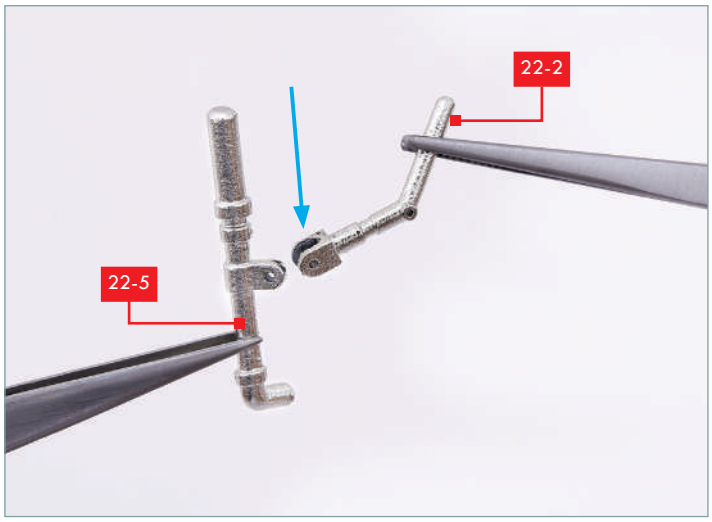
Cutting mat or suitable surface, tweezers, a fine dressmaking pin or needle, superglue, the Head assembly from stage 21 and the Faceplate assembly from stage 10.



STEP 1

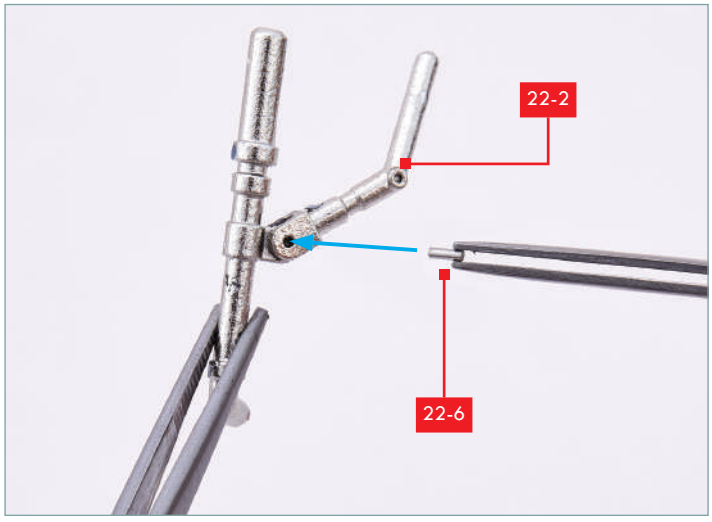
Place the plastic frame on a suitable cutting surface in the orientation shown. NOTE: the frame has been positioned so that the pegs at the bottom of parts **22-4** and **22-5** turn upwards (circled above).

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.

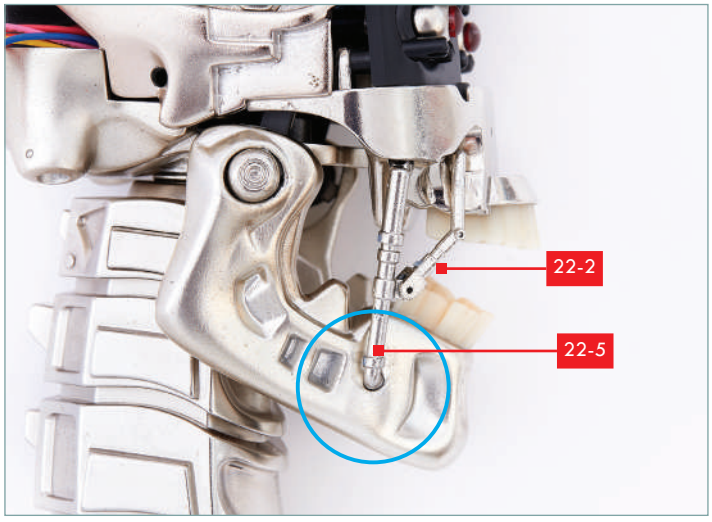


STEP 3

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**.

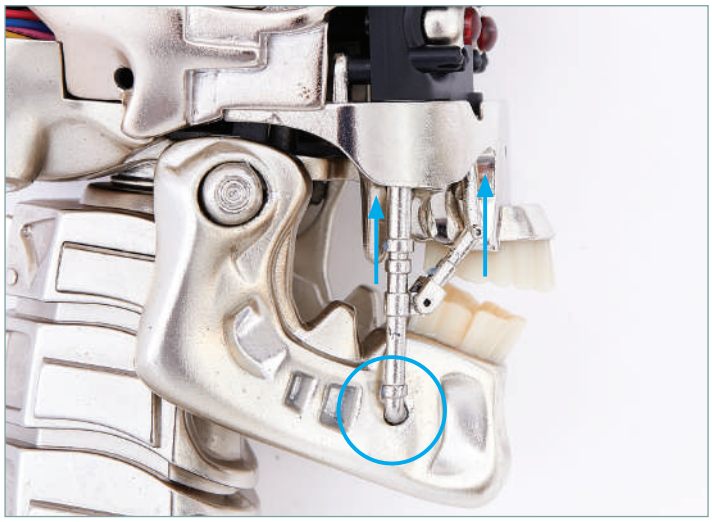
EXPERT TIP!

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.



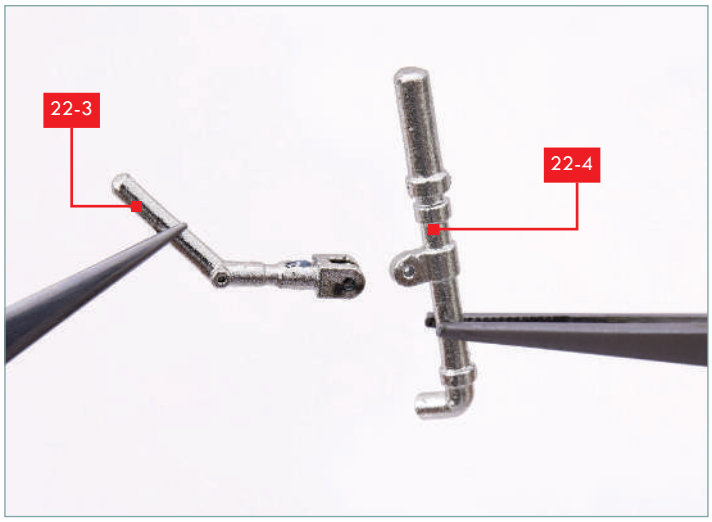
STEP 4

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).



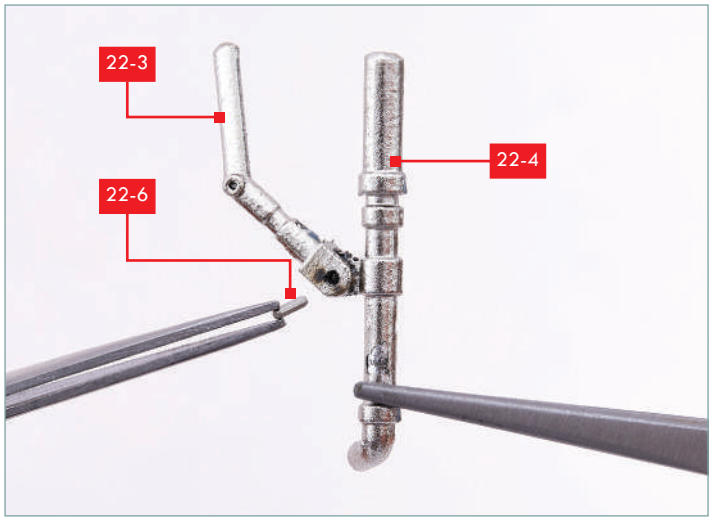
STEP 5

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.



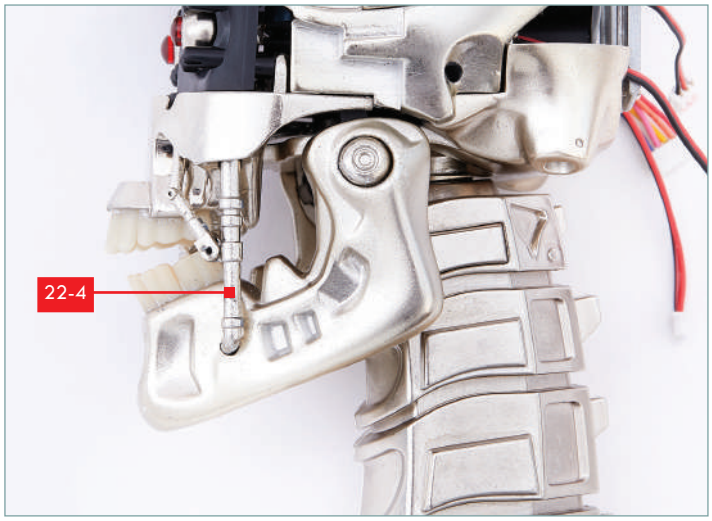
STEP 6

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.



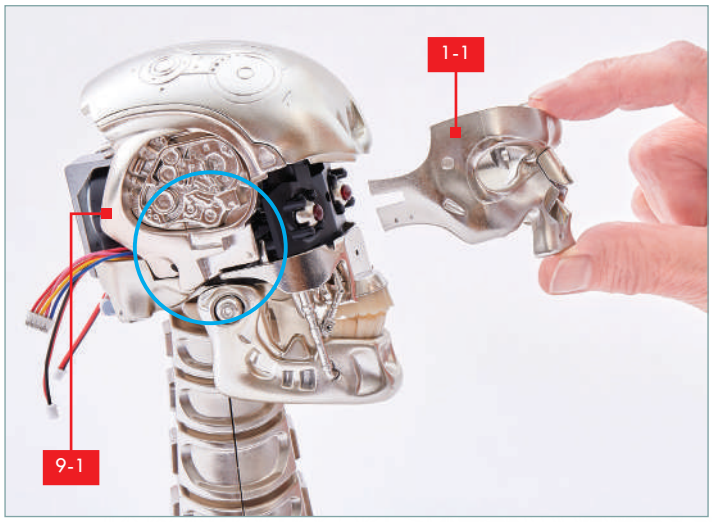
STEP 7

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



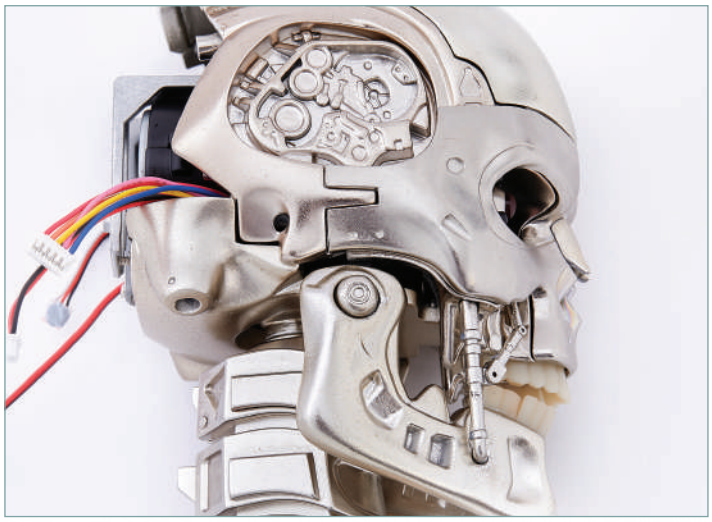
STEP 8

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.



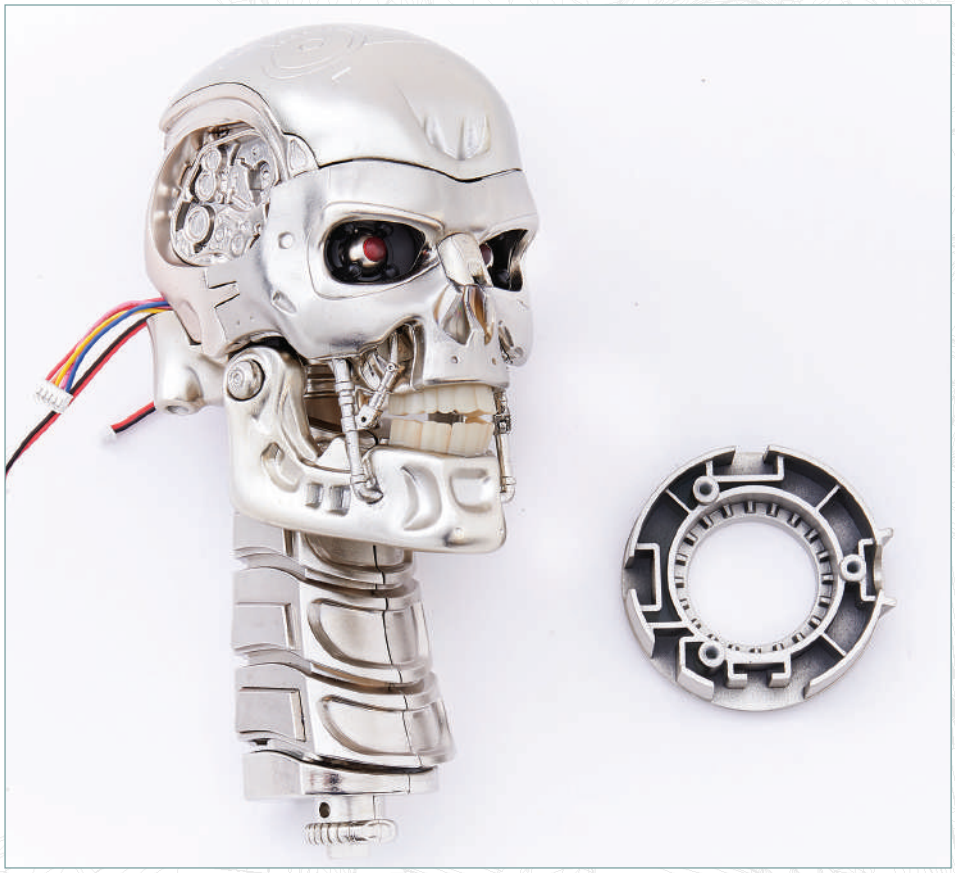
STEP 9

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.

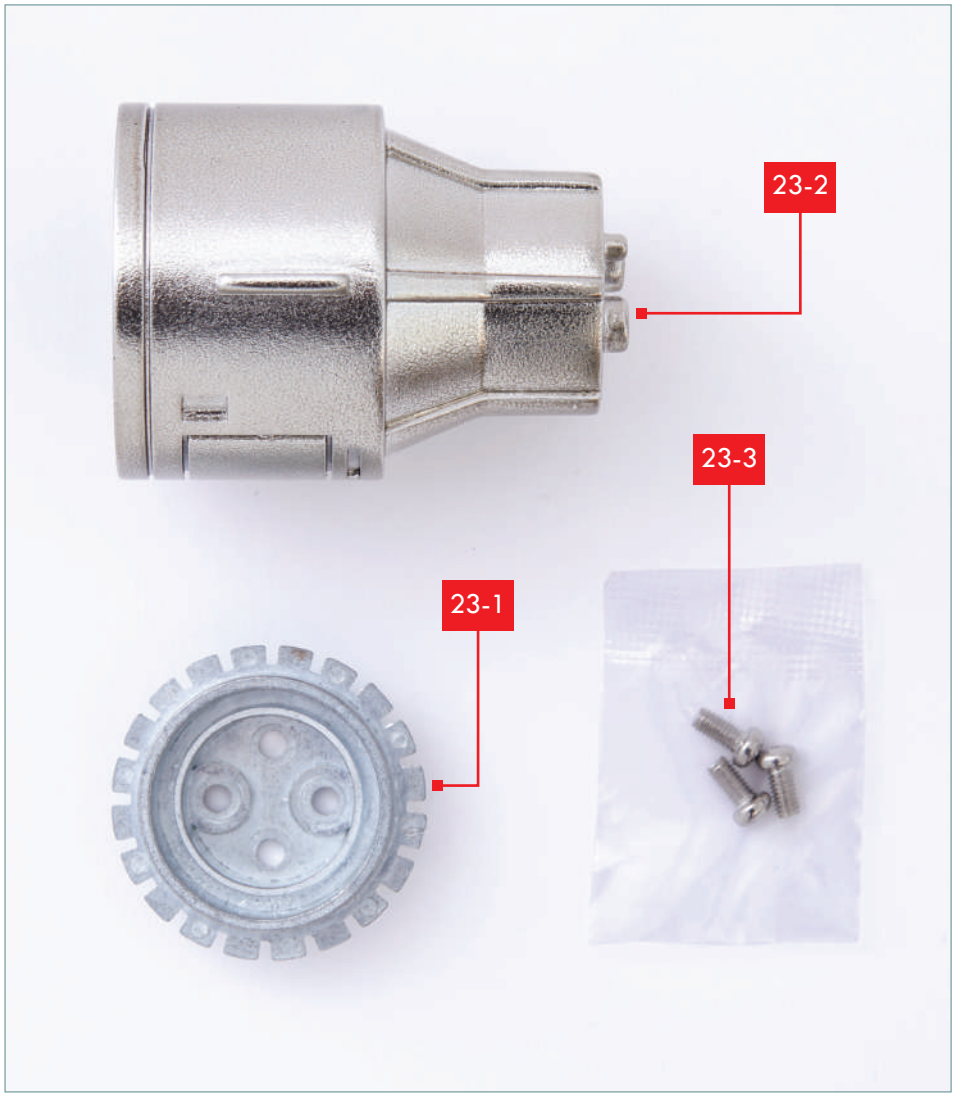


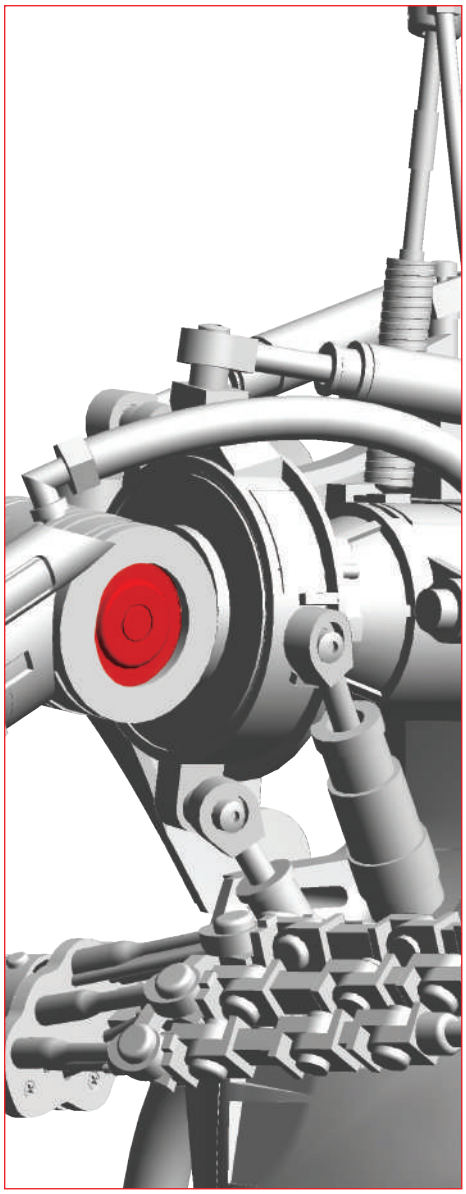
STAGE COMPLETE

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

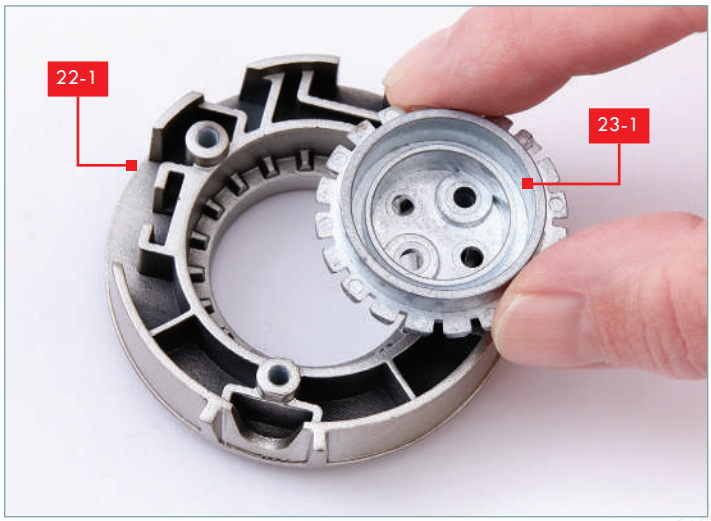
23-1	Right shoulder joint
23-2	Right shoulder joint (inner)
23-3	3x PM screw (3x6 mm) (1 spare)

YOU WILL ALSO NEED

A cross-head screwdriver, the Shoulder joint assembly from stage 21and the Shoulder part from stage 22.

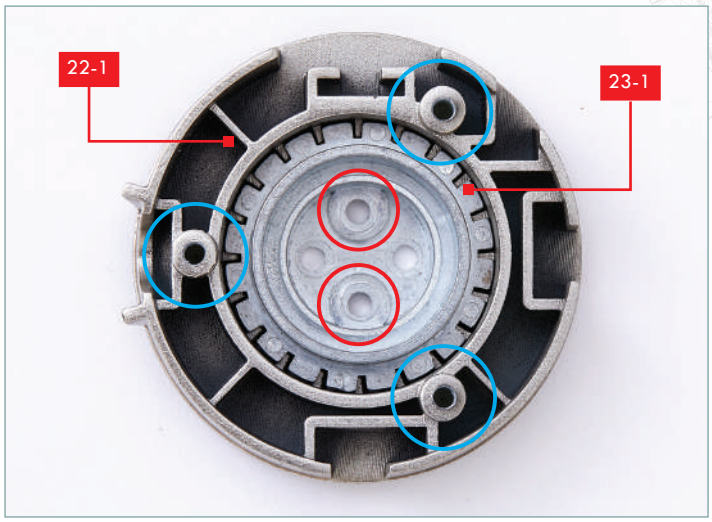
STEP 1

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

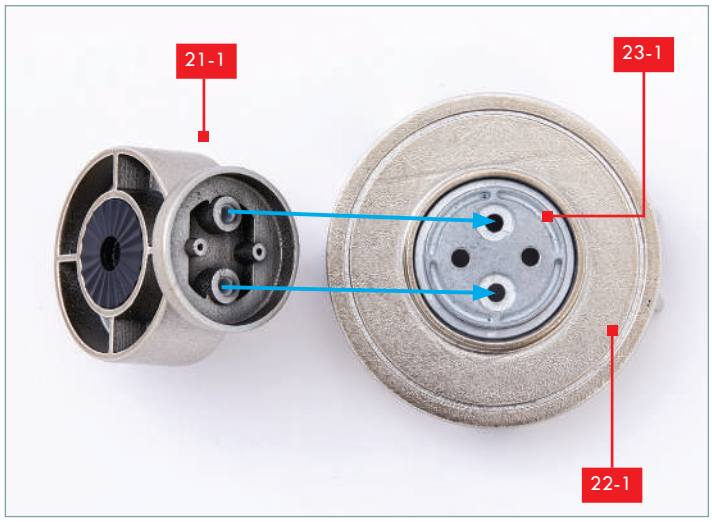
Fit the inner part of the right shoulder joint **23-1** into the shoulder part **22-1**. Ensure the teeth around the outer edge of part **23-1** fit into the recesses in part **22-1**.



