

ARMOUR ASSEMBLY

Part identification and physical-position guide



CURRENT	13	19
green print set / 82 recessed IDs	separate resin gems	strap / fabric / buckle candidates

LEFT and RIGHT always mean the wearer's side. Labels are recessed on the hidden, wearer-facing surface. Placement guide for the current V18 master. Final fasteners and articulation must still be proven by physical dry-fit.

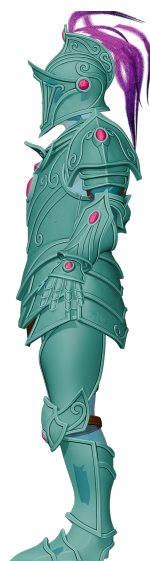
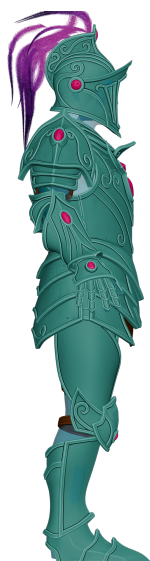
1. Orientation at a glance



FRONT - wearer's left is page right



BACK - wearer's left is page left



CODE FAMILIES

H helmet - C cuirass - W waist - S shoulder - A arm - G gauntlet/hand - L leg - R/L01-15 finger plates

2. Recommended assembly order

- 1. Sort before fastening** - Separate wearer's left and right parts. Put green labelled panels, pink resin gems and brown strap/buckle parts into three trays. Labels are on the concave wearer-facing surface.
- 2. Prepare the fixed inserts** - Paint and finish the green panels first. Dry-fit every pink gem in its matching recess; bond only after the visible finish and any future LED plan are settled.
- 3. Build the helmet** - Fit the H01 crest gem, then position fixed visor H02 between the helmet sides and add the two ST9 end gems. GORGET remains a separate neck ring beneath H01.
- 4. Build the cuirass** - Fit the medallion gem to C01-FRONT. Fit the diamond gem into C01-PEAK, then glue the complete peak subassembly to its seat above the medallion. Keep C01 and C02 separable for donning.
- 5. Build the shoulder stacks** - On each side, S01 is the outer cap. S02-2 is the upper sliding lame beneath it; S02-1 is the lower lame. Join with straps/rivets so the overlaps can move.
- 6. Build arms from shoulder to hand** - Use A02 then A01 straps around the upper arm, followed by A03. Place A04 centreline half A and half B around the forearm from opposite sides; both are open at the wrist and elbow ends. Let the seven distributed 5 x 2 mm pairs close the seams. Place the two uninterrupted G01 longitudinal halves around the wrist and let their four blind 5 x 2 mm pairs close the cuff. Seat G01 so its two concealed 8 x 2 mm pairs retain both A04 members. No square peg, printed key or transverse cuff joint is used. Continue with G02 and G03.
- 7. Build the waist** - Stack W01, W02 and W03 from top to bottom. Add W04 side closures. On each hip hang W07 upper, W06 middle and W05 lower. W08-UPPER sits over the separate brown front fabric panel.
- 8. Build legs from thigh to foot** - Fit thigh straps and their S034 buckle pairs, then L03-2 upper and L03-1 lower thigh panels. Fit the gemmed L05 poleyn and its separate lower lame, then greaves L06-09/L07, ankle L08 and toe lames L10 then L11.
- 9. Build the gloves** - For each finger run, numbers increase from fingertip toward the hand. Attach plates to a flexible glove with a small flex gap; never glue adjacent finger plates together.
- 10. Final wearable dry-fit** - Check every 0.2 mm overlap, side seam, joint and strap under movement before final fastening. The static sculpt is a placement reference, not proof of unrestricted articulation.

IMPORTANT

Do not glue sliding lames together. Use straps, rivets, elastic or other tested wearable connections at shoulders, waist, knees, ankles, toes and fingers.