STEP 3

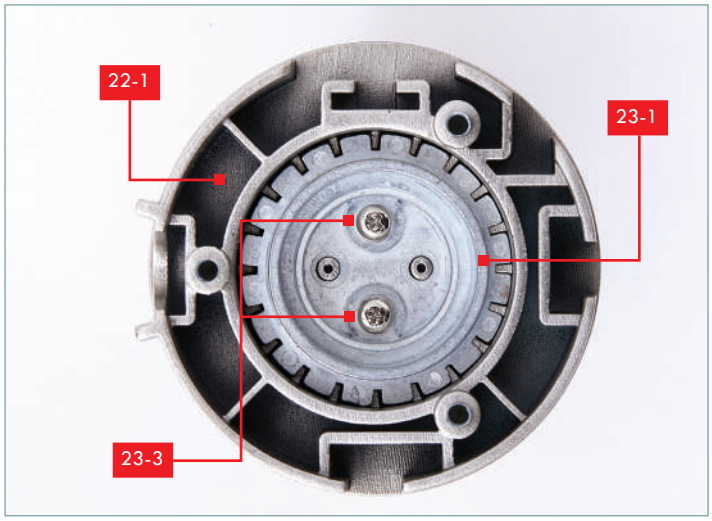
Note the orientation of the parts: ensure that the three screw holes in part **22-1** (circled in blue) are arranged as shown, with the raised screw sockets in part **23-1** (circled in red) vertically aligned.

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.



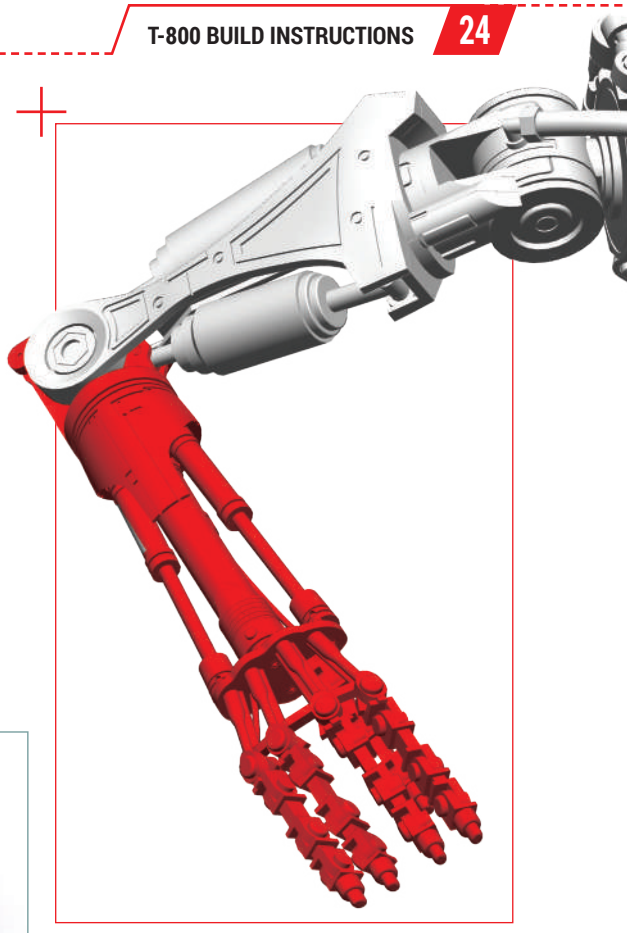
STEP 5

From behind, fix the shoulder part **22-1** in place from the inside of part **23-1** using two PM 3x6 mm screws (**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	4x Right hand muscle connector
24-5	2x KB screw (2x6 mm) (1 spare)
24-6	2x PB screw (2x6 mm) (1 spare)

YOU WILL ALSO NEED

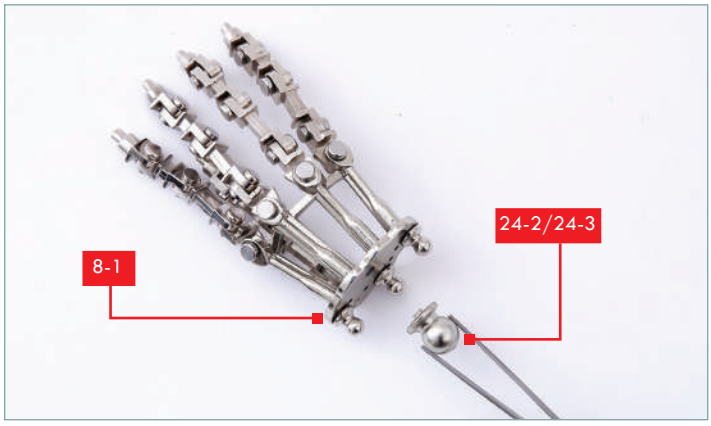
A cross-head screwdriver, a cutting mat or suitable surface and craft knife, superglue, tweezers, the Hand assembly from stage 15 and the Lower arm assembly from stage 16.

STEP 1

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

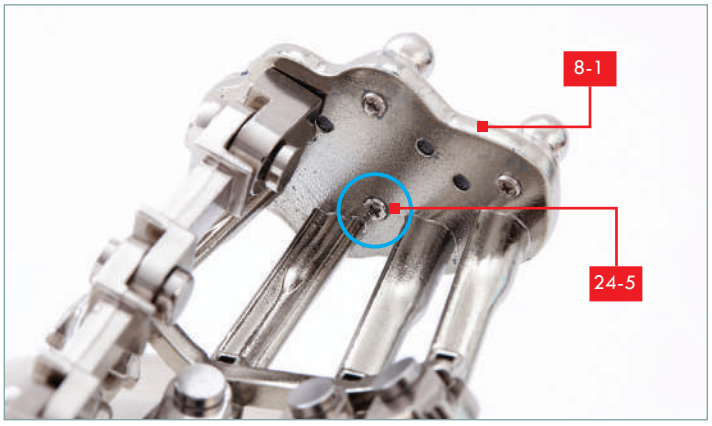
STEP 2

Use a PB 2x6 mm screw (**24-6**) 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.



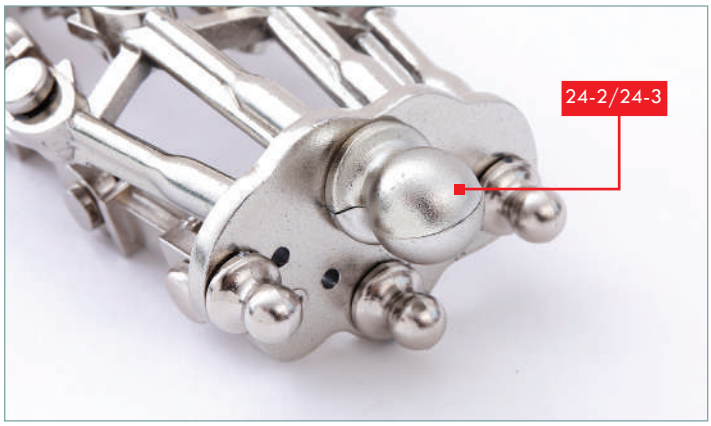
STEP 3

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.



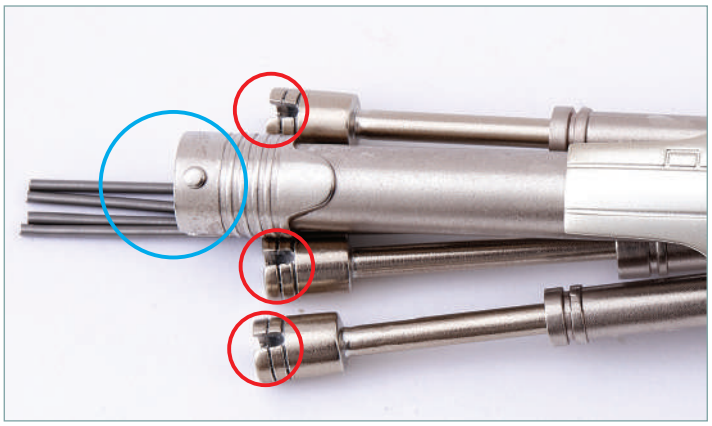
STEP 4

Screw the ball joint in place from the inside of the hand assembly, using a KB 2x6 mm countersunk screw (**24-5**).



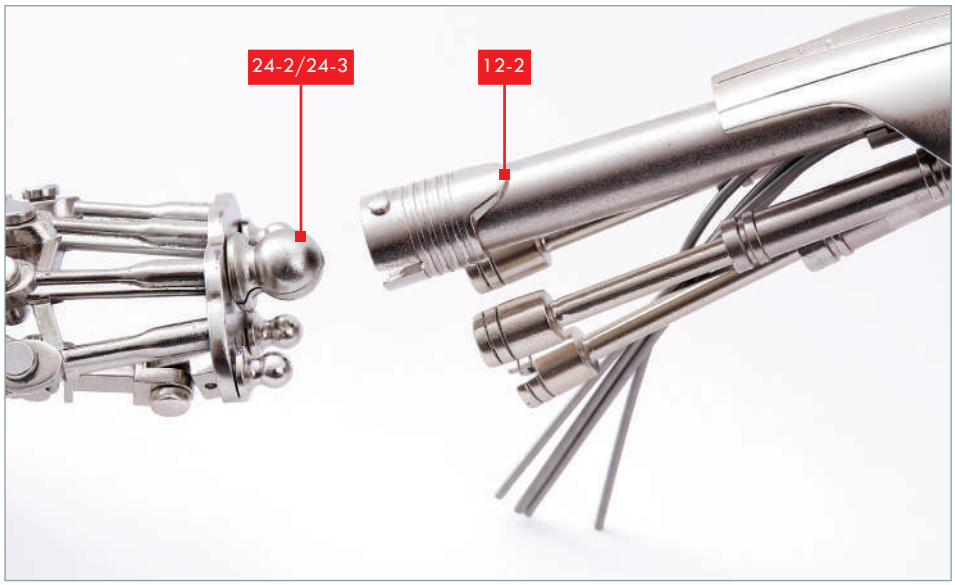
STEP 5

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



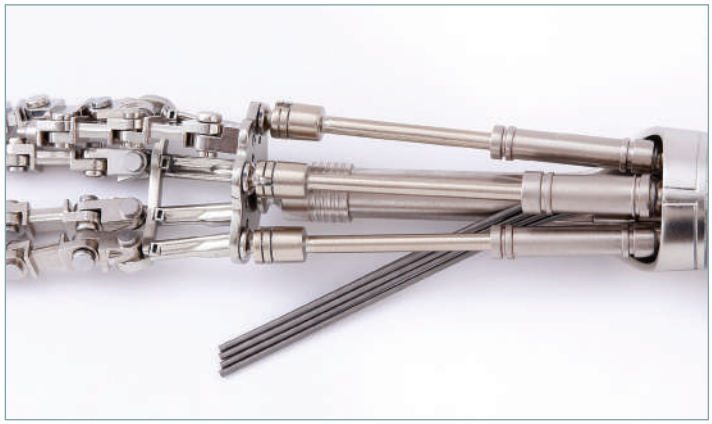
STEP 6

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.



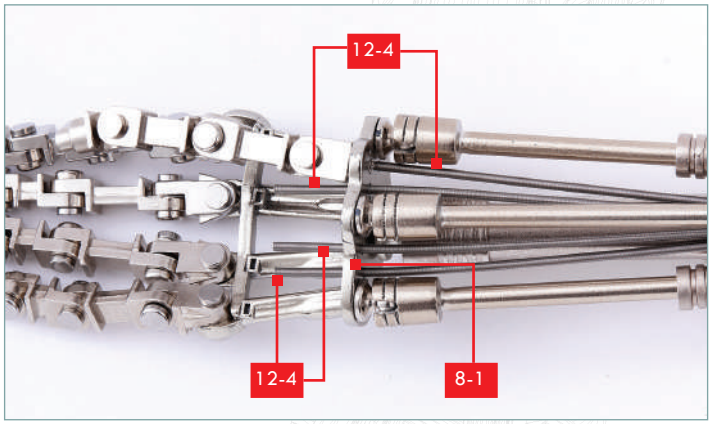
STEP 7

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.



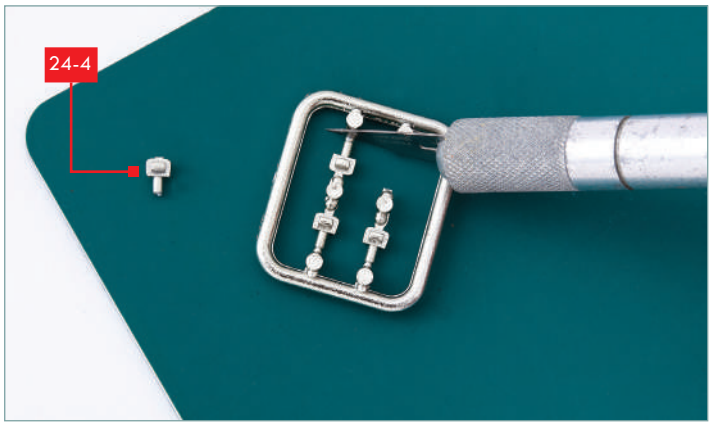
STEP 8

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.



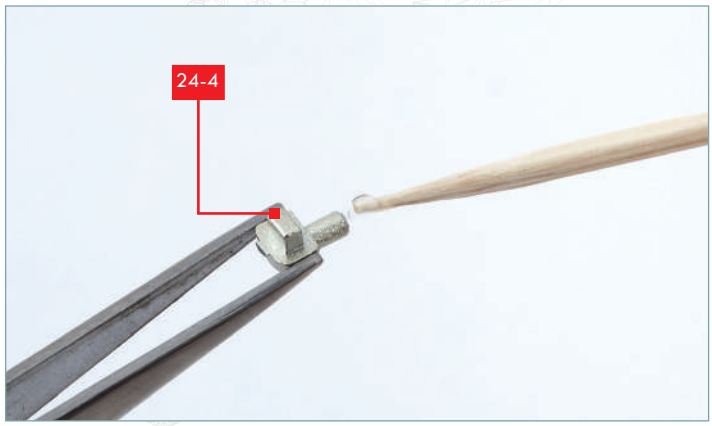
STEP 9

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.



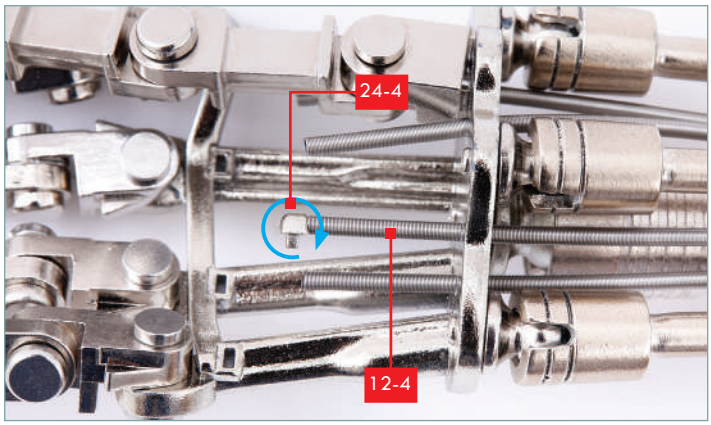
STEP 10

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

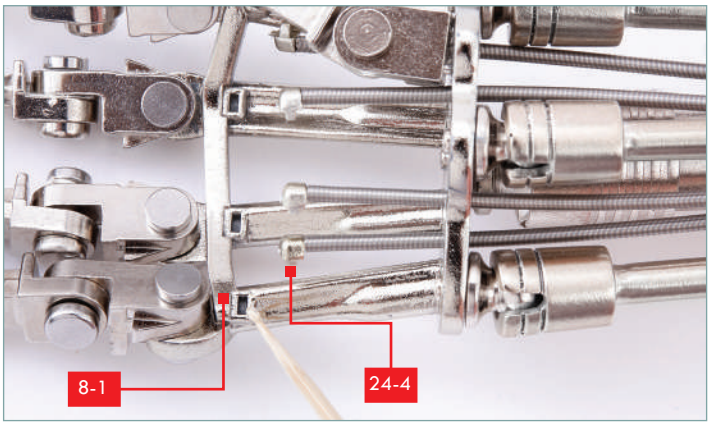
Take the first connector **24-4** and apply a tiny drop of superglue to the sides of the long round peg.



STEP 12

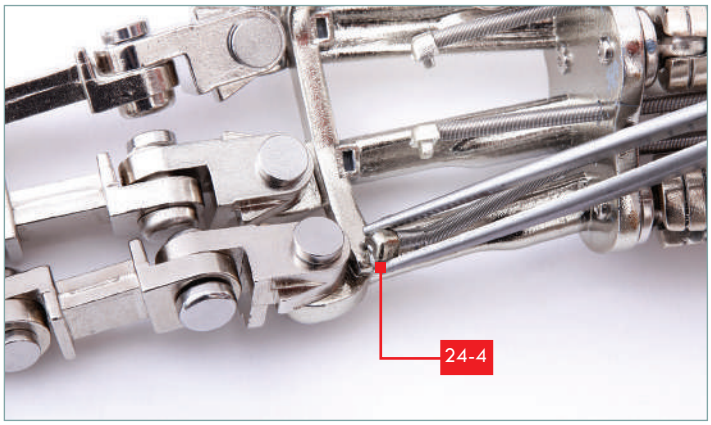
Fit the connector peg (**24-4**) into one of the spring muscles (**12-4**), turning it clockwise so that it fits snugly into the end of the spring (indicated by the blue arrow).

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!

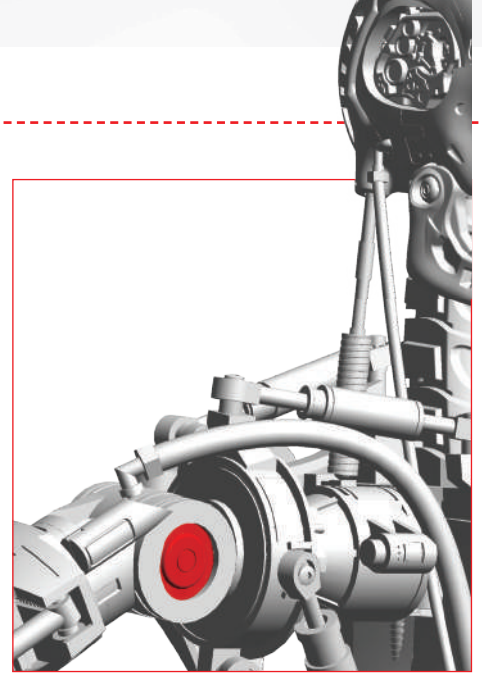
It may help to anchor the stretched springs to the base of the hand with a little pressure sensitive putty (Blu Tack) while you work. This will stop the springs from pulling at the connectors and make it easier to hold the springs in place while the glue dries.

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.

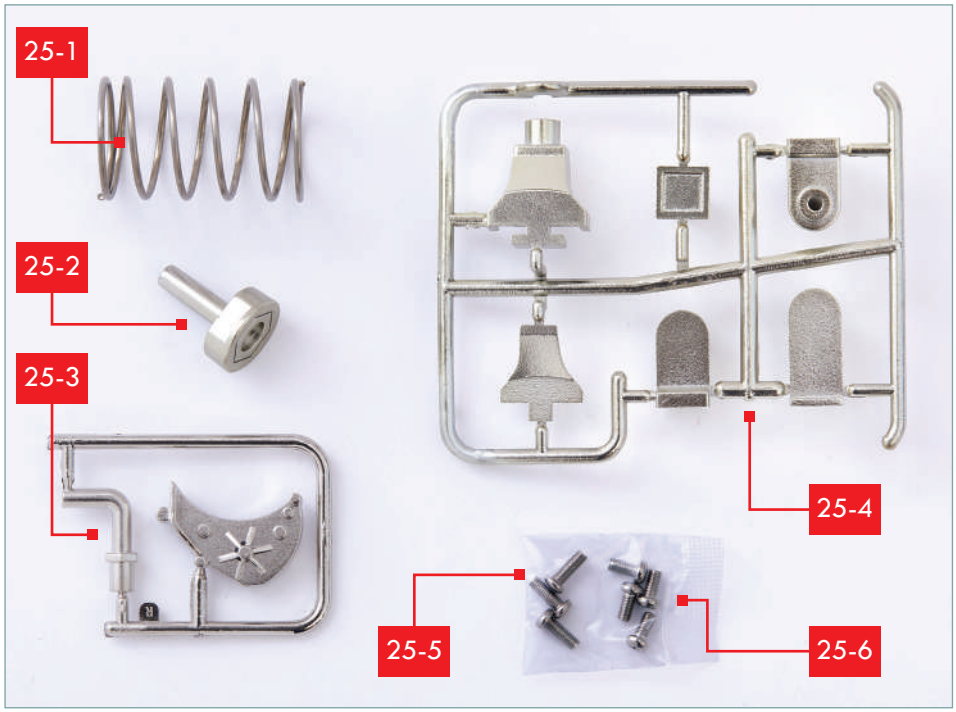


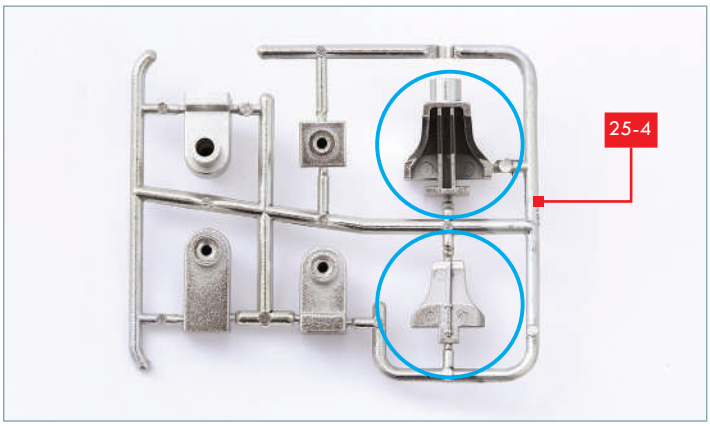
LIST OF PIECES

25-1	Right shoulder spring
25-2	Right elbow pin
25-3	Right shoulder accessories
25-4	Right shoulder accessories
25-5	3x PM screw (3x8 mm) (1 spare)
25-6	4x PM screw (3x6 mm) (1 spare)

YOU WILL ALSO NEED

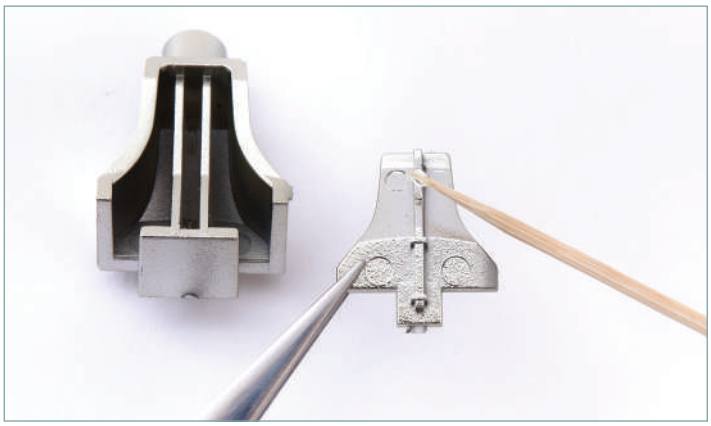
A cross-head screwdriver, a cutting mat or suitable surface and craft knife, superglue, tweezers, the Shoulder assembly from stage 23, the Shoulder joint part 23-2 and the Shoulder plate 24-1.





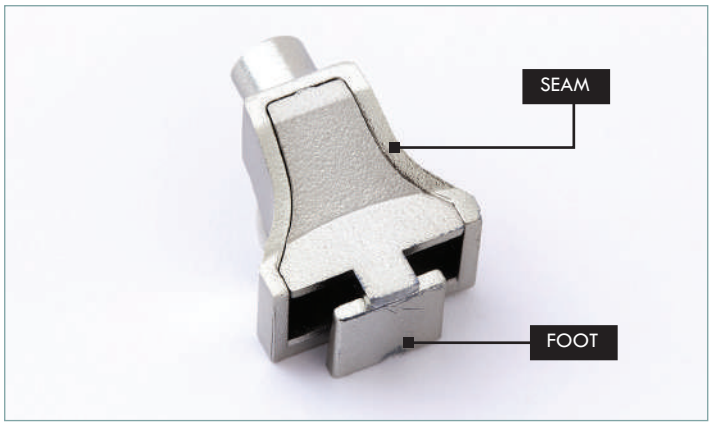
STEP 1

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.



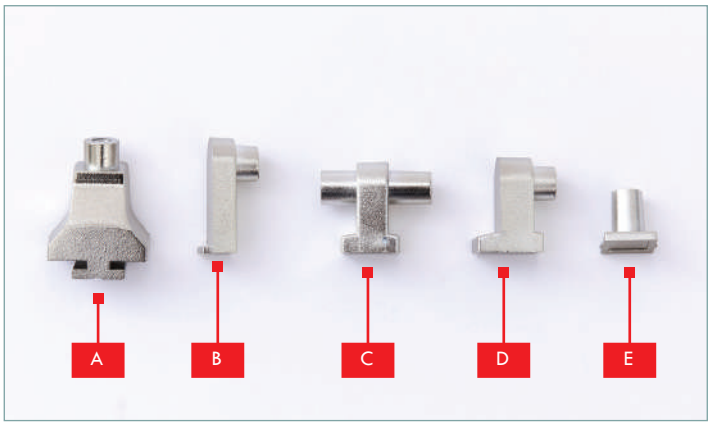
STEP 2

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



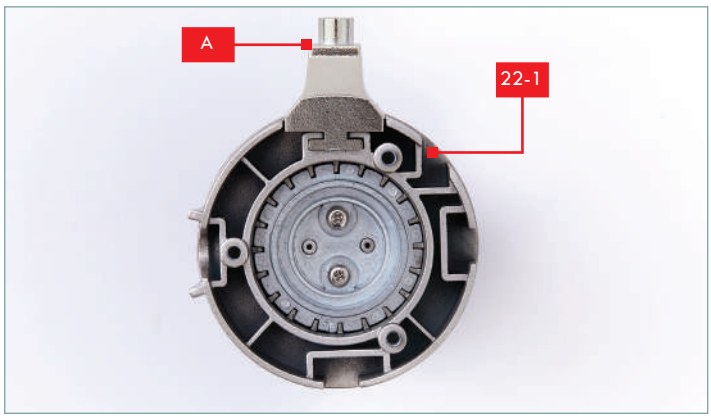
STEP 3

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



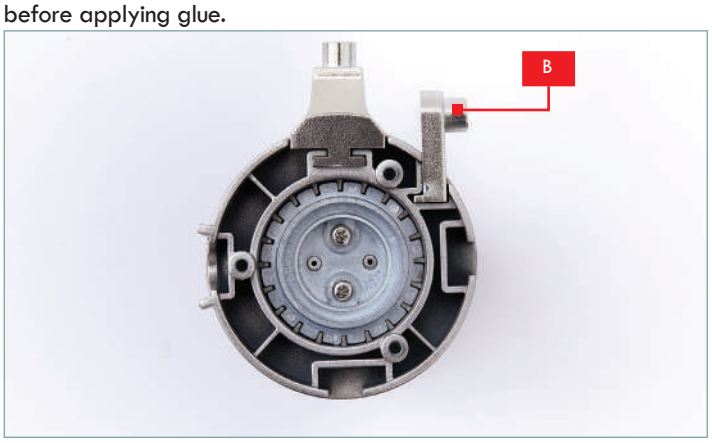
STEP 4

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.



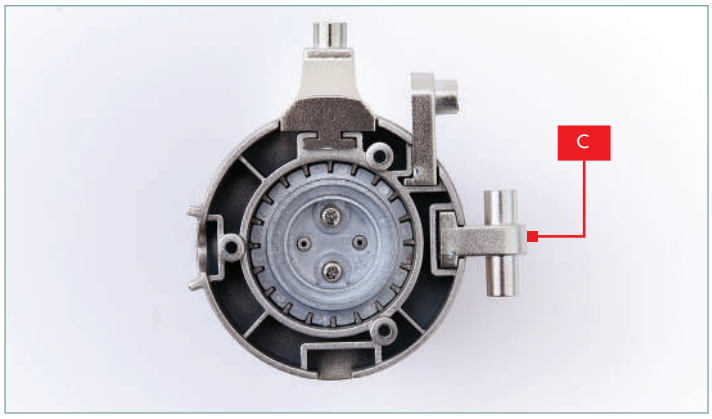
STEP 5

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.



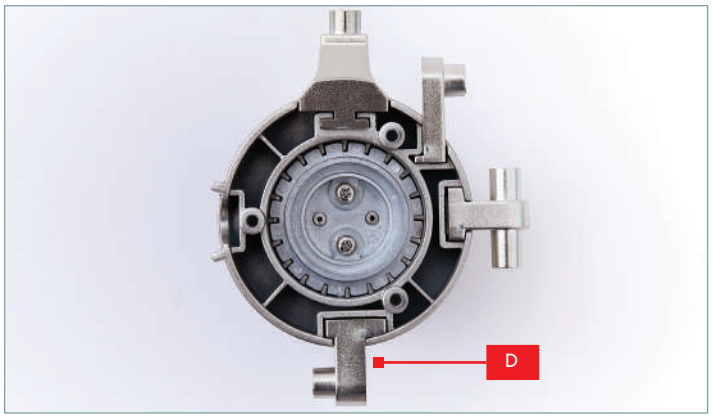
STEP 6

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



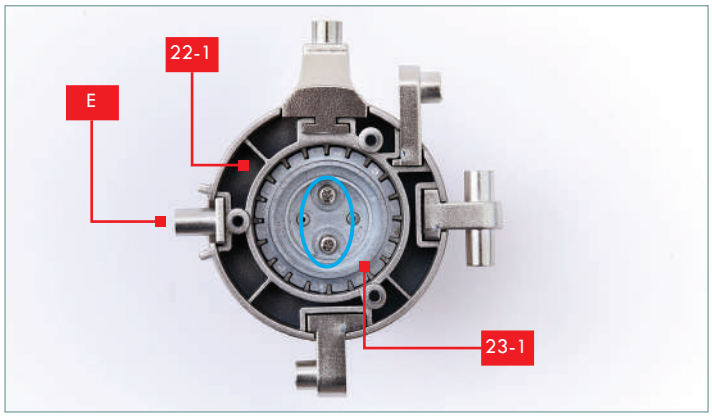
STEP 7

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**.



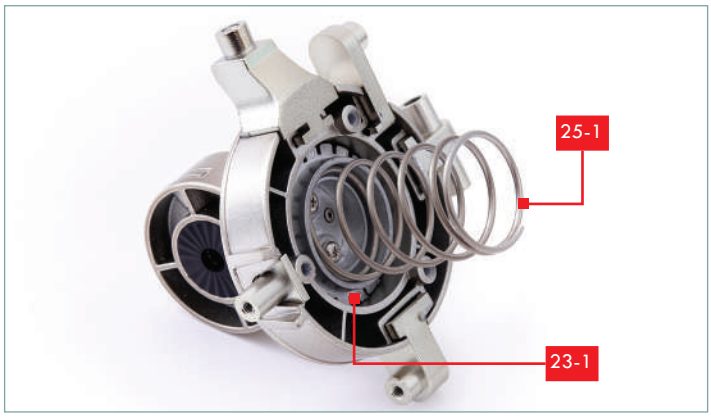
STEP 8

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



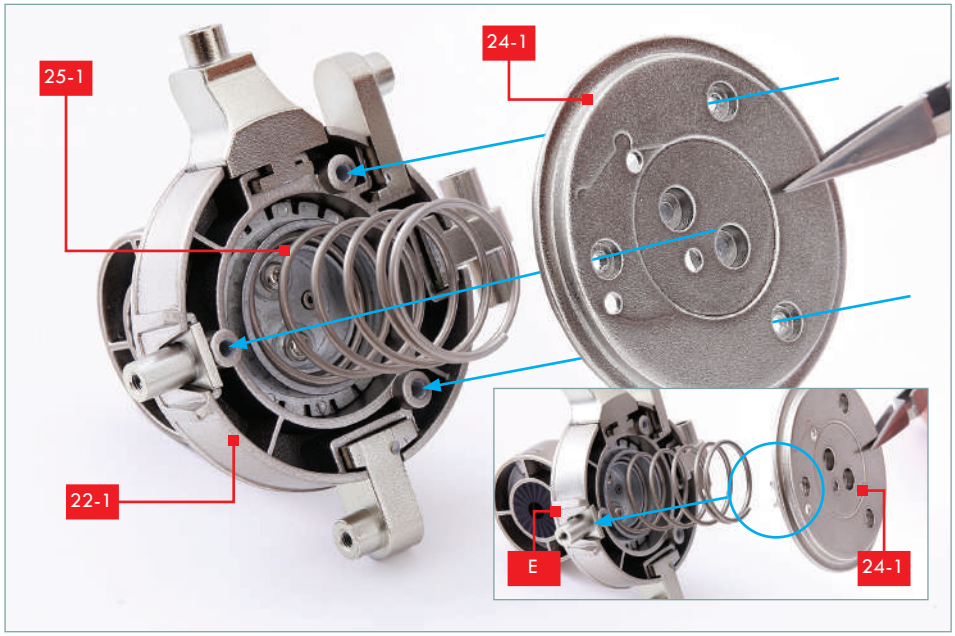
STEP 9

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**.

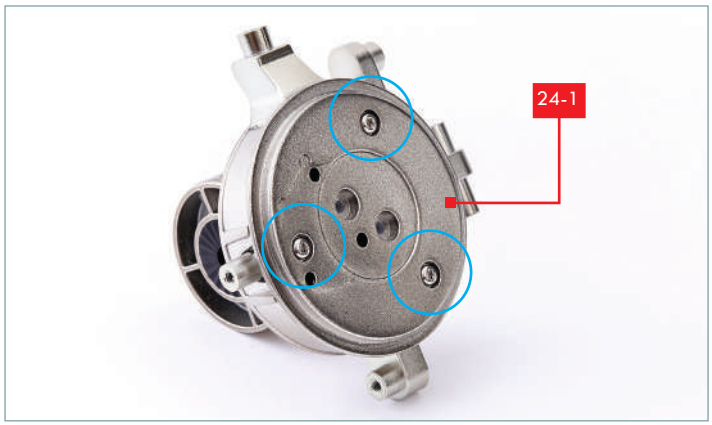


STEP 11

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).

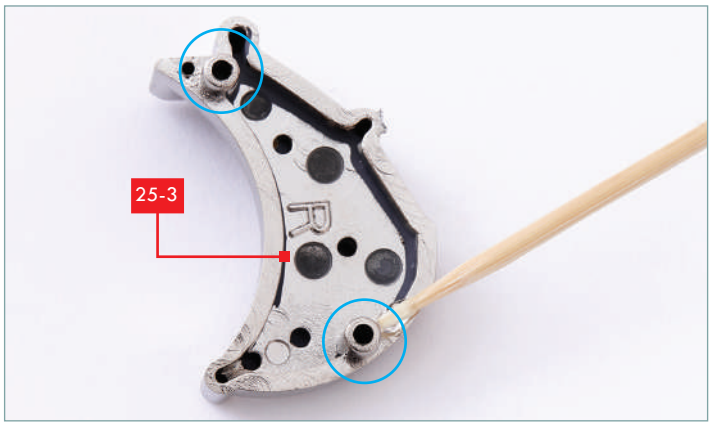
EXPERT TIP!

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.



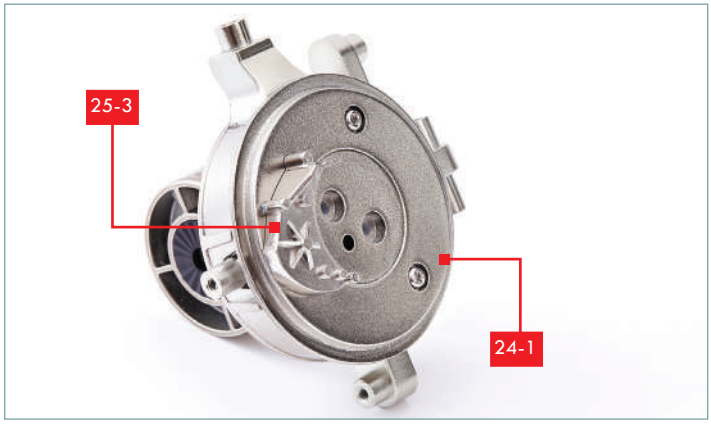
STEP 12

When you have the alignment correct, fix part **24-1** in place using three PM 3x6 mm 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).

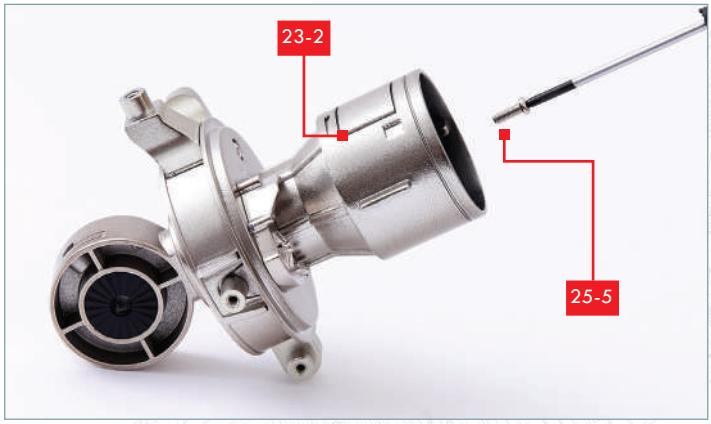


STEP 14

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).

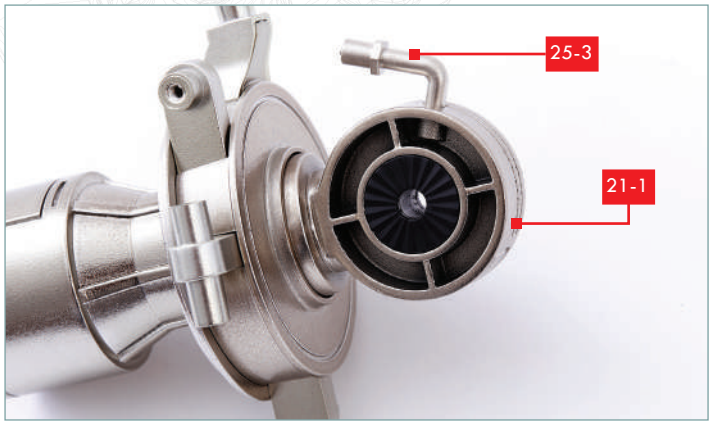


STEP 16

With shoulder part **23-2** positioned on the shoulder joint assembly, use two PM 3x8 mm screws (**25-5**) 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.



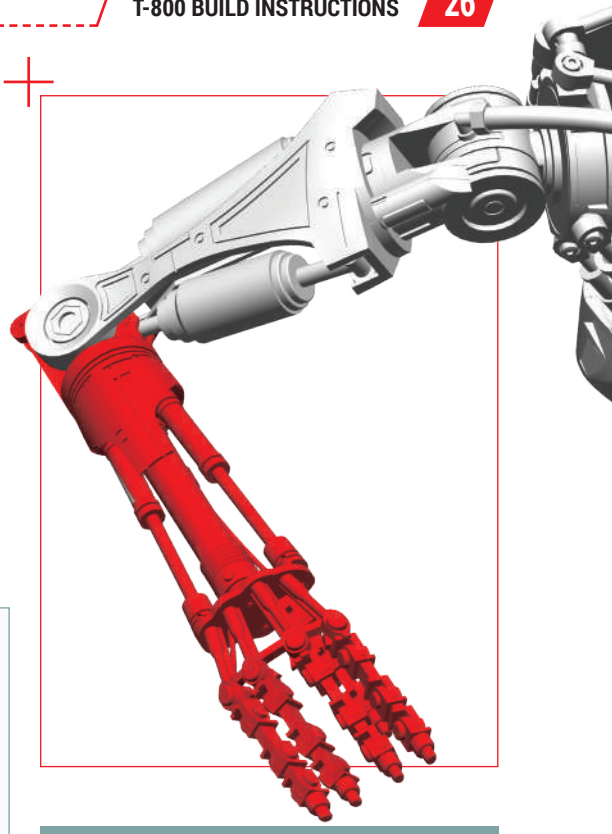
STEP 18

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

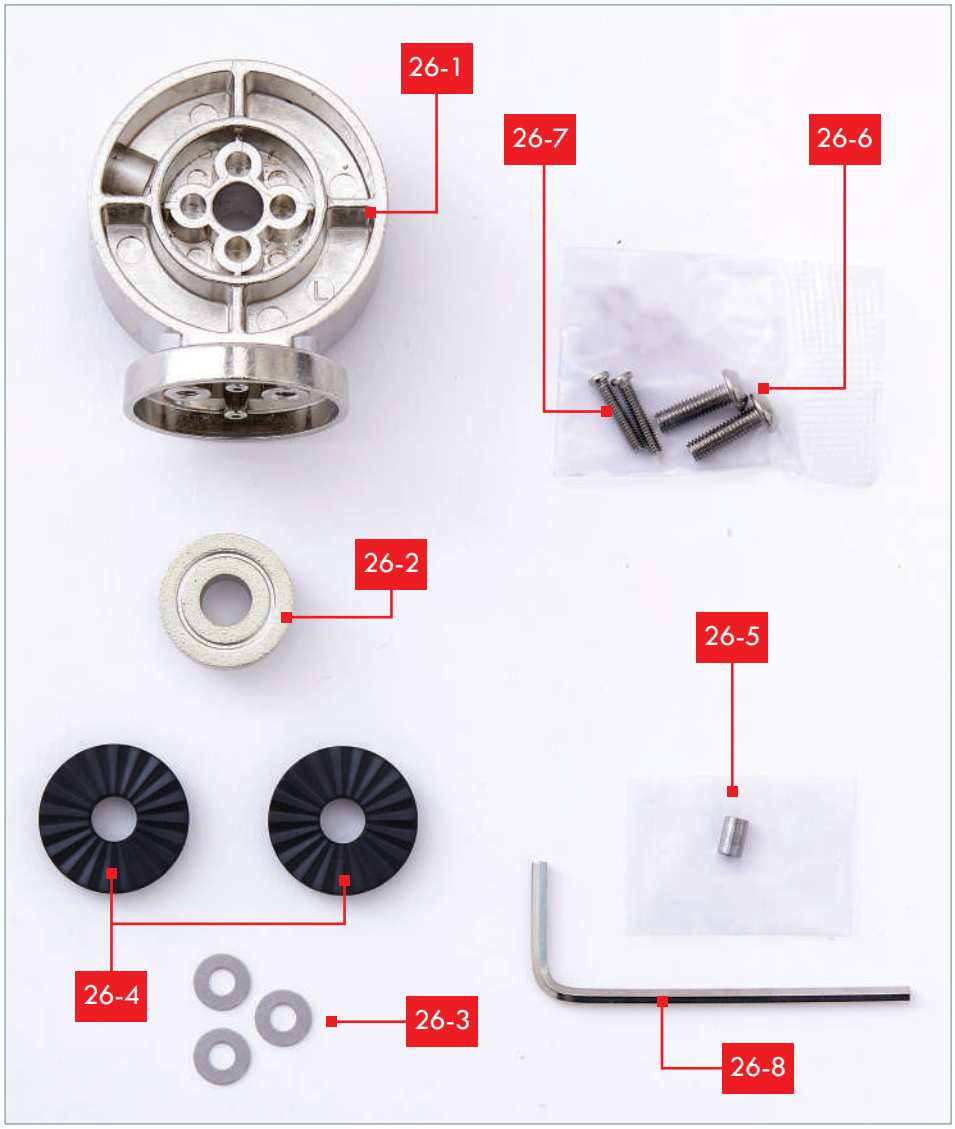
STAGE COMPLETE

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

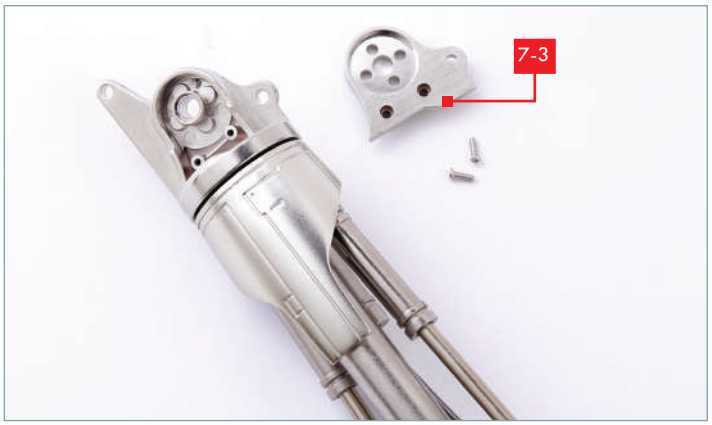
26-1	Left shoulder
26-2	Right elbow part
26-3	3 x Right elbow washers
26-4	2 x Right elbow parts
26-5	Small cylinder
26-6	2 x PM Allen screw (3x10 mm) (1 spare)
26-7	2 x PM screw (2x10 mm) (1 spare)
26-8	Allen key

YOU WILL ALSO NEED

A cross-head screwdriver, superglue, the Hand and lower arm assembly from stage 24, the Upper arm assembly from stage 07 and the Right elbow pin 25-2 from stage 25.

STEP 1

Take the lower arm and hand assembly from stage 24. Identify the two PM 2x6 mm screws (circled) that hold part **7-3** in place.

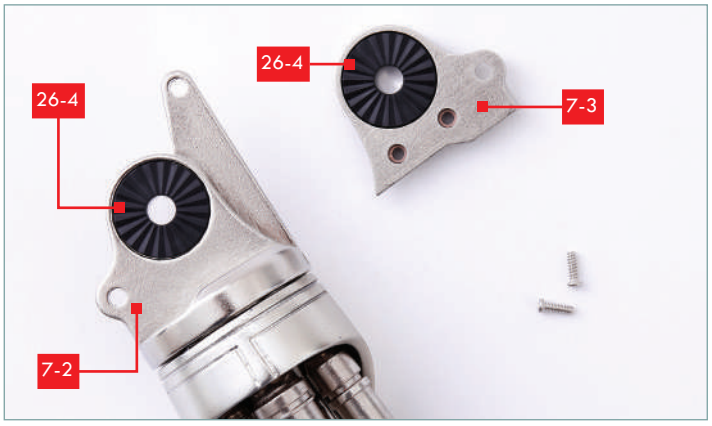


STEP 2

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.