3. Helmet and neck

Inside ID	Physical part and position	Blender object / print stem
H01	Helmet skull/dome and full crest; surrounds the head above the visor.	H01_STOCK_SHELL_FULL_CREST
H02	Fixed visor and grille; covers the face and seats between the two circular ST9 ends.	H02_STOCK_FIXED_VISOR_ST9_GEM_SEATS
GORGET	Lower helmet/neck ring directly beneath H01; sits above the cuirass neckline.	FINAL_HELMET_GORGET

4. Cuirass

Inside ID	Physical part and position	Blender object / print stem
C01-FRONT	Front breastplate; covers chest and abdomen. Side seam meets C02.	FINAL_C01_FRONT_PEAK_SEAT_BEZEL_UNION_GROOVE_FOLLOWING_SEAM
C02-BACK	Backplate; covers shoulder blades and lower back. Side seam meets C01.	FINAL_C02_BACK_GROOVE_FOLLOWING_SEAM
C01-PEAK	Small removable diamond-shaped chest peak above the large oval medallion.	C01_CHEST_PEAK_ST130_131_132_S018_BEZEL

5. Waist and tassets

Inside ID	Physical part and position	Blender object / print stem
W01	Top circumferential fauld lame immediately below the cuirass rim.	S048_W01
W02	Middle circumferential fauld lame; overlaps below W01.	S063_W02
W03	Bottom circumferential fauld lame; lowest of the three rear/waist bands.	FINAL_W03
W04-L	Wearer's left waist side/closure panel at the edge of the fauld stack.	S052_W04_L
W04-R	Wearer's right waist side/closure panel at the edge of the fauld stack.	S051_W04_R
W07-L	Wearer's left upper side tasset/hip lame; overlaps the other two on that side.	S061_W07_L
W07-R	Wearer's right upper side tasset/hip lame; overlaps the other two on that side.	S058_W07_R
W06-L	Wearer's left middle side tasset/hip lame; overlaps the other two on that side.	S060_W06_L
W06-R	Wearer's right middle side tasset/hip lame; overlaps the other two on that side.	S057_W06_R
W05-L	Wearer's left lower side tasset/hip lame; overlaps the other two on that side.	S059_W05_L
W05-R	Wearer's right lower side tasset/hip lame; overlaps the other two on that side.	S056_W05_R
W08-UPPER	Small central front metal panel directly below the cuirass; above the brown fabric panel.	S031_W08_UPPER_METAL_PANEL

6. Shoulders and arms

Inside ID	Physical part and position	Blender object / print stem
S01-L	Wearer's left outer pauldron/shoulder cap; the large oval gem sits at its crown.	S01_L_PAULDRON_GEM_SEAT
S01-R	Wearer's right outer pauldron/shoulder cap; the large oval gem sits at its crown.	S01_R_PAULDRON_GEM_SEAT
S02-L2	Wearer's left upper sliding pauldron lame beneath S01; keep it separate from its neighbour.	S158_S02_R_INNER_S02_R_OUTER_S02_L_INNER_S02_L_OUTER__L02
S02-R2	Wearer's right upper sliding pauldron lame beneath S01; keep it separate from its neighbour.	S158_S02_R_INNER_S02_R_OUTER_S02_L_INNER_S02_L_OUTER__R02
S02-L1	Wearer's left lower sliding pauldron lame beneath S01; keep it separate from its neighbour.	S158_S02_R_INNER_S02_R_OUTER_S02_L_INNER_S02_L_OUTER__L01
S02-R1	Wearer's right lower sliding pauldron lame beneath S01; keep it separate from its neighbour.	S158_S02_R_INNER_S02_R_OUTER_S02_L_INNER_S02_L_OUTER__R01
A03-L	Wearer's left upper-arm rerebrace, between shoulder lames and elbow.	FINAL_A03_L
A03-R	Wearer's right upper-arm rerebrace, between shoulder lames and elbow.	FINAL_A03_R
A04-L	Wearer's left two-piece elbow/vambrace between A03 and G01. The A04-L recess is on its removable inner panel; match it to the named outer body.	S108_A04_L
A04-R	Wearer's right two-piece elbow/vambrace between A03 and G01. The A04-R recess is on its removable inner panel; match it to the named outer body.	S107_A04_R
G02-L	Wearer's left outer forearm frame with an oval gem recess.	G02_L_FOREARM_FRAME_GEM_SEAT
G02-R	Wearer's right outer forearm frame with an oval gem recess.	G02_R_FOREARM_FRAME_GEM_SEAT
G01-L	Wearer's left gauntlet cuff surrounding the wrist.	FINAL_G01_L
G01-R	Wearer's right gauntlet cuff surrounding the wrist.	FINAL_G01_R
G03-L	Wearer's left back-of-hand plate with an oval gem recess.	FINAL_G03_L
G03-R	Wearer's right back-of-hand plate with an oval gem recess.	FINAL_G03_R

7. Legs and feet

The starred L05 IDs are deliberate duplicate-label pairs. Use the oval gem recess to identify the main poleyn; the other piece is its lower overlapping lame.