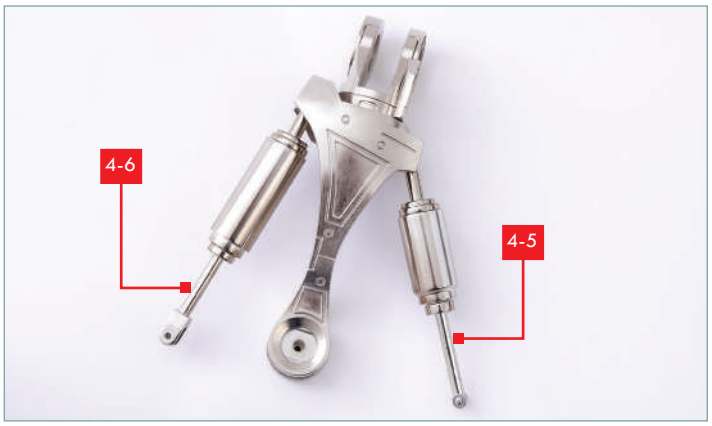


STEP 4

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.

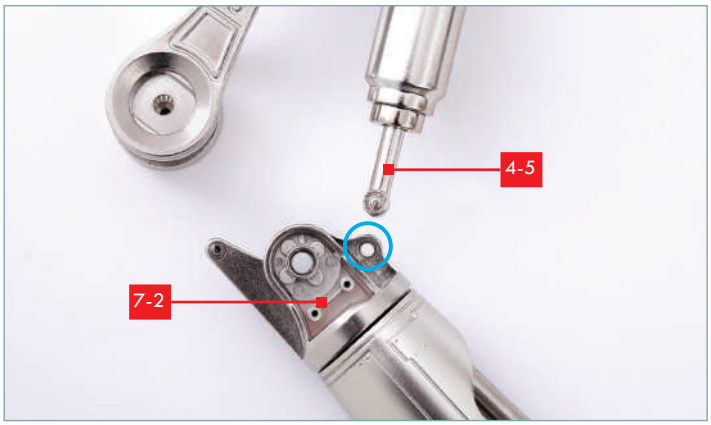
STEP 5

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.



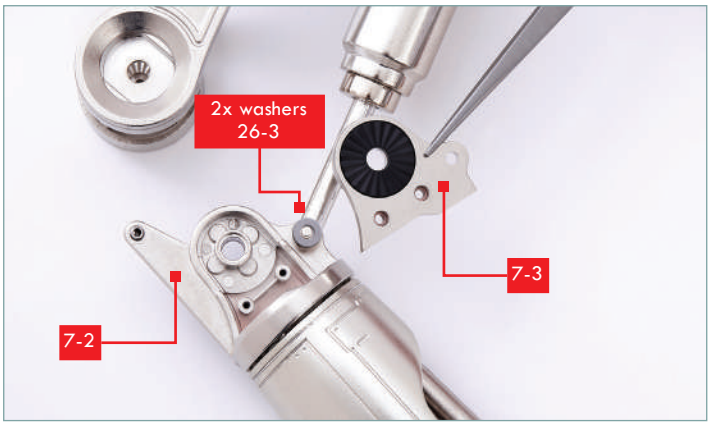
STEP 6

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**).



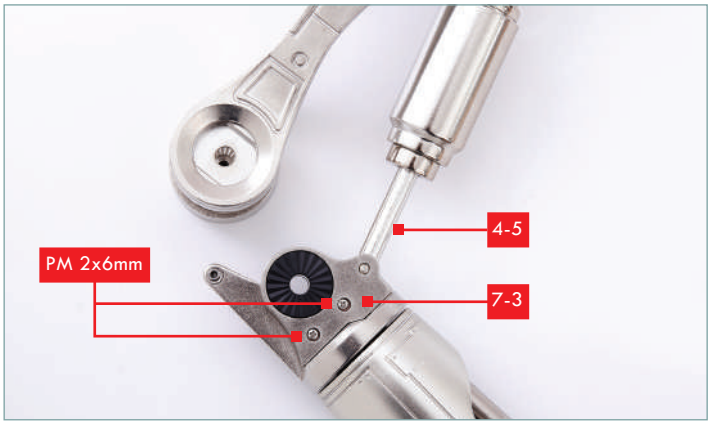
STEP 7

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



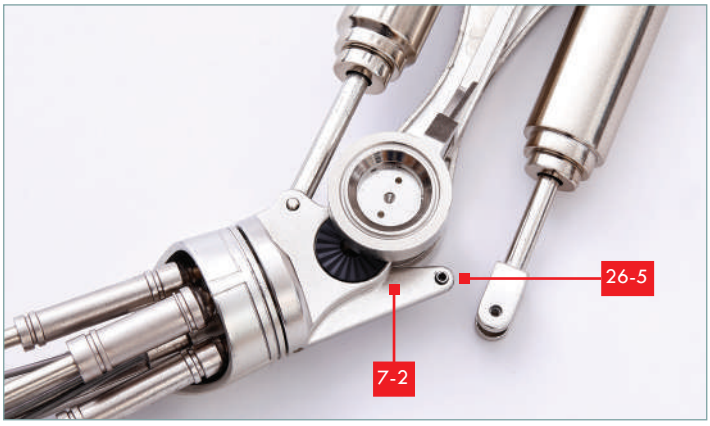
STEP 8

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**.



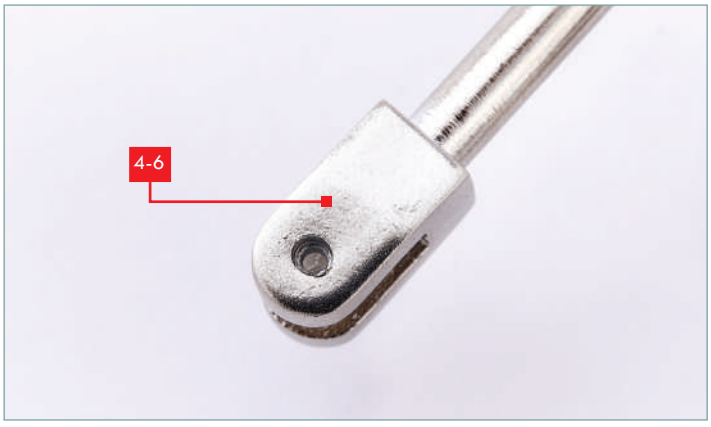
STEP 9

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 2x6 mm screws.



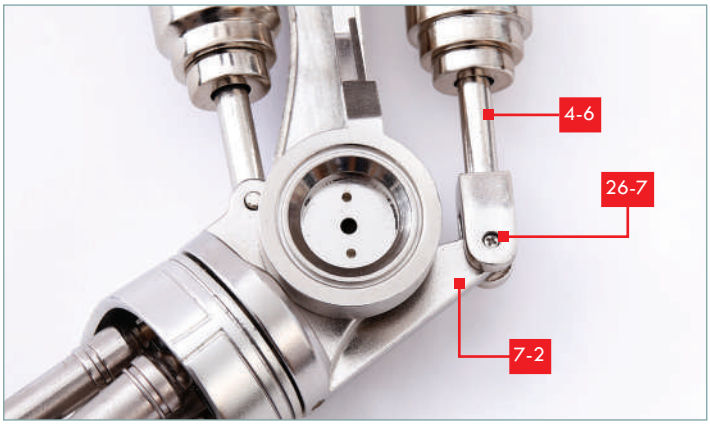
STEP 10

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**.



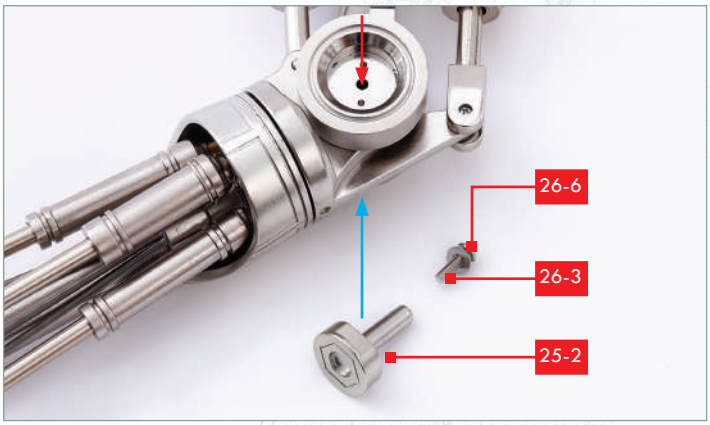
STEP 11

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.



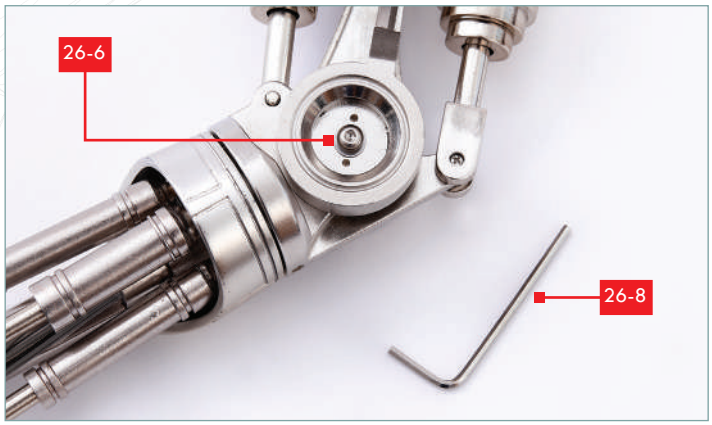
STEP 12

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 2x10 mm screw (**26-7**). The pan head of the screw fits in the recess in part **4-6**.



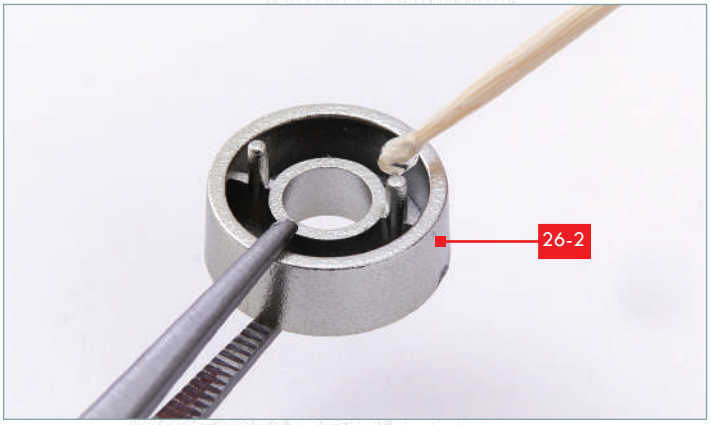
STEP 13

Fit the washer **26-3** over the 3x10 mm 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.



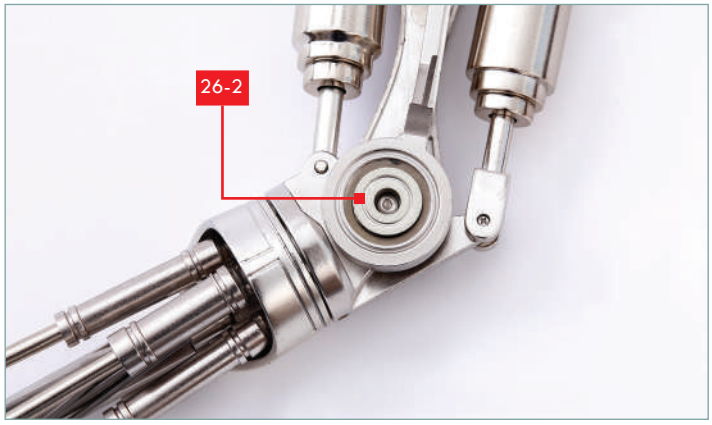
STEP 14

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.



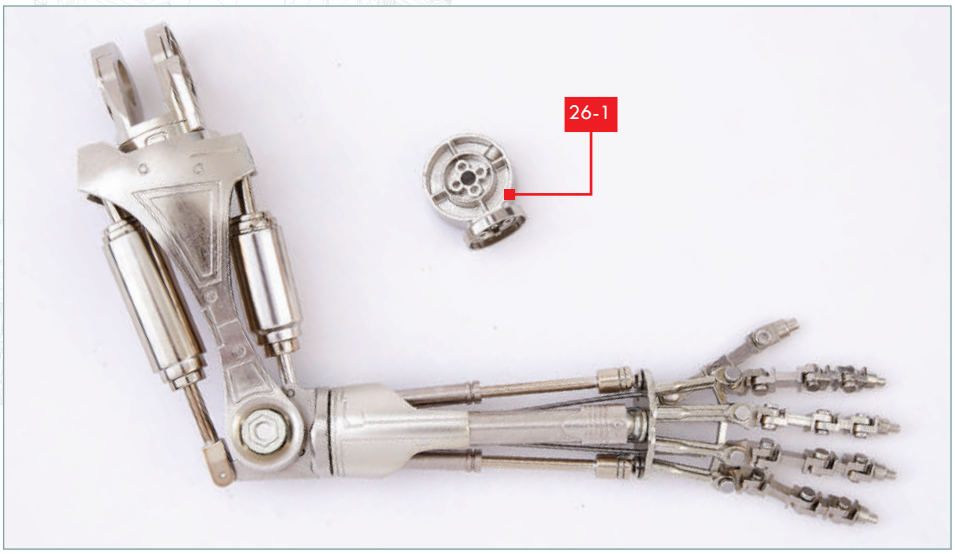
STEP 15

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.

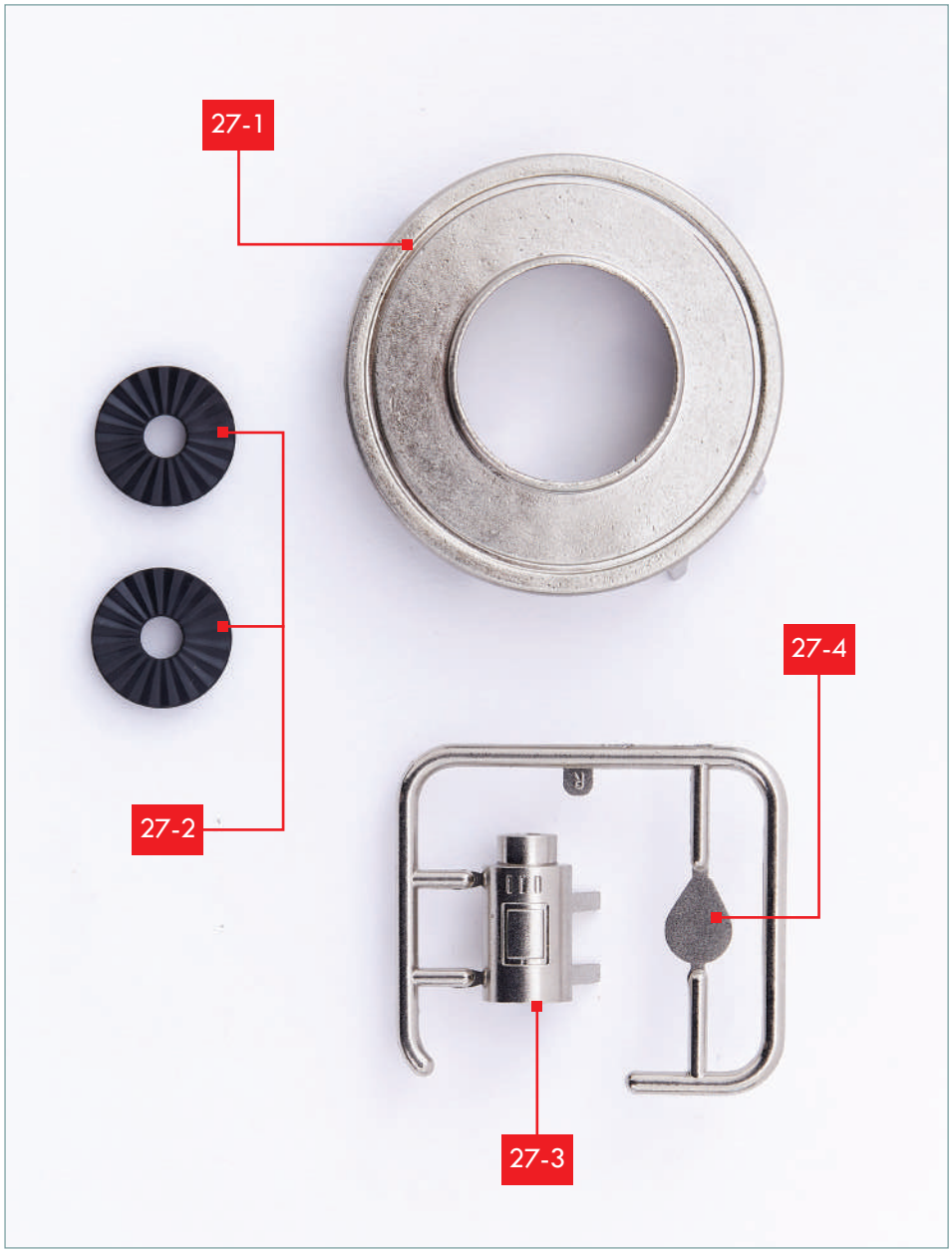


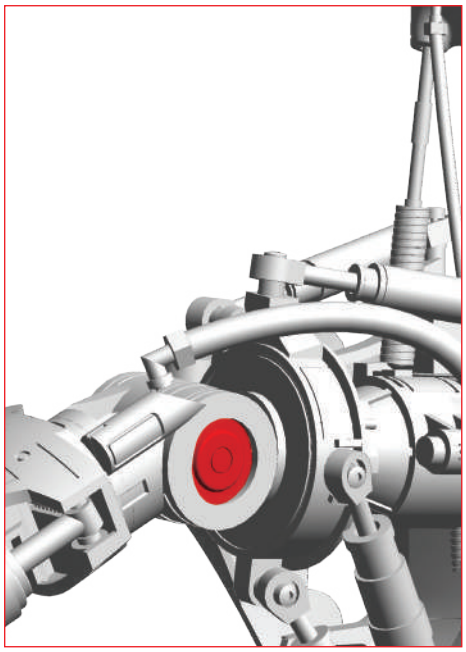
STAGE COMPLETE!

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.



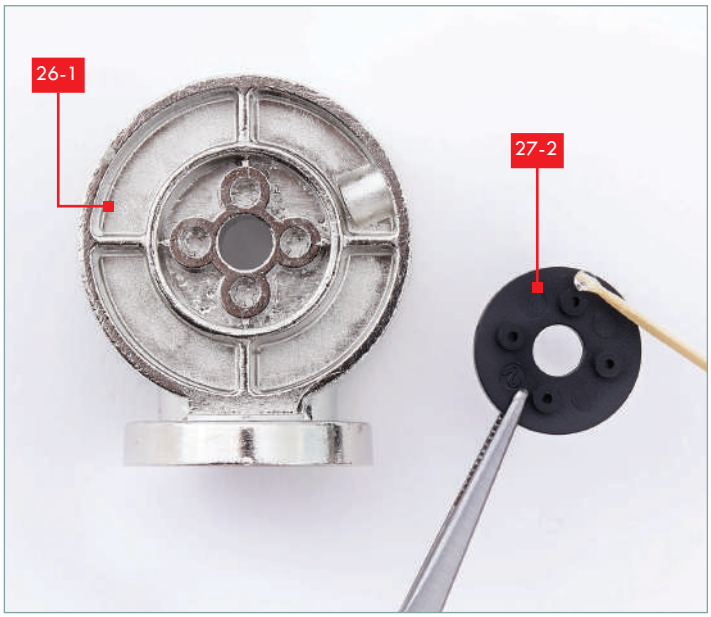


LIST OF PIECES

27-1	Left shoulder plate
27-2	2x Left shoulder inserts
27-3	Right shoulder socket
27-4	Right shoulder socket cap

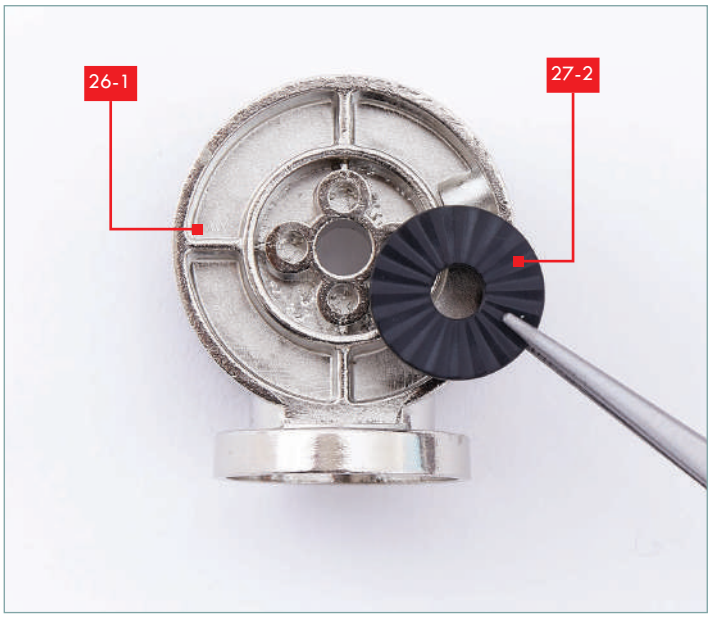
YOU WILL ALSO NEED

A cross-head screwdriver, superglue and a cocktail stick, Part 26-1 from the previous stage, the Right shoulder assembly from stage 25.



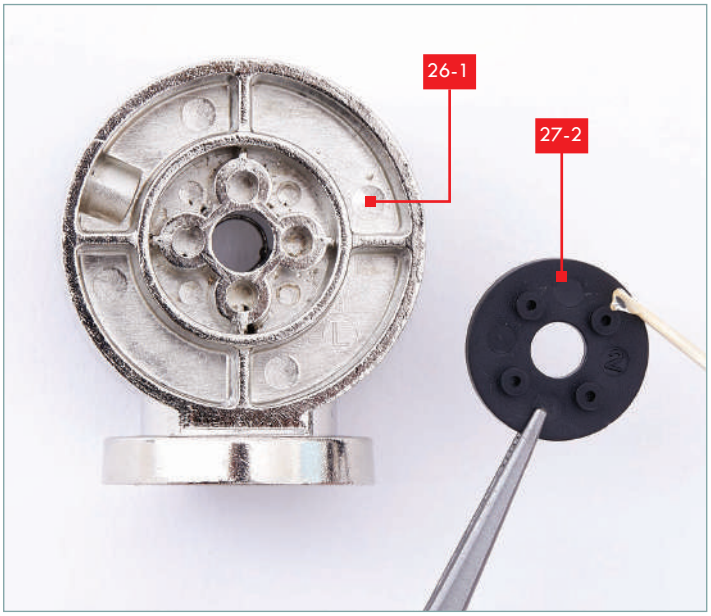
STEP 1

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**.



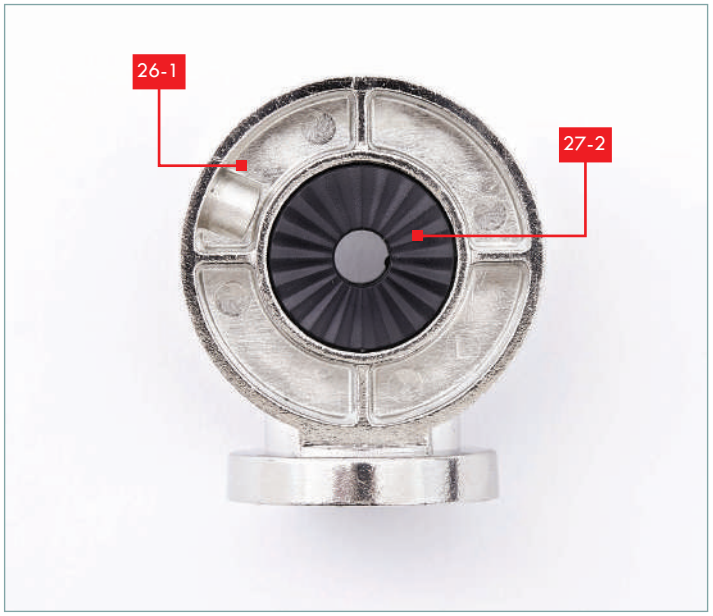
STEP 2

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



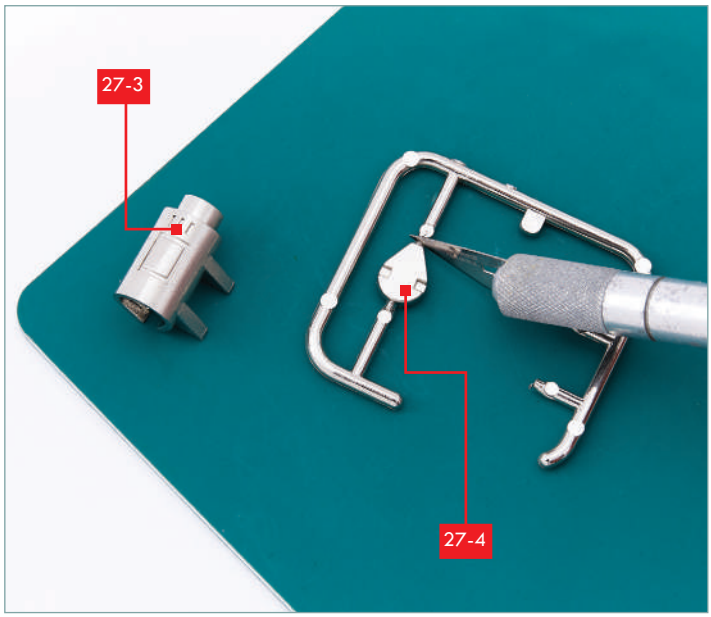
STEP 3

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



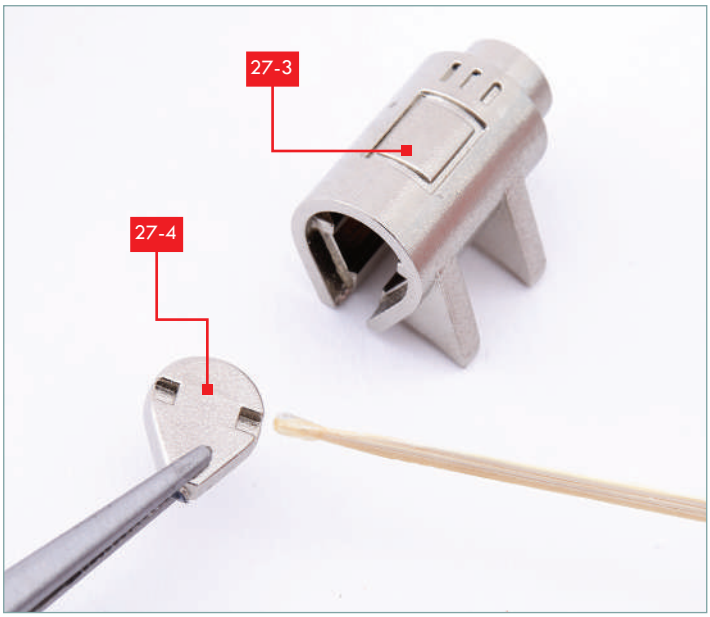
STEP 4

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



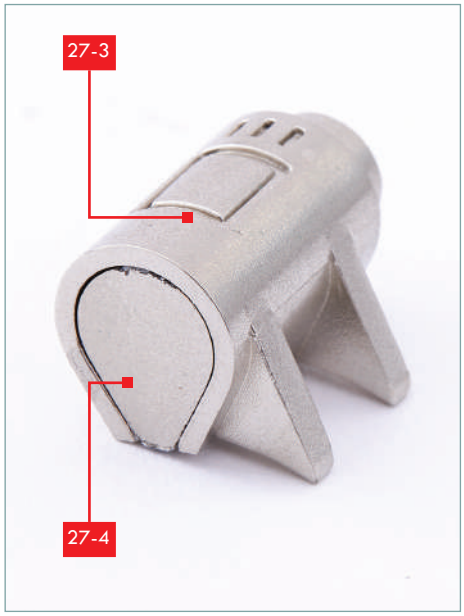
STEP 5

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

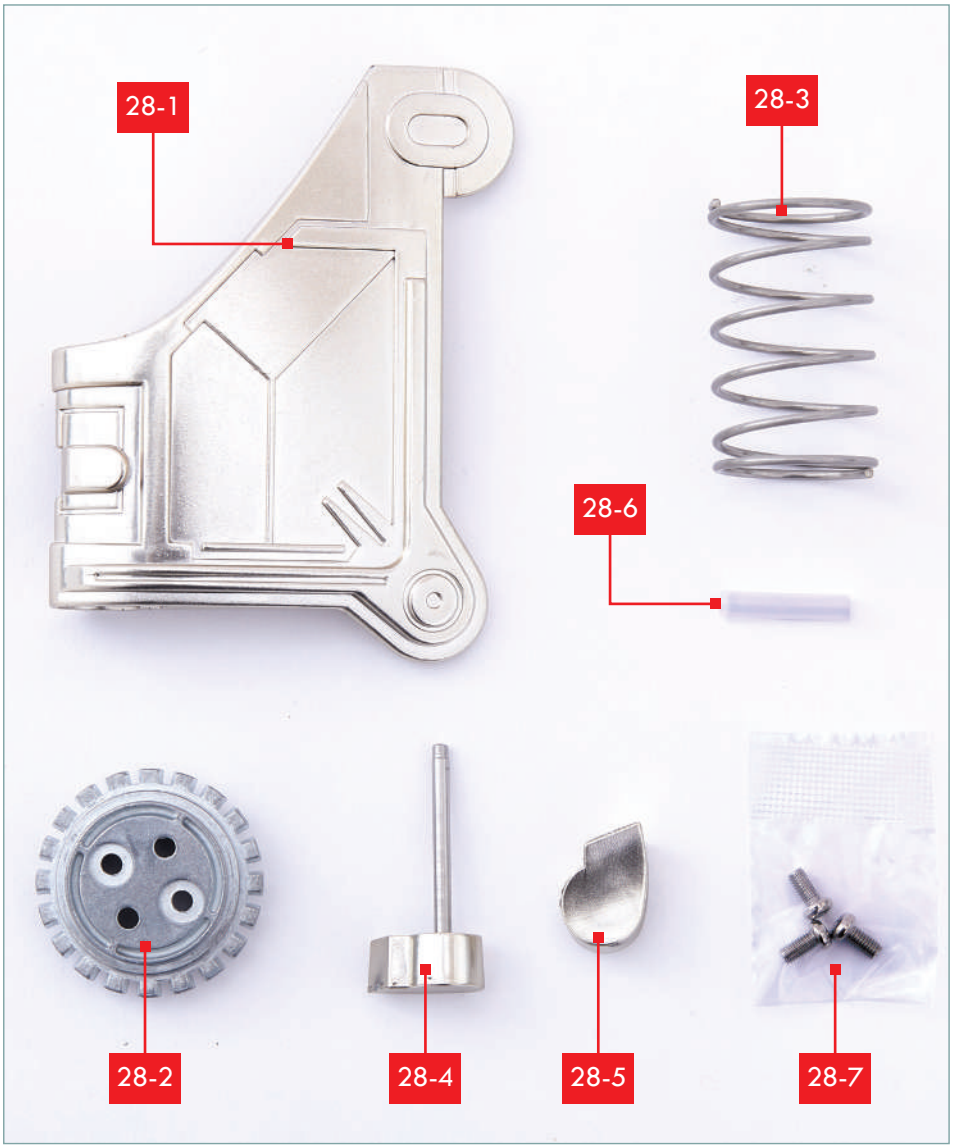
Glue part **27-3** on to the ridge.

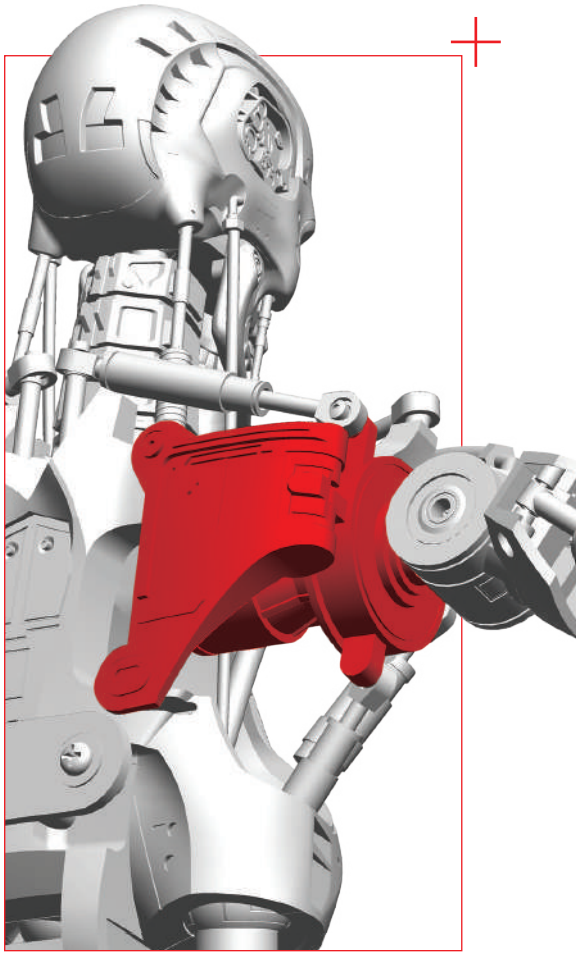
STAGE COMPLETE

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.



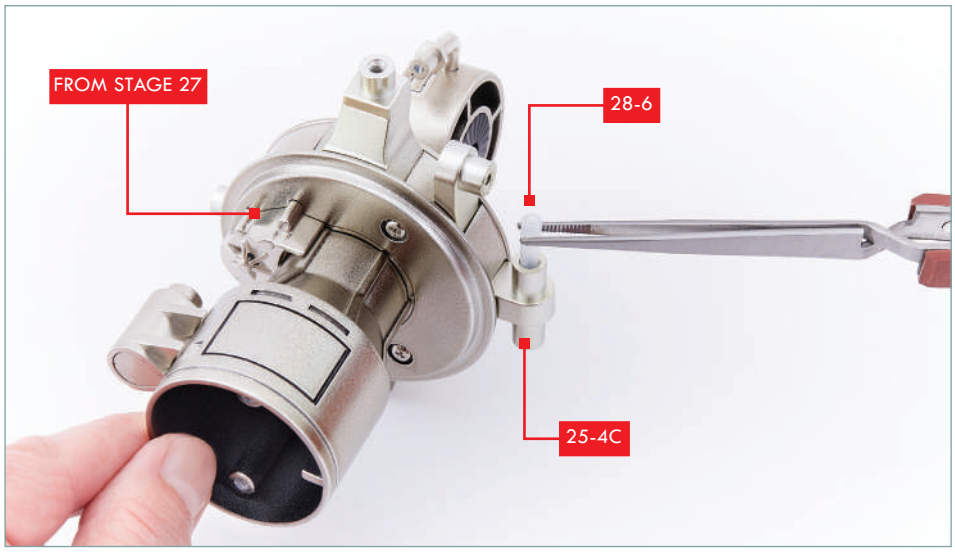


LIST OF PIECES

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	3x PM screw (3x6 mm)

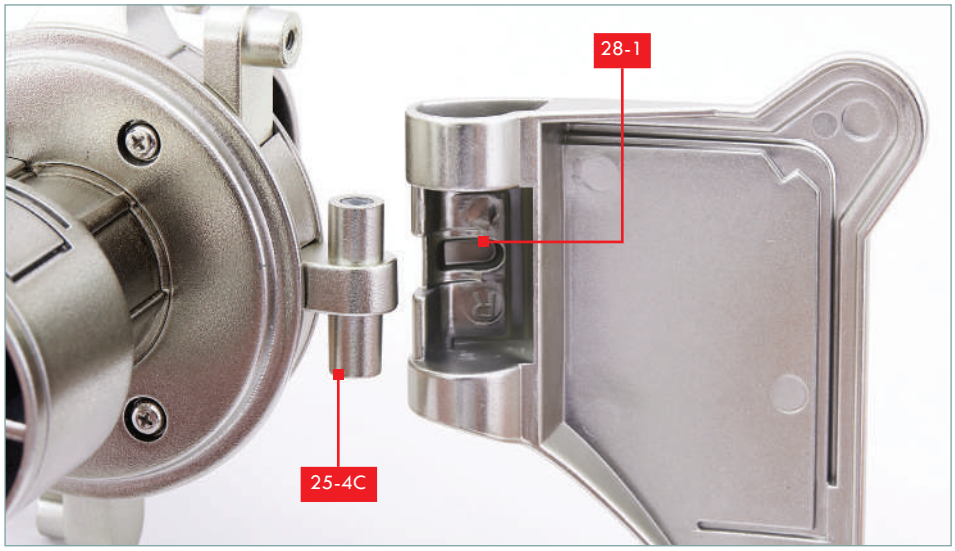
YOU WILL ALSO NEED

A cross-head screwdriver, the Left and Right shoulder assemblies from stage 27.



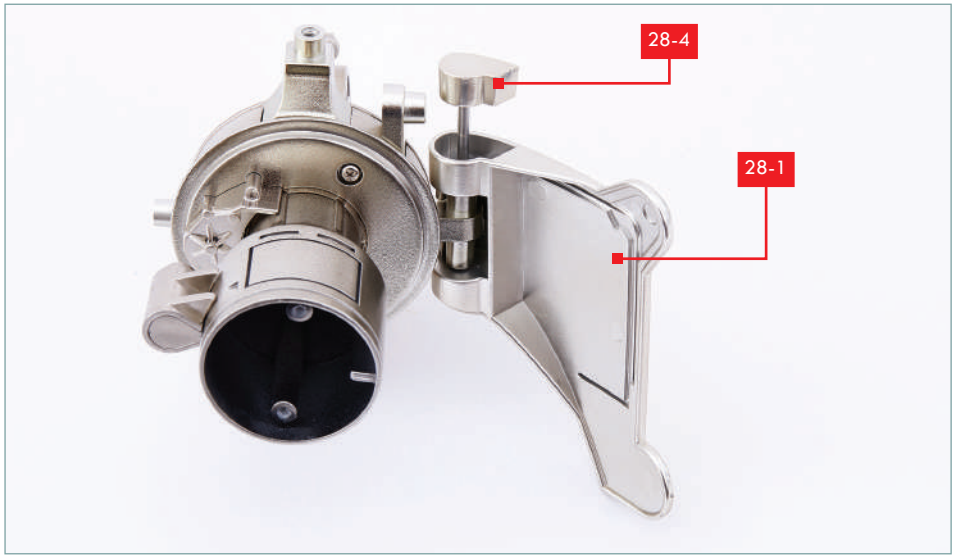
STEP 1

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**.

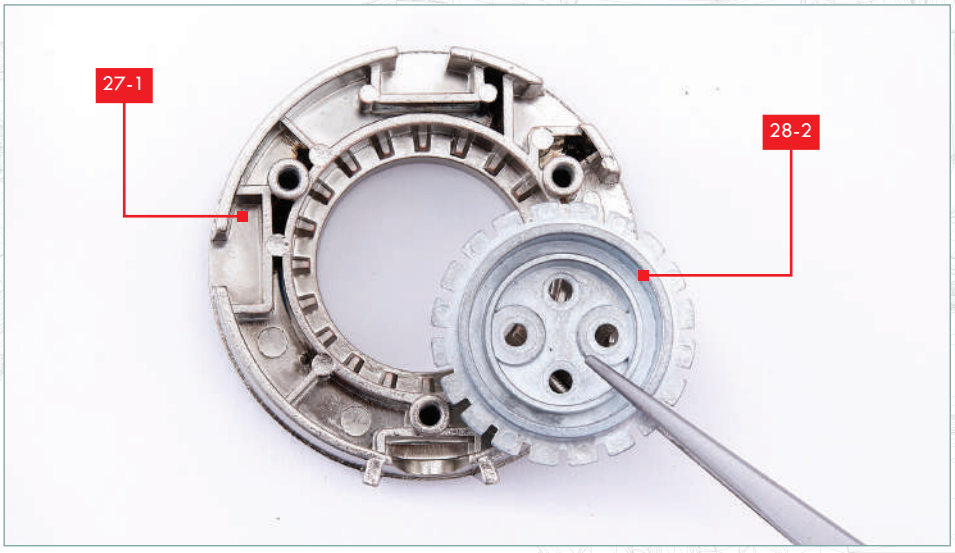


STEP 3

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.

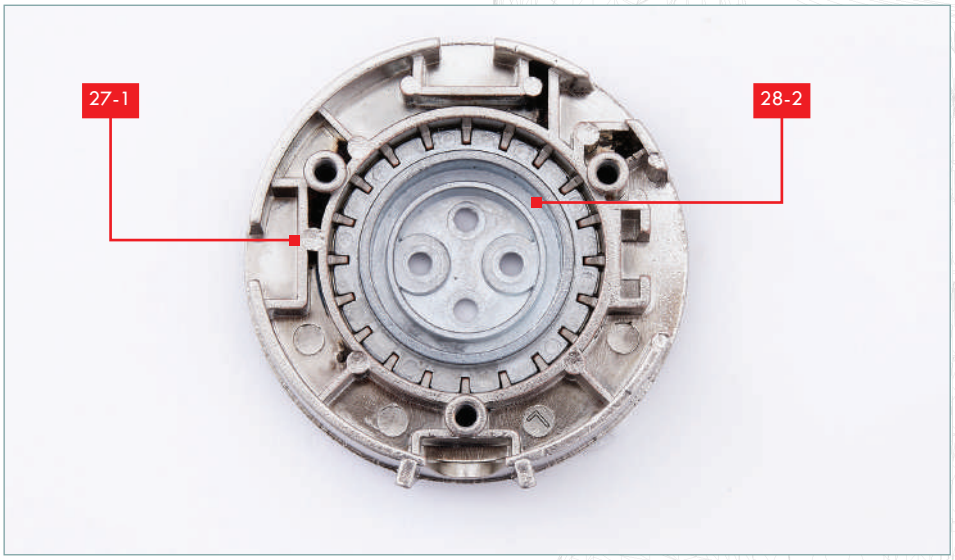
STEP 4

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



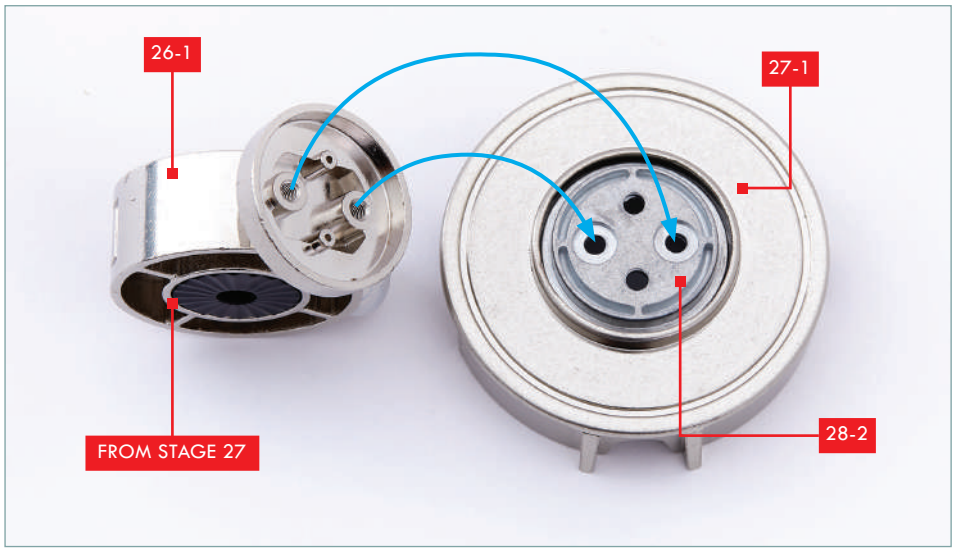
STEP 5

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.



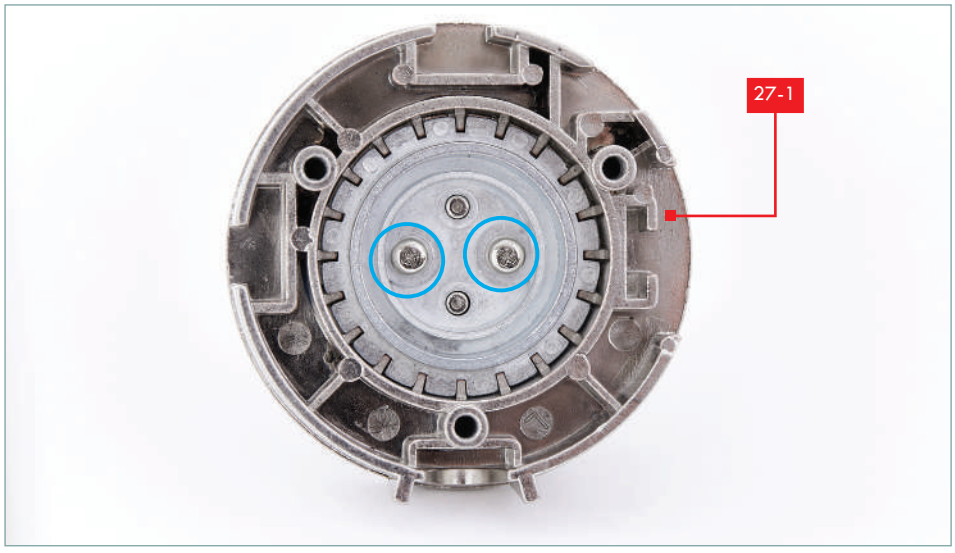
STEP 6

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



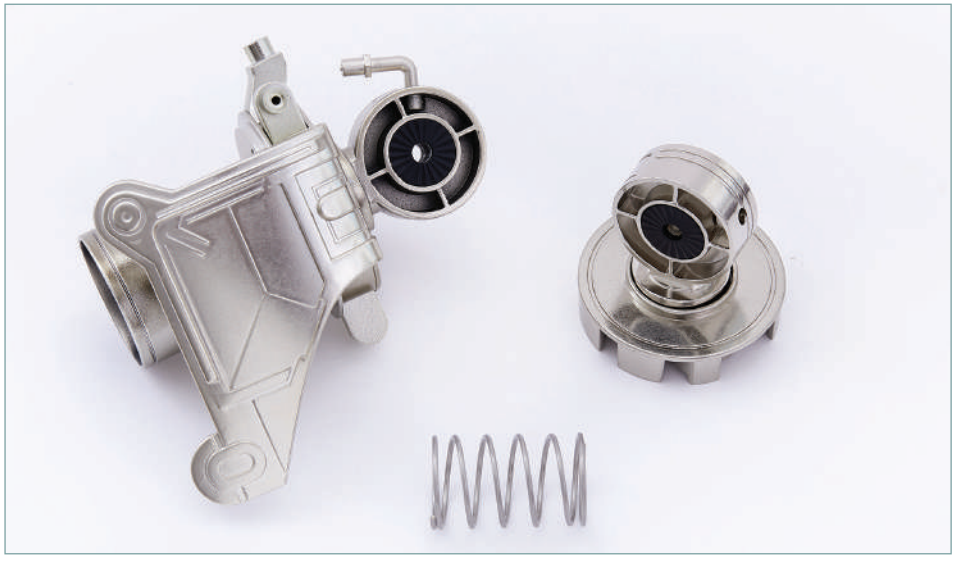
STEP 7

Take the assembled shoulder parts from stage 27 (**26-1** and 2x **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 PM 3x6 mm screws (**28-7**, circled).