Inside ID	Physical part and position	Blender object / print stem
L03-L2	Wearer's left upper cuisse/thigh panel; upper and lower panels overlap and must remain mobile.	S037_L03_R_UPPER_L03_R_LOWER_L03_L_UPPER_L03_L_LOWER__L02
L03-R2	Wearer's right upper cuisse/thigh panel; upper and lower panels overlap and must remain mobile.	S037_L03_R_UPPER_L03_R_LOWER_L03_L_UPPER_L03_L_LOWER__R02
L03-L1	Wearer's left lower cuisse/thigh panel; upper and lower panels overlap and must remain mobile.	S037_L03_R_UPPER_L03_R_LOWER_L03_L_UPPER_L03_L_LOWER__L01
L03-R1	Wearer's right lower cuisse/thigh panel; upper and lower panels overlap and must remain mobile.	S037_L03_R_UPPER_L03_R_LOWER_L03_L_UPPER_L03_L_LOWER__R01
L05-L *	Wearer's left main poleyn/knee cap centred on the patella. DUPLICATE ID: this is the piece with the oval gem recess.	L05_L_POLEYN_GEM_SEAT
L05-L *	Wearer's left lower overlapping knee lame directly below the main poleyn. DUPLICATE ID: no gem recess.	FINAL_L05_L_LOWER_LAME
L05-R *	Wearer's right main poleyn/knee cap centred on the patella. DUPLICATE ID: this is the piece with the oval gem recess.	L05_R_POLEYN_GEM_SEAT
L05-R *	Wearer's right lower overlapping knee lame directly below the main poleyn. DUPLICATE ID: no gem recess.	FINAL_L05_R_LOWER_LAME
L06-09-L	Wearer's left front greave/shin assembly, including the L09 auxiliary front panel.	FINAL_L06_L09_L
L06-09-R	Wearer's right front greave/shin assembly, including the L09 auxiliary front panel.	FINAL_L06_L09_R
L07-L1	Wearer's left rear greave/calf shell; mates with the L06-09 front greave using straps or closures.	S040_L07_R_L07_L__L01
L07-R1	Wearer's right rear greave/calf shell; mates with the L06-09 front greave using straps or closures.	S040_L07_R_L07_L__R01
L08-L1	Wearer's left ankle/heel guard between greave and sabaton.	S041_L08_R_L08_L__L01
L08-R1	Wearer's right ankle/heel guard between greave and sabaton.	S041_L08_R_L08_L__R01
L10-L1	Wearer's left first/proximal sabaton toe lame, nearest the ankle.	S045_L10_R_L10_L__L01
L10-R1	Wearer's right first/proximal sabaton toe lame, nearest the ankle.	S045_L10_R_L10_L__R01
L11-L1	Wearer's left second/distal sabaton toe lame, nearest the toe tip.	S046_L11_R_L11_L__L01
L11-R1	Wearer's right second/distal sabaton toe lame, nearest the toe tip.	S046_L11_R_L11_L__R01

8. Finger plate map

Numbers increase from the fingertip toward the hand. Every plate remains separate and mounts to a flexible glove with a small flex gap.