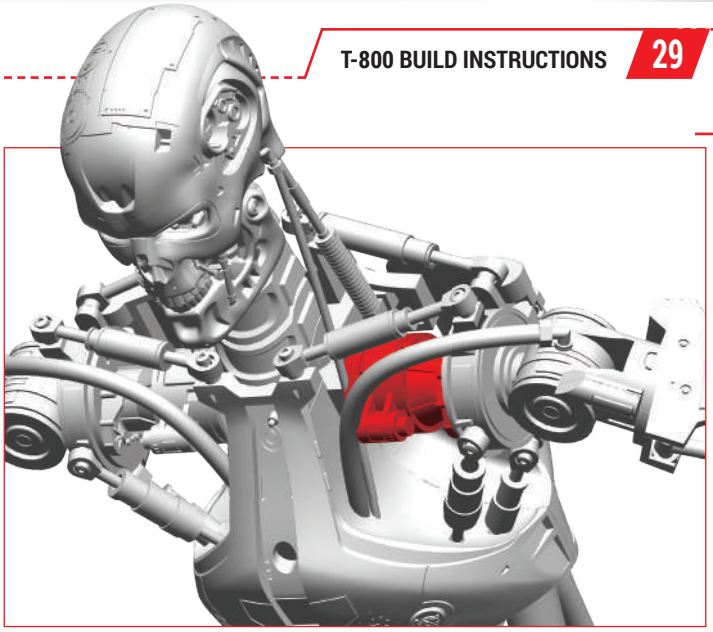


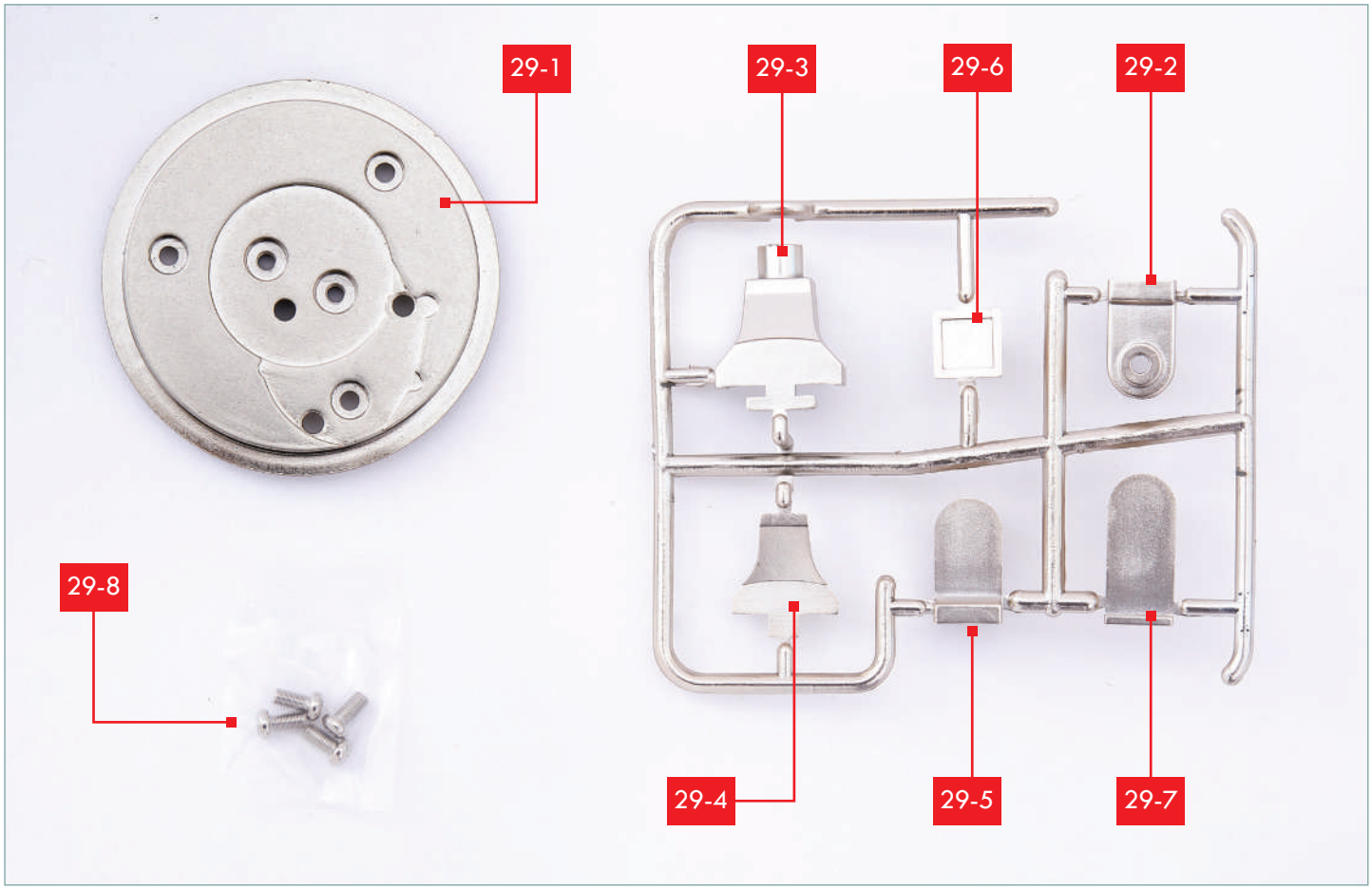
STAGE COMPLETE!

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.



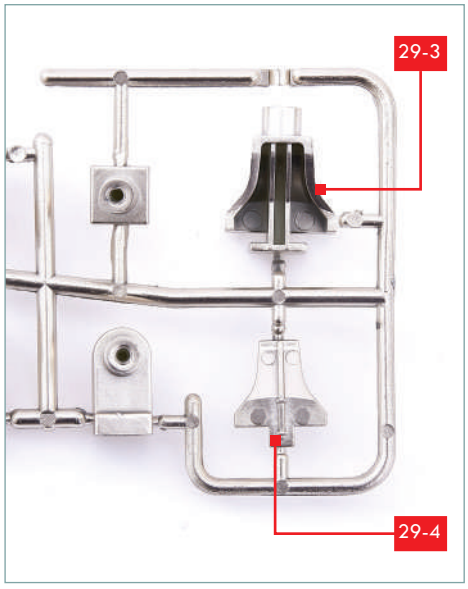


LIST OF PIECES

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	3x PM screw (3x6 mm)

YOU WILL ALSO NEED

A cross-head screwdriver, superglue and a cocktail stick, the Left shoulder assembly from stage 28.



STEP 1

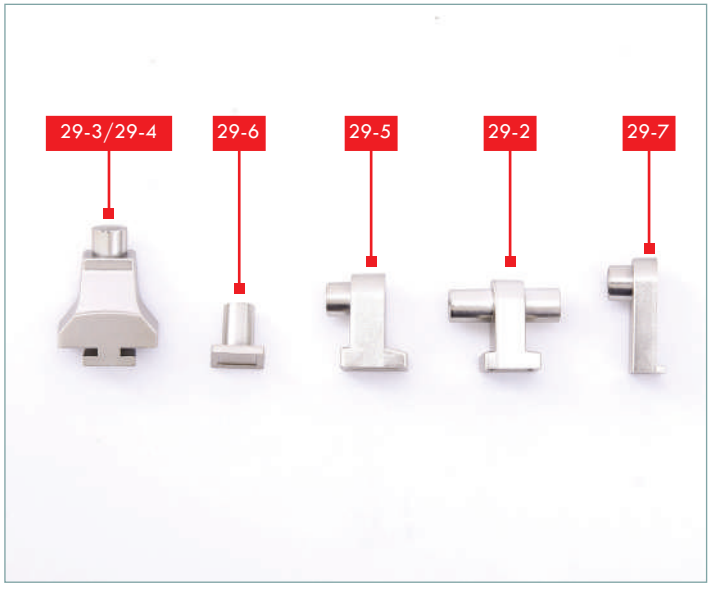
Identify parts **29-3** and **29-4** and carefully cut them from the frame. Smooth any rough edges.

STEP 2

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

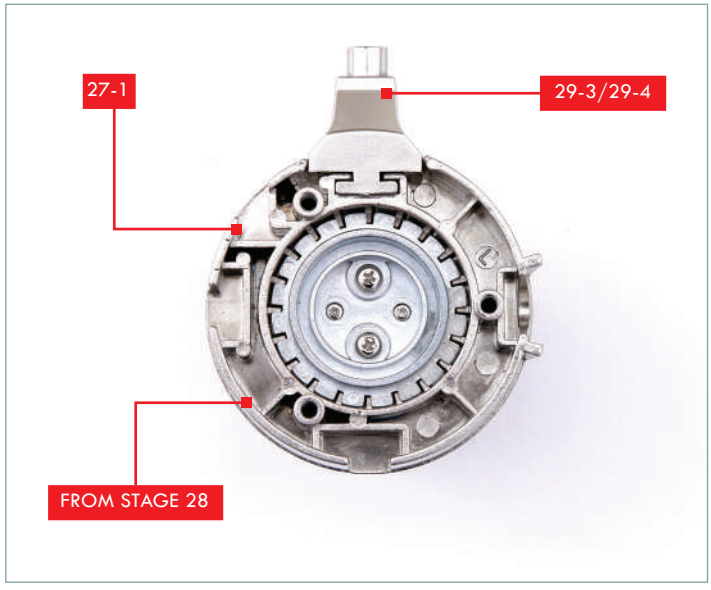
STEP 3

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'.



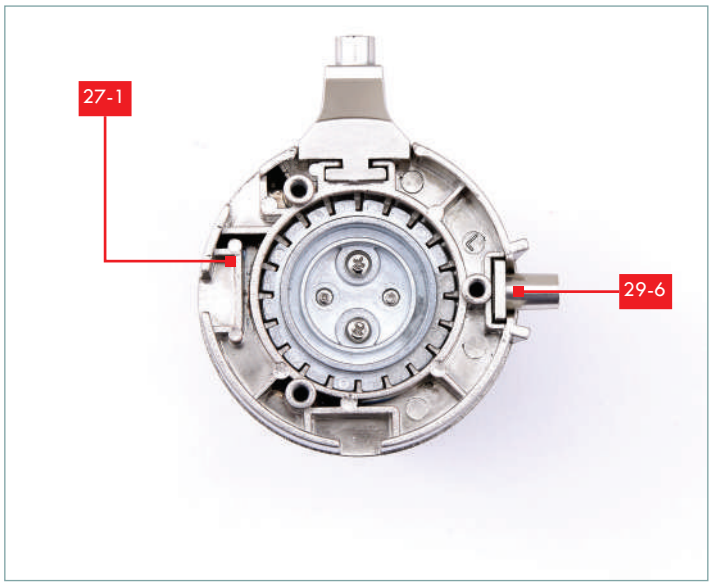
STEP 4

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



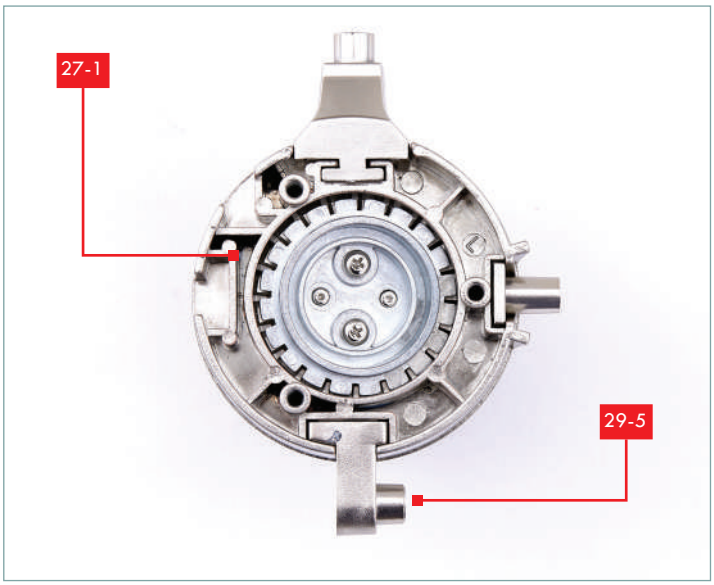
STEP 5

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.



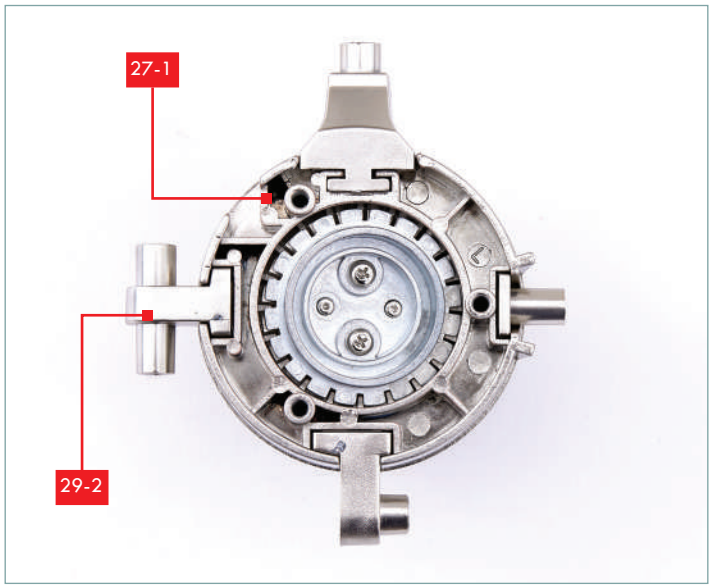
STEP 6

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



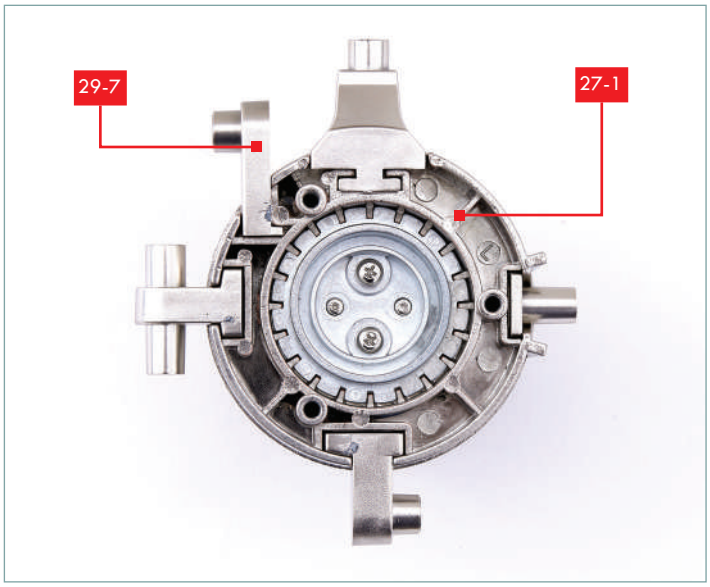
STEP 7

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**.



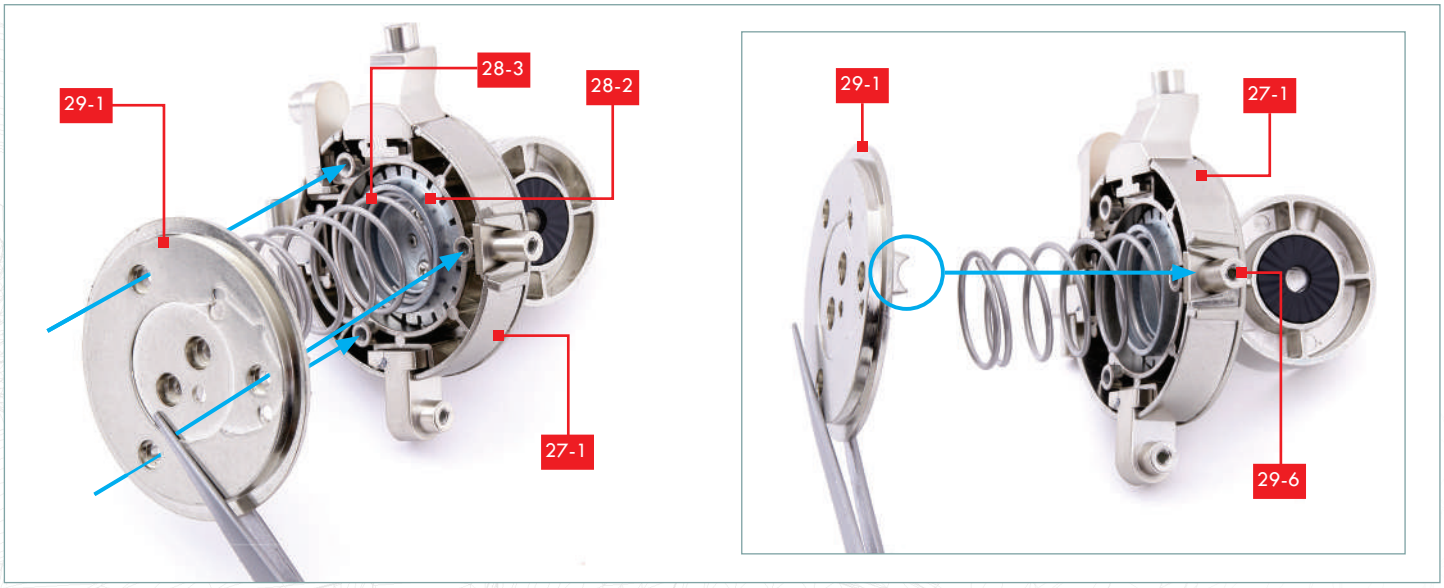
STEP 8

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.

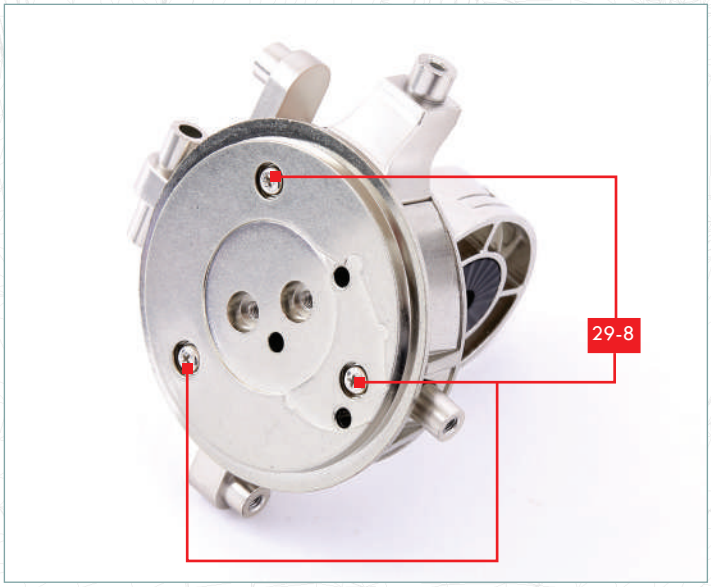


STEP 10

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.



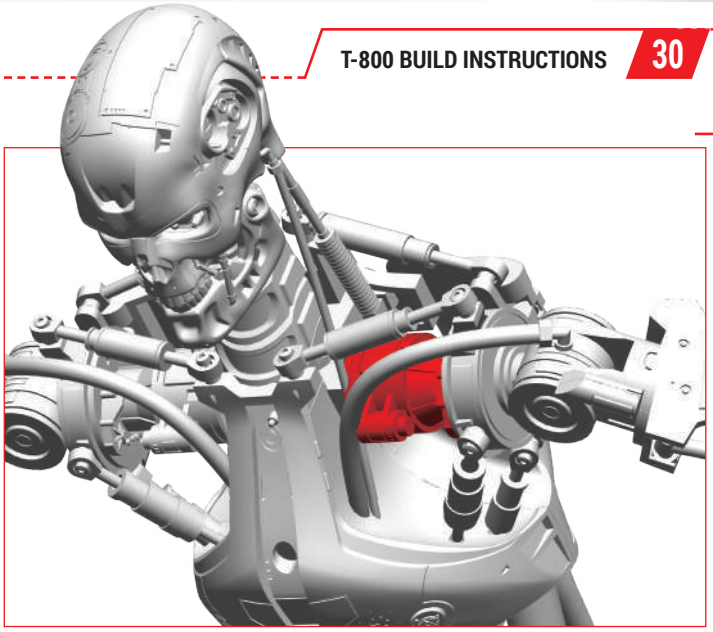
STEP 11

Fix the left shoulder plate **29-1** in place with three PM 3x6 mm screws (**29-8**).

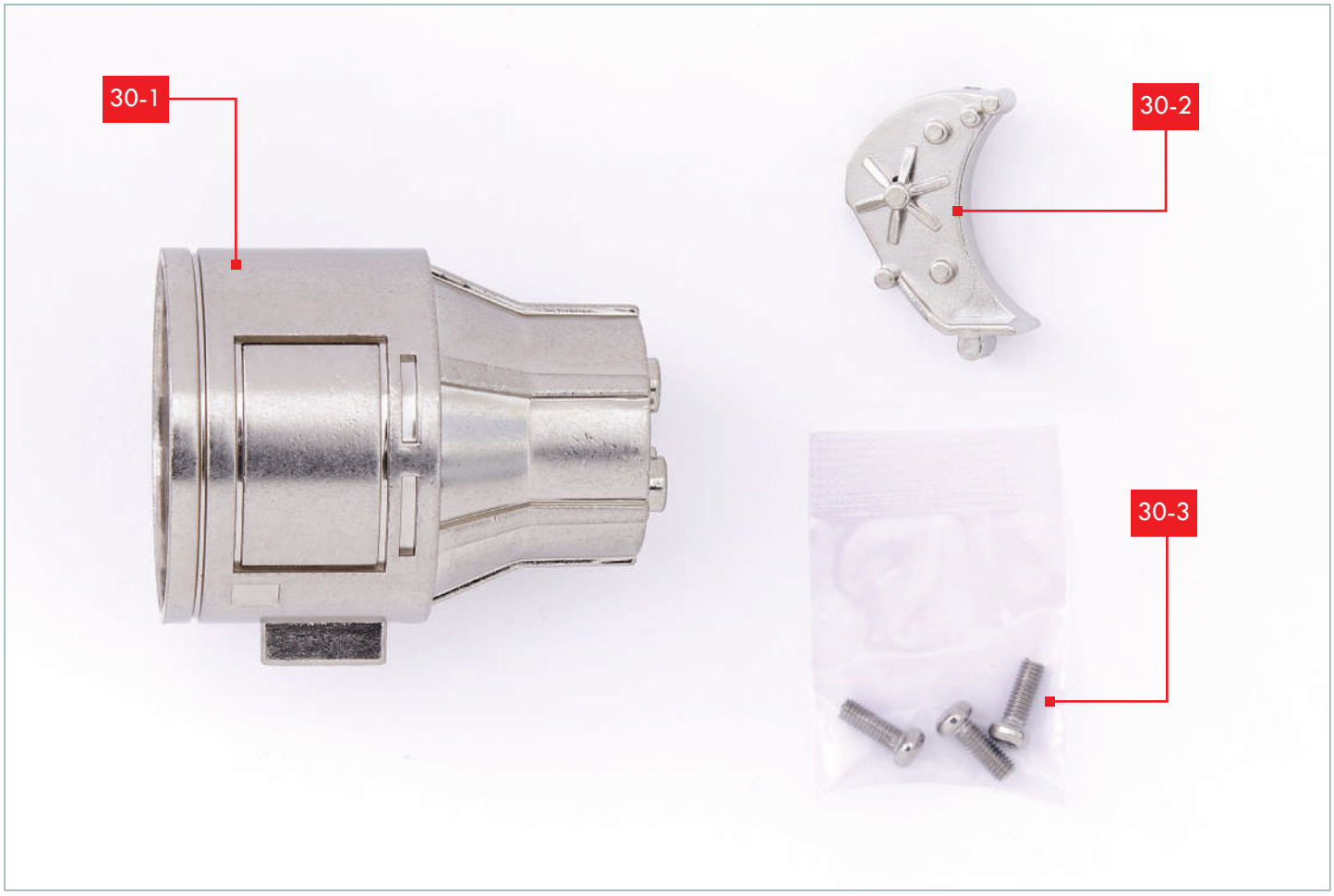
STAGE COMPLETE

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.

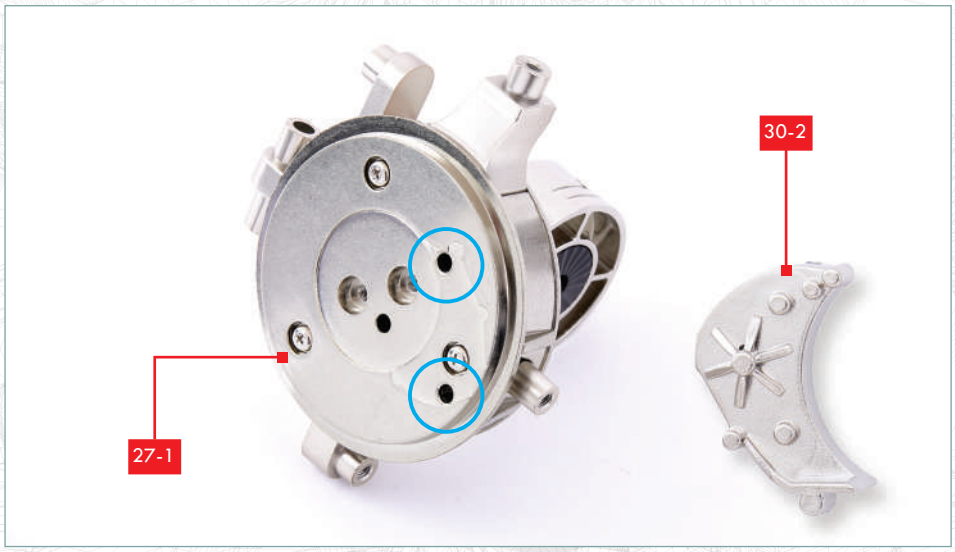


LIST OF PIECES

30-1	Left shoulder part
30-2	Left shoulder accessory
30-3	3x PM screw (3x8 mm)

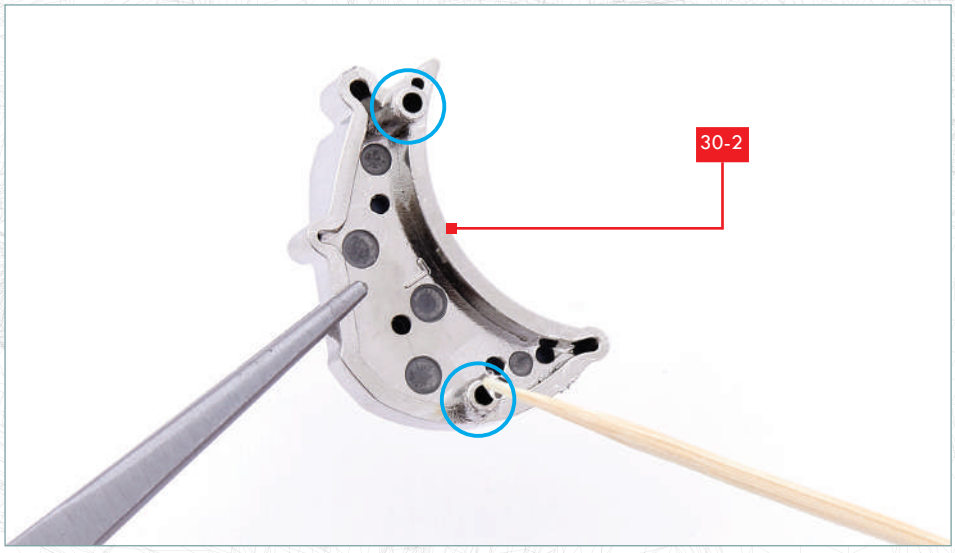
YOU WILL ALSO NEED

A cross-head screwdriver, superglue and a cocktail stick, the Left shoulder assembly from stage 29.



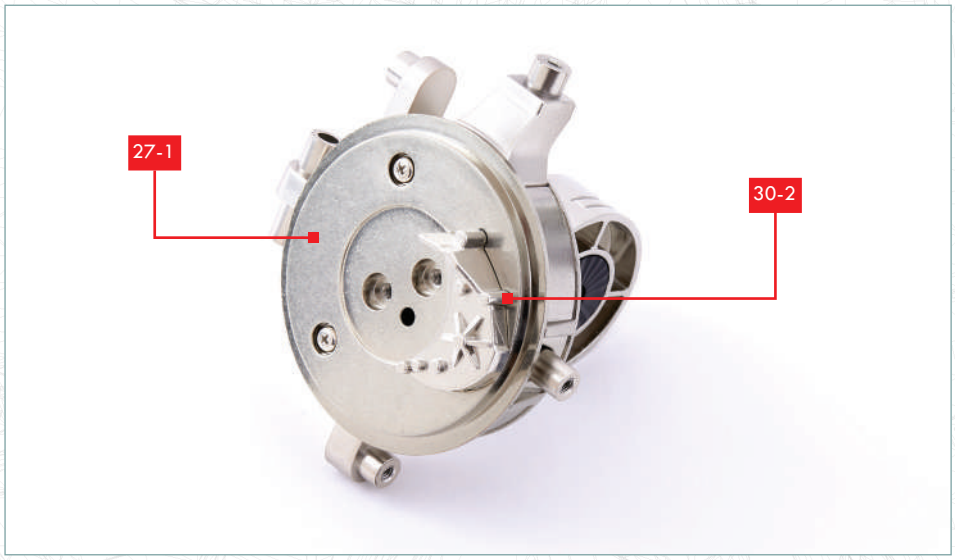
STEP 1

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



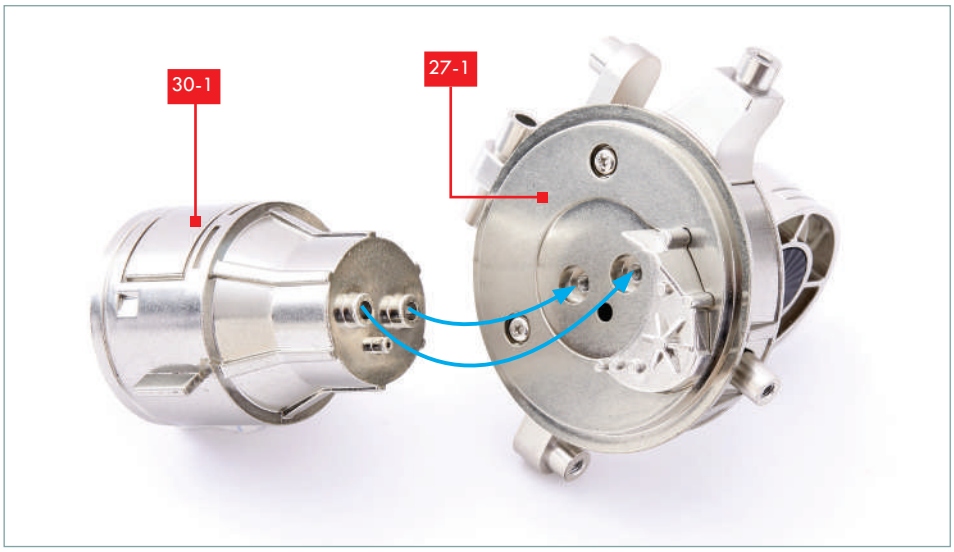
STEP 2

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



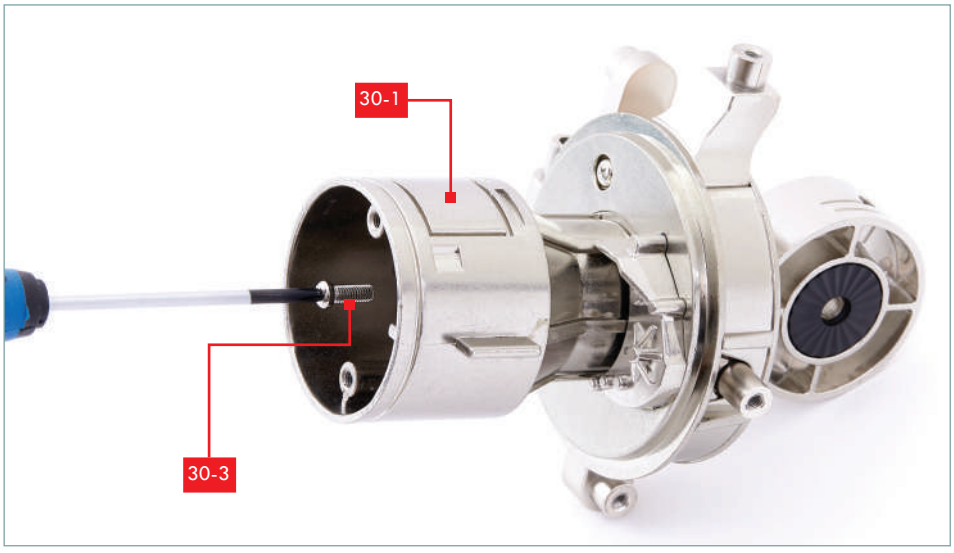
STEP 3

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

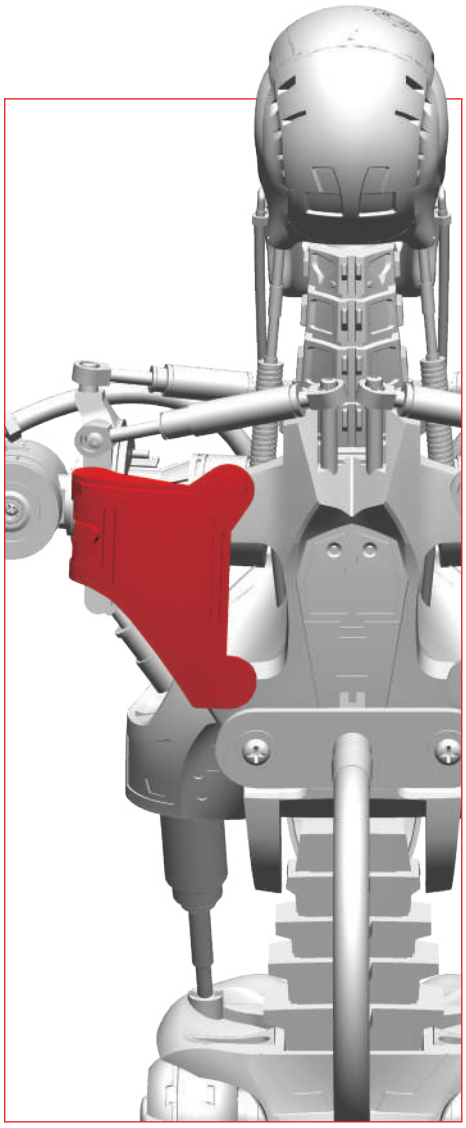
Fix part **30-1** in place with two PM 3x8 mm screws (**30-3**).

STAGE COMPLETE!

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

STAGE 31: FIT LEFT SHOULDER ACCESSORIES AND ADD JOINT FOR THE RIGHT SHOULDER

In this stage, you'll add the left shoulder blade, along with other shoulder accessories, and assemble part of the right shoulder joint.

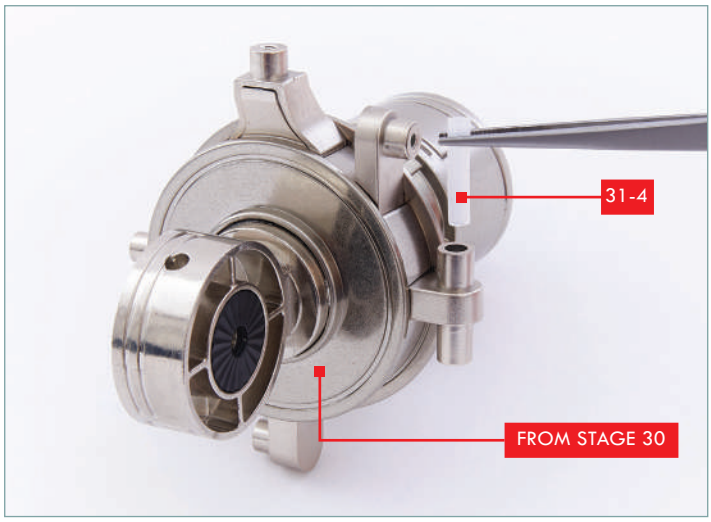


LIST OF PIECES

31-1	Left shoulder blade	31-5	Left shoulder accessory
31-2	Left shoulder blade fixing shaft	31-6	Right shoulder joint
31-3	Left shoulder blade fixing cap	31-7	Right shoulder insert
31-4	Plastic liner		

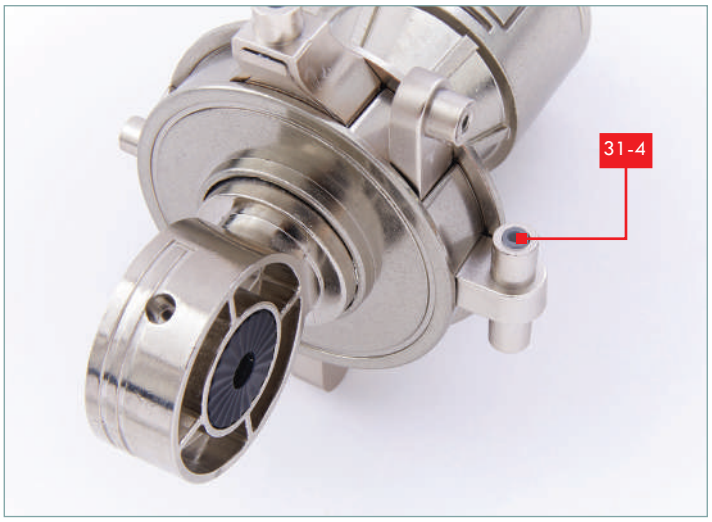
YOU WILL ALSO NEED

Superglue and a cocktail stick or toothpick with which to apply it, the Left shoulder assembly from stage 30.



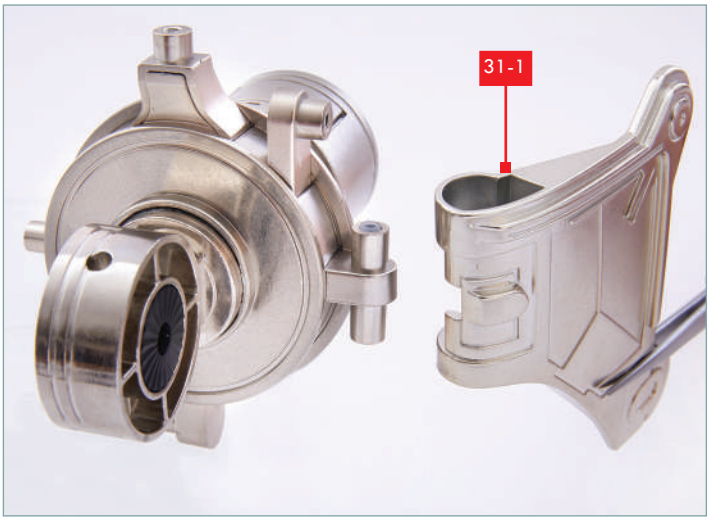
STEP 1

Take the left shoulder assembly from stage 30. Fit the plastic liner **31-4** into the socket on the side of the shoulder assembly.



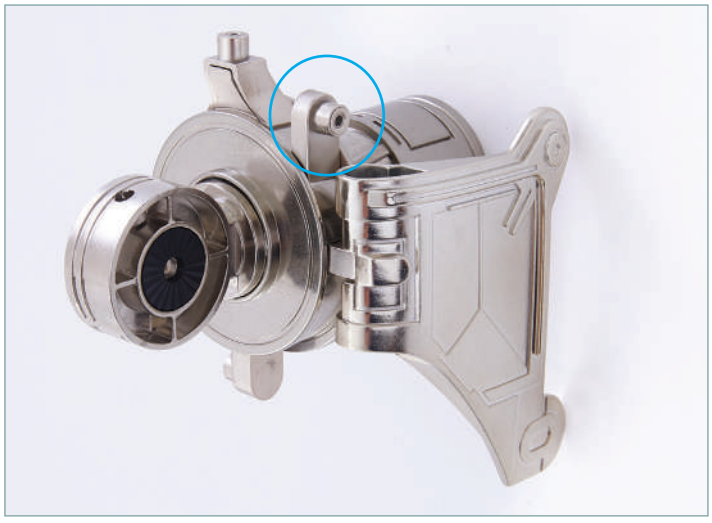
STEP 2

Push the liner **31-4** into the socket so that it is flush with both ends of the socket.



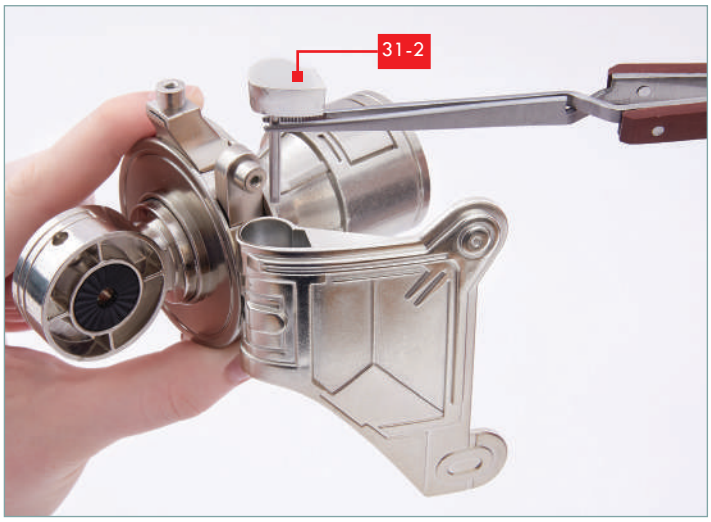
STEP 3

Take the left shoulder blade **31-1** and fit it over the socket on the side of the shoulder assembly.



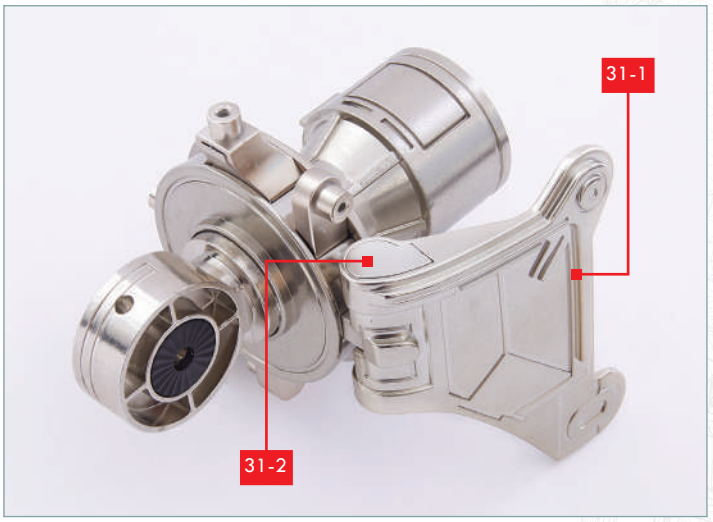
STEP 4

Check that you have the shoulder blade the right way up. Note that the top of the shoulder blade is close to one of the raised details on the shoulder assembly (circled).



STEP 5

Take the left shoulder blade fixing shaft **31-2** and slip it into the shoulder blade joint.

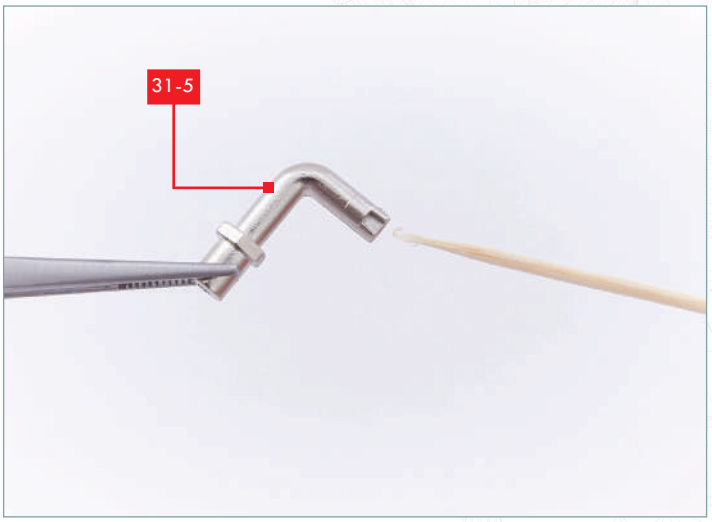


STEP 6

Ensure that the fixing shaft **31-2** fits into the socket in the left shoulder blade **31-1**.