Side	Finger	Distal / tip	Middle	Proximal / base
Right	Little	R01 / S077_F_R01	R02 / S078_F_R02	R03 / S079_F_R03
Right	Ring	R04 / S080_F_R04	R05 / S081_F_R05	R06 / S082_F_R06
Right	Middle	R07 / S083_F_R07	R08 / S084_F_R08	R09 / S085_F_R09
Right	Index	R10 / S086_F_R10	R11 / S087_F_R11	R12 / S088_F_R12
Right	Thumb	R13 / S101_F_R13	R14 / S102_F_R14	R15 / S103_F_R15
Left	Little	L01 / S089_F_L01	L02 / S090_F_L02	L03 / S091_F_L03
Left	Ring	L04 / S092_F_L04	L05 / S093_F_L05	L06 / S094_F_L06
Left	Middle	L07 / S095_F_L07	L08 / S096_F_L08	L09 / S097_F_L09
Left	Index	L10 / S098_F_L10	L11 / S099_F_L11	L12 / S100_F_L12
Left	Thumb	L13 / S104_F_L13	L14 / S105_F_L14	L15 / S106_F_L15

DRY-FIT RULE

Little: 01-03 - Ring: 04-06 - Middle: 07-09 - Index: 10-12 - Thumb: 13-15. Match the authored curvature to the glove before drilling or gluing attachment points.

9. Resin gem inserts

Print these separately in transparent/translucent resin. Their matching green seats already include nominal clearance. Install after painting; leave unbonded if future LEDs require access.

Gem object	Matching seat	Physical position
GEM_H01_CREST_FRONT	H01	Top-front oval in the helmet crest.
GEM_H02_ST9_L_VISOR_END	H02 left	Circular detail at the wearer's left visor end.
GEM_H02_ST9_R_VISOR_END	H02 right	Circular detail at the wearer's right visor end.
GEM_C01_MEDALLION_CENTRE_RESIN	C01-FRONT	Large egg-shaped gem at the centre of the chest.
GEM_C01_S018_CENTRE_DIAMOND_RESIN	C01-PEAK	Four-sided pyramid gem in the small diamond chest peak.
GEM_S01_L_PAULDRON_OVAL	S01-L	Oval at the crown of the left pauldron.
GEM_S01_R_PAULDRON_OVAL	S01-R	Oval at the crown of the right pauldron.
GEM_G02_L_FOREARM_OVAL	G02-L	Oval in the left outer forearm frame.
GEM_G02_R_FOREARM_OVAL	G02-R	Oval in the right outer forearm frame.
GEM_G03_L_HANDPLATE_OVAL	G03-L	Small oval on the left back-of-hand plate.
GEM_G03_R_HANDPLATE_OVAL	G03-R	Small oval on the right back-of-hand plate.
GEM_L05_L_POLEYN_OVAL	L05-L poleyn	Oval in the left main knee cap; not the lower lame.
GEM_L05_R_POLEYN_OVAL	L05-R poleyn	Oval in the right main knee cap; not the lower lame.

10. Straps, fabric and buckle hardware

These objects are kept in the STRAPS collection and are not recessed-labelled. The S034 parts are buckle/ring hardware that pair with the upper and lower thigh straps.

Object / print stem	Physical position
FINAL_A02_L	Left upper biceps band, immediately below the shoulder lames.
FINAL_A02_R	Right upper biceps band, immediately below the shoulder lames.
S072_A01_L	Left lower upper-arm band, below A02 and above the elbow.
S070_A01_R	Right lower upper-arm band, below A02 and above the elbow.
S065_W08_LOWER_FABRIC_PANEL	Central brown fabric panel below W08-UPPER at the front of the waist.
S035_L02_R_UPPER_L02_R_LOWER_L02_L_UPPER_L02_L_LOWER__L02	Left upper thigh strap.
S035_L02_R_UPPER_L02_R_LOWER_L02_L_UPPER_L02_L_LOWER__L01	Left lower thigh strap.
S035_L02_R_UPPER_L02_R_LOWER_L02_L_UPPER_L02_L_LOWER__R02	Right upper thigh strap.
S035_L02_R_UPPER_L02_R_LOWER_L02_L_UPPER_L02_L_LOWER__R01	Right lower thigh strap.
S034_L01_R_L01_L__L03	Left upper thigh strap buckle bar/ring.
S034_L01_R_L01_L__L04	Left upper thigh strap rectangular buckle frame.
S034_L01_R_L01_L__L01	Left lower thigh strap buckle bar/ring.
S034_L01_R_L01_L__L02	Left lower thigh strap rectangular buckle frame.
S034_L01_R_L01_L__R03	Right upper thigh strap buckle bar/ring.
S034_L01_R_L01_L__R04	Right upper thigh strap rectangular buckle frame.
S034_L01_R_L01_L__R01	Right lower thigh strap buckle bar/ring.
S034_L01_R_L01_L__R02	Right lower thigh strap rectangular buckle frame.
S038_L04_R_L04_L__L01	Left rear knee strap wrapping behind the poleyn.
S038_L04_R_L04_L__R01	Right rear knee strap wrapping behind the poleyn.

11. Concealed magnetic closures

ARMOUR-MAGNET-01 is the approved design standard. S107/S108 V6 and intact G01 longitudinal halves plus the V7 X1C project pass Bambu; physical testing is still pending.

Application	Magnet	Layout / state
S107_A04_R and S108_A04_L seams	5 x 2 mm N42	Seven opposed pairs per arm distributed across both longitudinal seams; all pockets embedded in authored wall material. 14 magnets per arm; 28 for both arms
FINAL_G01_R/L to A04	8 x 2 mm N42	Two opposed pairs per arm. 4 magnets per arm; 8 total
FINAL_G01_R/L part seams	5 x 2 mm N42	Four opposed pairs per cuff; all pockets blind and concealed. 8 magnets per arm; 16 for both arms

Pocket standard: 8.3-8.4 mm diameter x 2.2 mm deep; recess the face 0.1-0.2 mm; retain at least 1.2 mm behind it. Use two-part epoxy, a polarity jig, glue relief, a hidden removal notch and full sweat sealing.

Use 26 magnets per arm, 52 total: four 8 x 2 mm and twenty-two 5 x 2 mm. Magnets close and locate only; authored seam faces and cuff overlaps carry shear. There are no square keys or transverse cuff seams. Review magnet size and count for every new joint.

Member	Print stem	Physical use
A04-R half A	S107_A04_R_CENTRELINE_HALF_A_ALL_MAGNETIC_V6	Open right A04 half; small and large ends both cut through.
A04-R half B	S107_A04_R_CENTRELINE_HALF_B_ALL_MAGNETIC_V6	Matching open right A04 half with concealed seam and cuff pockets.
G01-R cuff	FINAL_G01_R_CUFF_LONGITUDINAL_HALF_[A/B]_MAGNETIC_V3	Two uninterrupted open halves; no transverse seam.
A04-L half A	S108_A04_L_CENTRELINE_HALF_A_ALL_MAGNETIC_V6	Open left A04 half; small and large ends both cut through.
A04-L half B	S108_A04_L_CENTRELINE_HALF_B_ALL_MAGNETIC_V6	Matching open left A04 half with concealed seam and cuff pockets.
G01-L cuff	FINAL_G01_L_CUFF_LONGITUDINAL_HALF_[A/B]_MAGNETIC_V3	Two uninterrupted open halves; no transverse seam.

12. Final fit checklist

- [] 1. All wearer-left parts are on the wearer's left, not the viewer's left in a front photograph.
- [] 2. C01 front and C02 back close cleanly at the authored angled side groove.
- [] 3. H02 remains the fixed stock visor; do not use old moving-visor or hinge experiments.
- [] 4. Every pink gem is in the matching named seat and sits flush without force.
- [] 5. S02, W01-W07, L03, L05, L08, L10, L11 and finger overlaps remain free to move.
- [] 6. The L05 main poleyn is identified by its oval gem recess; the duplicate-ID piece is the lower lame.
- [] 7. Upper thigh straps use S035 ...02; lower thigh straps use S035 ...01. Each receives its matching S034 buckle pair.
- [] 8. No paint, filler or glue bridges the nominal 0.2 mm panel gaps.
- [] 9. Any magnetic closure follows ARMOUR-MAGNET-01, has confirmed polarity and is fully sealed; magnets do not carry shear by themselves.
- [] 10. The plume and ST3 glass body are retained only as non-print reference geometry.
- [] 11. A full movement test is passed before permanent fastening or wearing in public.

MASTER FILE

output/wearable_mm/assembly/full_armour_v18_forearm_minimal_functional_splits_master.blend

The four guide views are preserved in previews/assembly_guide_v1/.