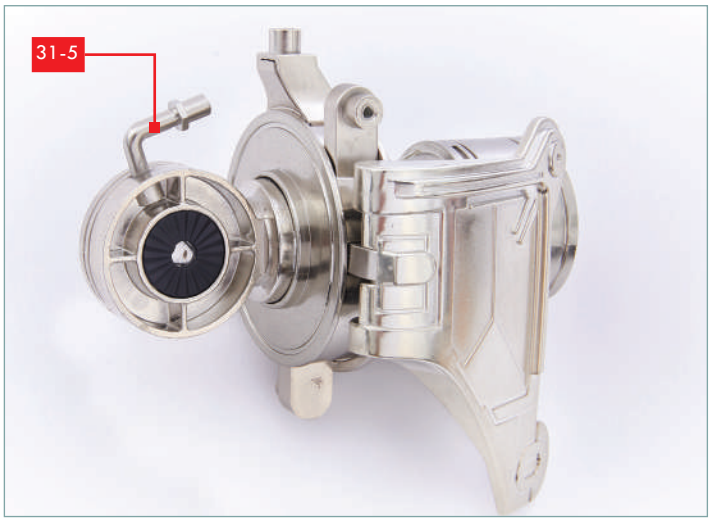
STEP 7

Fit the left shoulder blade fixing cap **31-3** into the bottom of the shoulder blade joint. This is a push-fit connection.



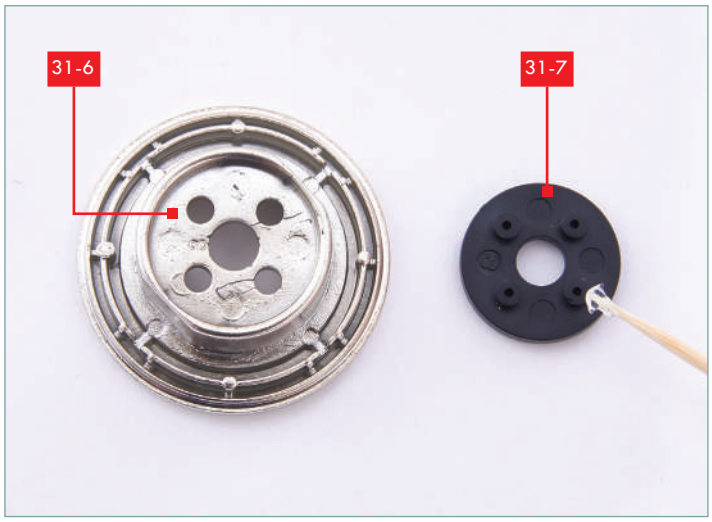
STEP 8

After test-fitting, apply a little superglue to the recess on the shoulder accessory **31-5**.



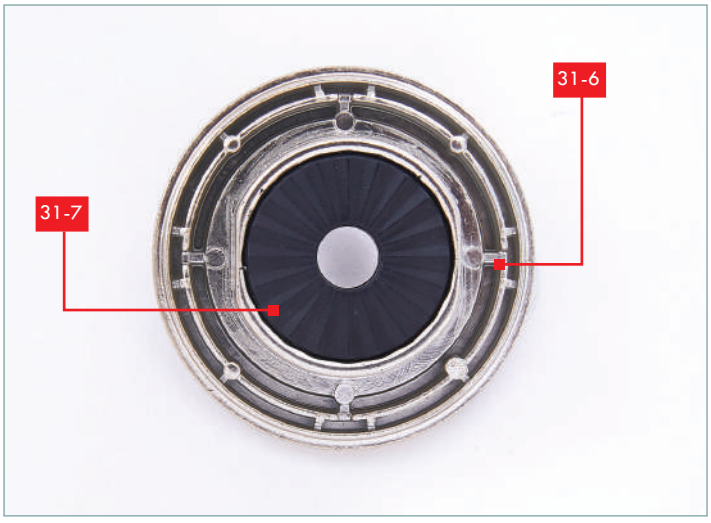
STEP 9

Fit the accessory **31-5** into the socket in the head of the shoulder assembly.



STEP 10

After test-fitting, apply a little superglue to the four raised areas on the back of part **31-7**.



STEP 11

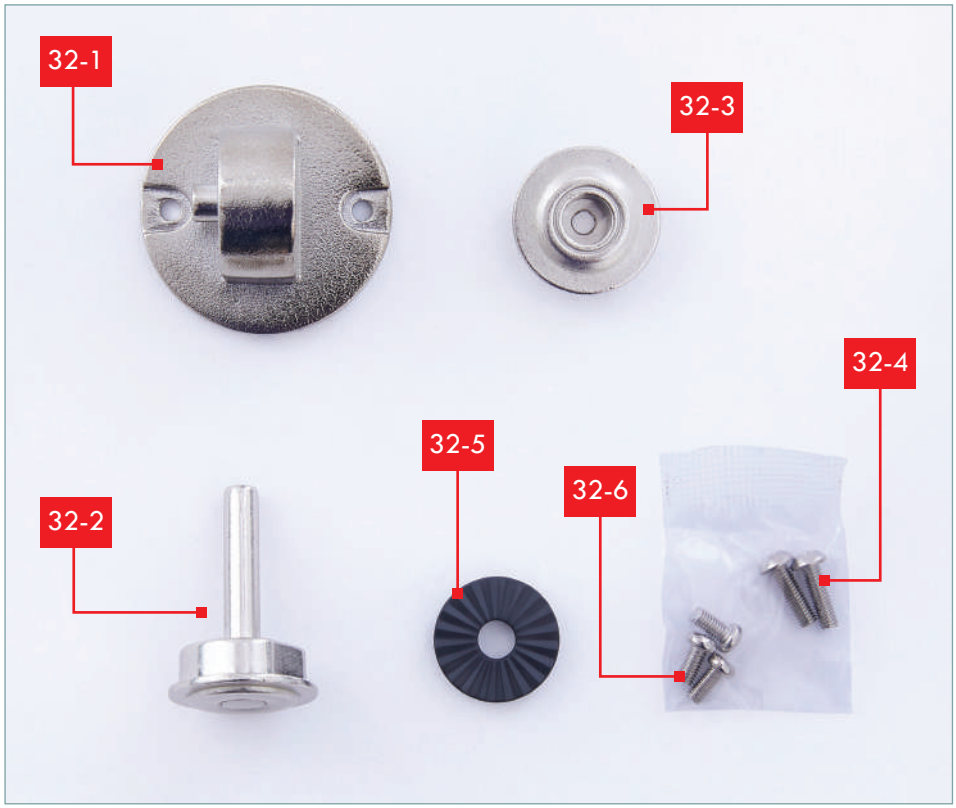
Fit part **31-7** into part **31-6**.

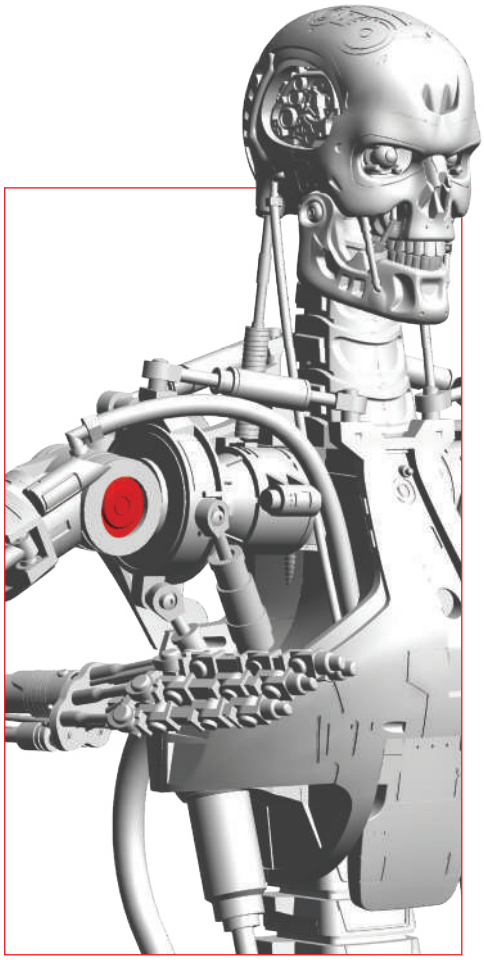
STAGE COMPLETE

The left shoulder blade has been fitted to the left shoulder, along with a small accessory. The right shoulder joint assembly will be fitted in a future stage.

STAGE 32: COMPLETE A HINGE JOINT ON THE RIGHT SHOULDER

Fit the new parts to the right arm and shoulder assembly to create a shoulder hinge joint.



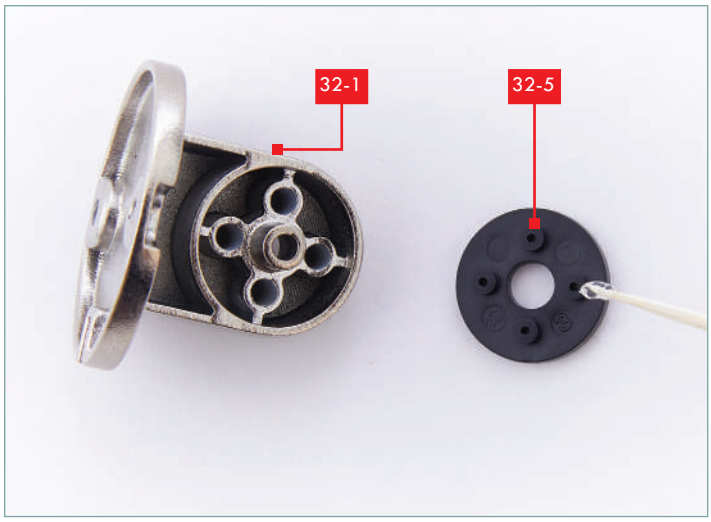


LIST OF PIECES

32-1	Right shoulder end piece
32-2	Right shoulder joint shaft
32-3	Right shoulder joint cap
32-4	2x Allen screws PM (3x10 mm) (1 spare)
32-5	Right shoulder end piece insert
32-6	3x PM screw (3x6 mm) (1 spare)

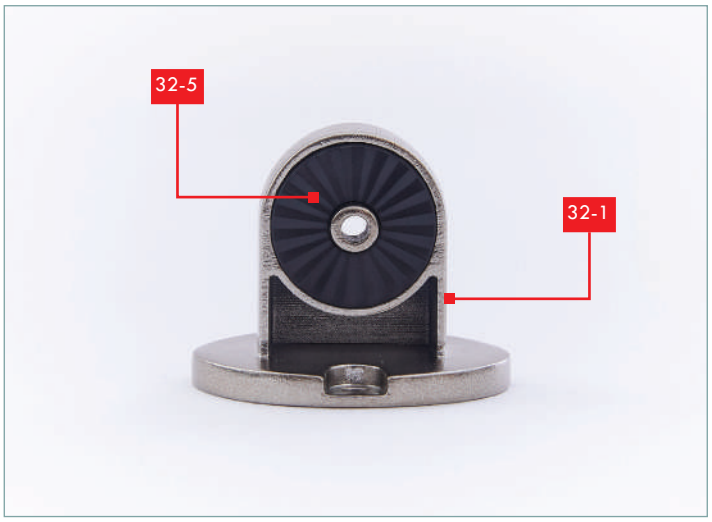
YOU WILL ALSO NEED

A cross-head screwdriver, Allen key (supplied in stage 26), superglue and a cocktail stick or toothpick with which to apply it, the Shoulder joint assembly from stage 31, the Right arm assembly from stage 26, the Right shoulder assembly from stage 28.



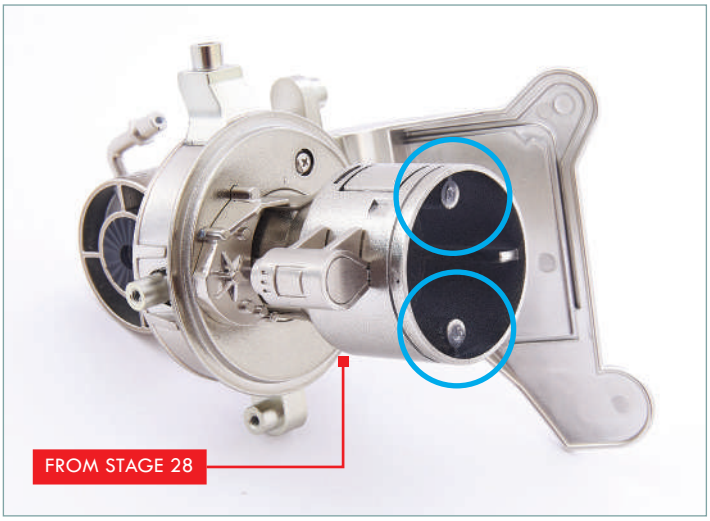
STEP 1

Take shoulder joint insert **32-5** and apply a little superglue to the four raised studs.



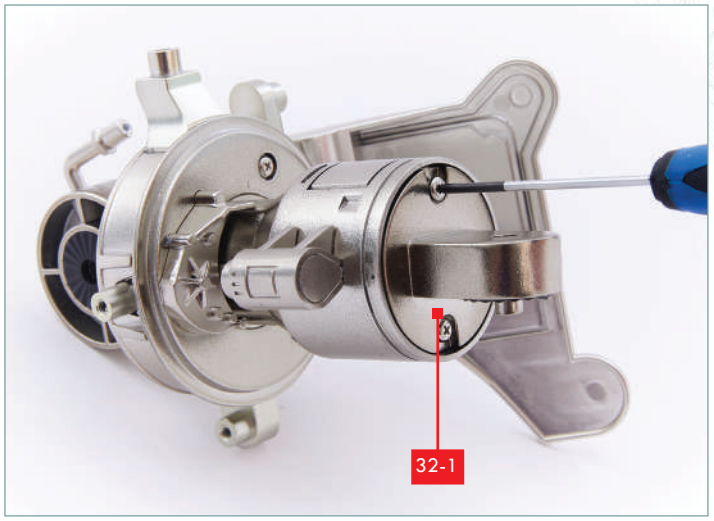
STEP 2

Fit part **32-5** into shoulder end piece **32-1.**



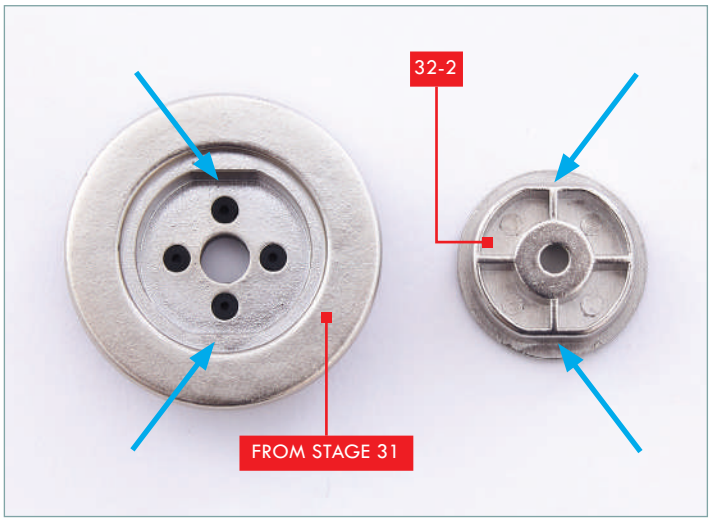
STEP 3

Take the right shoulder assembly from stage 28 and identify the fixing points (circled) for the shoulder end piece.



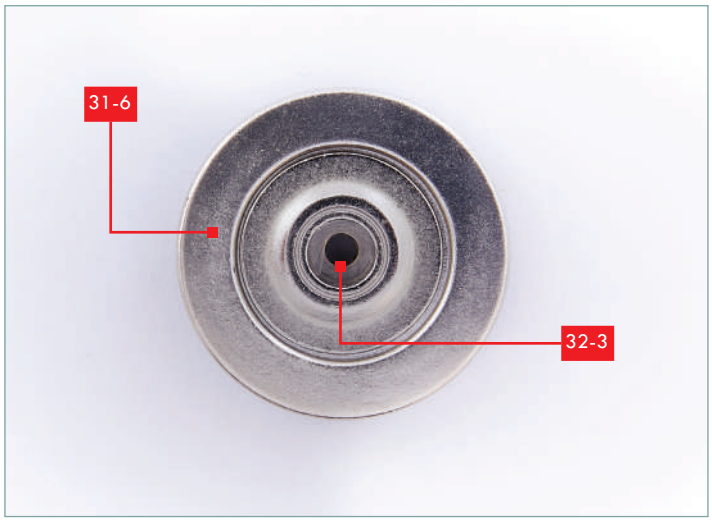
STEP 4

Fix the shoulder end piece **32-1** into the end of the shoulder assembly using two PM 3x6 mm screws.



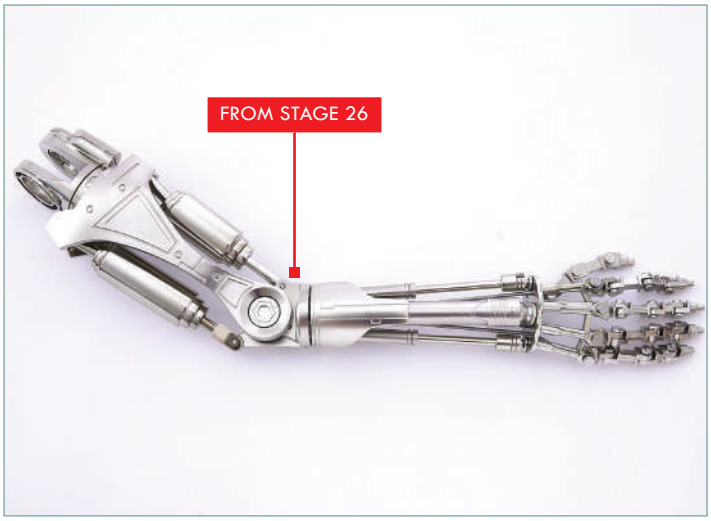
STEP 5

Take the shoulder joint assembly from stage 31 and the right shoulder joint cap **32-3.** Note that the inner rims have flattened edges (arrows).



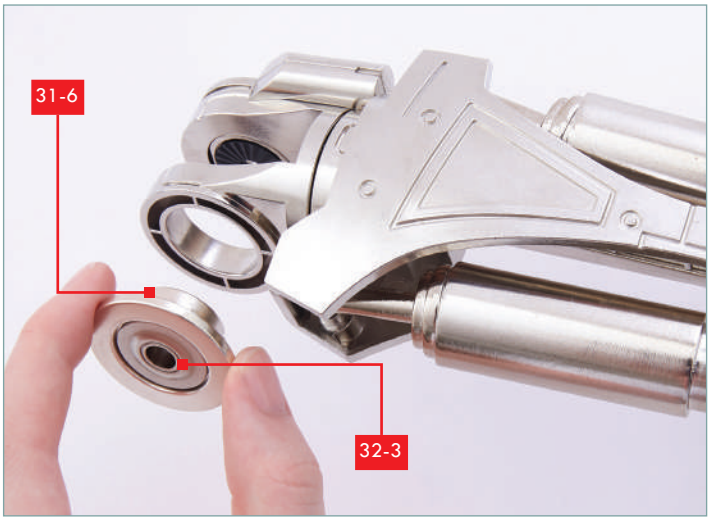
STEP 6

Fit the cap **32-3** into the shoulder joint assembly (**31-6**).



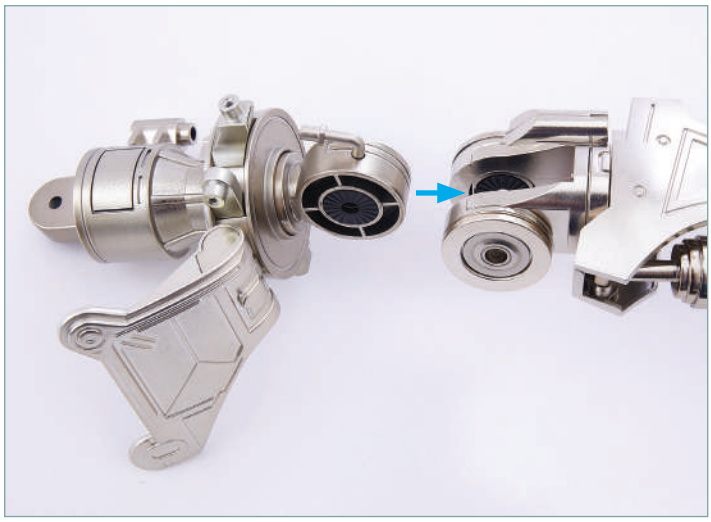
STEP 7

Take the right arm assembly from stage 26. Check that you have it in the correct orientation.



STEP 8

Fit the shoulder joint assembly (**31-6**/**32-3**) from step 6 into the socket in the top of the arm.

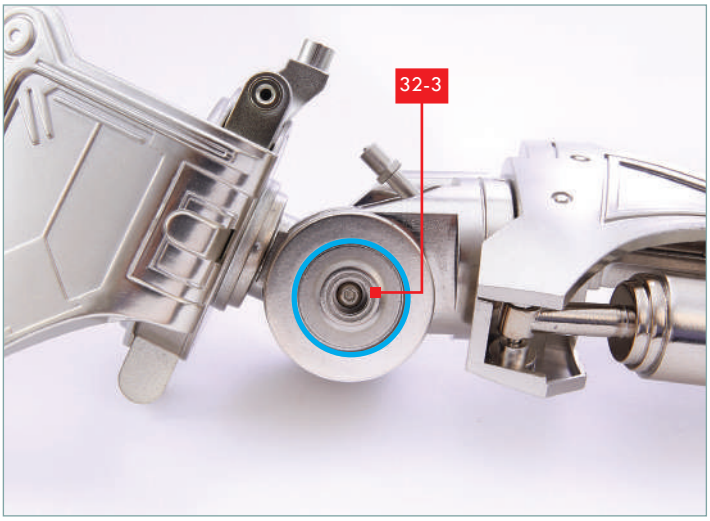


STEP 9

Fit the head of the shoulder assembly from step 4 in between the two parts of the hinge joint on the top of the arm, as shown.

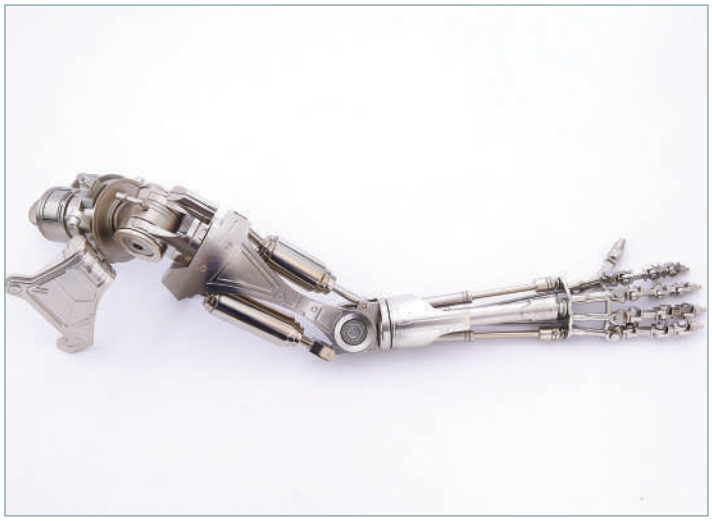
STEP 10

Fit the right shoulder joint shaft **32-2** through the right shoulder hinge joint.



STEP 11

Fit an Allen screw (**PM** 3x10 mm) through the shoulder joint cap **32-3** and into the end of the shaft **32-2**. Use the Allen key supplied with stage 26 to tighten the screw.



STAGE COMPLETE

The right shoulder assembly has been fitted to the top of the right arm, forming a hinge joint.