

## UMa - AV-8B Harrier II Plus – Overview

It is a pity we only became involved with this kit when we were asked to provide feedback on the colour schemes and markings rather than at a much earlier stage to help with the model's accuracy. As a thank you for our help, Mr Yingjie Yang at UMa kindly sent me some of their new kits for review, which have been passed onto Karl Smith, Dave Redwood and Gav Stratford, for review builds. I've done an "on-the-runner" review, provided below, looking at each runner in detail and summarising the issues at the end.

That review leaves me asking one big question: ***"Are we ever going to get a GREAT 1/48 scale Harrier kit?"*** Airfix now produce stunning 1/48 kits - Hunter, Buccaneer, Sea King, Gannet, Jaguar - for UK 1960s-2000s aircraft. Kinetic Model's first-generation Harriers are a big improvement on Airfix's 1/48 kits, but are only c.90% there. Their Harrier II's have yet to be announced for release.

UMa had a great opportunity to get the Harrier II right. I'd say they're 80% of the way there.

### Positives

- Surface detailing is beautifully crisp if over deep on the panel lines - no washes required to see that detailing! - and some of the raised rivets are quite high
- 'Ease of build' ideas are VERY good – the pegs inside the fuselage; the moulded tailplane sealing plates on their lower sections to help set the anhedral.
- Undercarriage units, have nicely detailed legs and the main wheels have the brakes units depicted.
- Cockpit detail with different options for detailing the IP and consoles – paint and decals or 3D printed decals are great.
- The wings' LE twist is done without a cranked upper surface.
- Dropped flaps option – great for inflight models in the hover, but no fully open intakes are provided!
  - Remember, the flaps were to be selected up by the pilot before he left the cockpit, to enable re-arming and maintenance.
  - Pilots got hefty (beer!) fines from their ground crew if they forgot to do this!

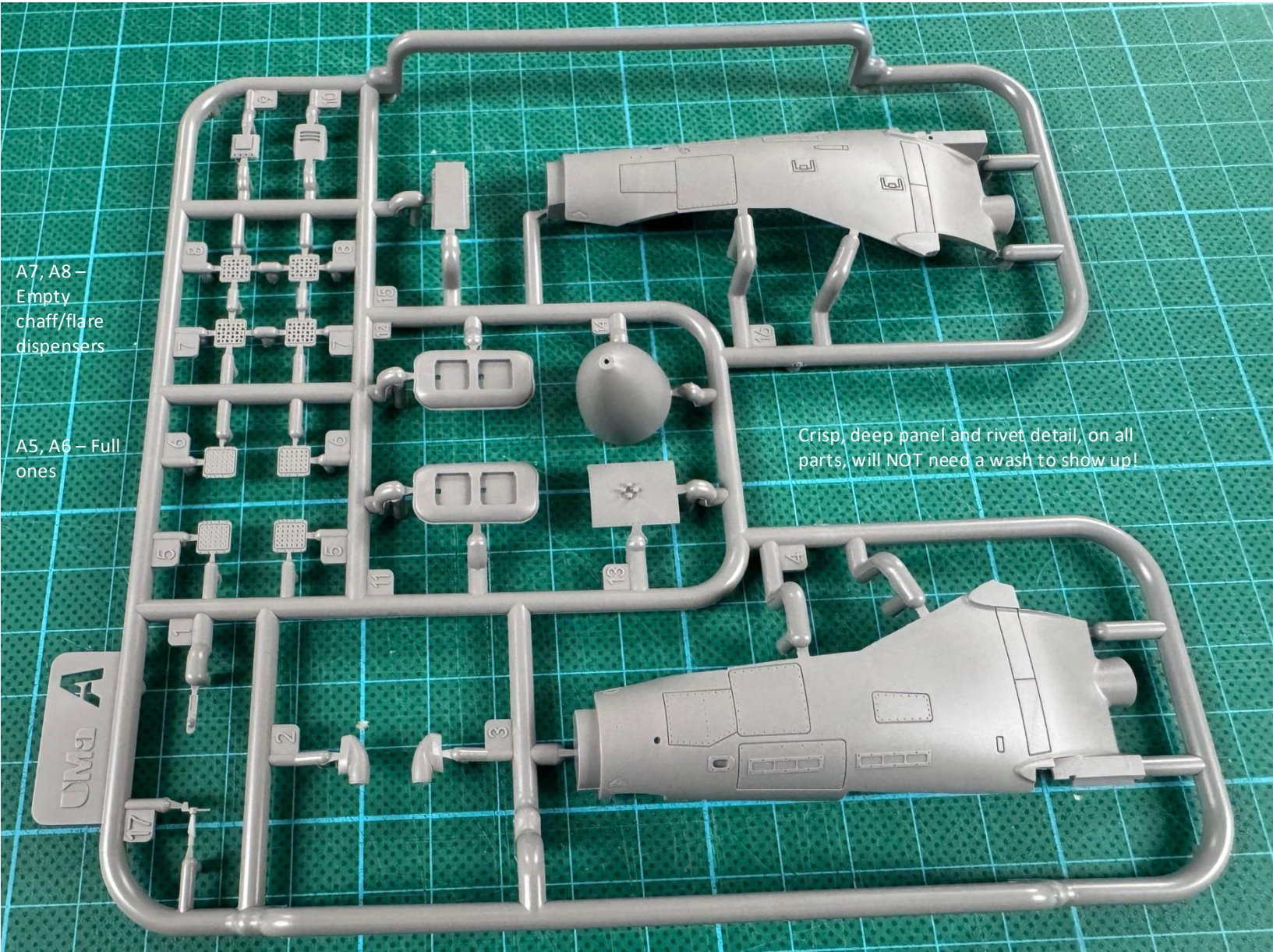
### Concerns

- They have provided a rather nice Martin-Baker Mk.12H seat - shame that's only fitted to UK Harrier IIs!
  - That said, the Rockit resin SJU-4 Stencel S-III-S seat looks gorgeous.
- The intakes! No fully open auxiliary intake doors option for in flight in the hover with flaps dropped.
- 20+ other concerns, some serious, see the and comments on each runner and summary page.

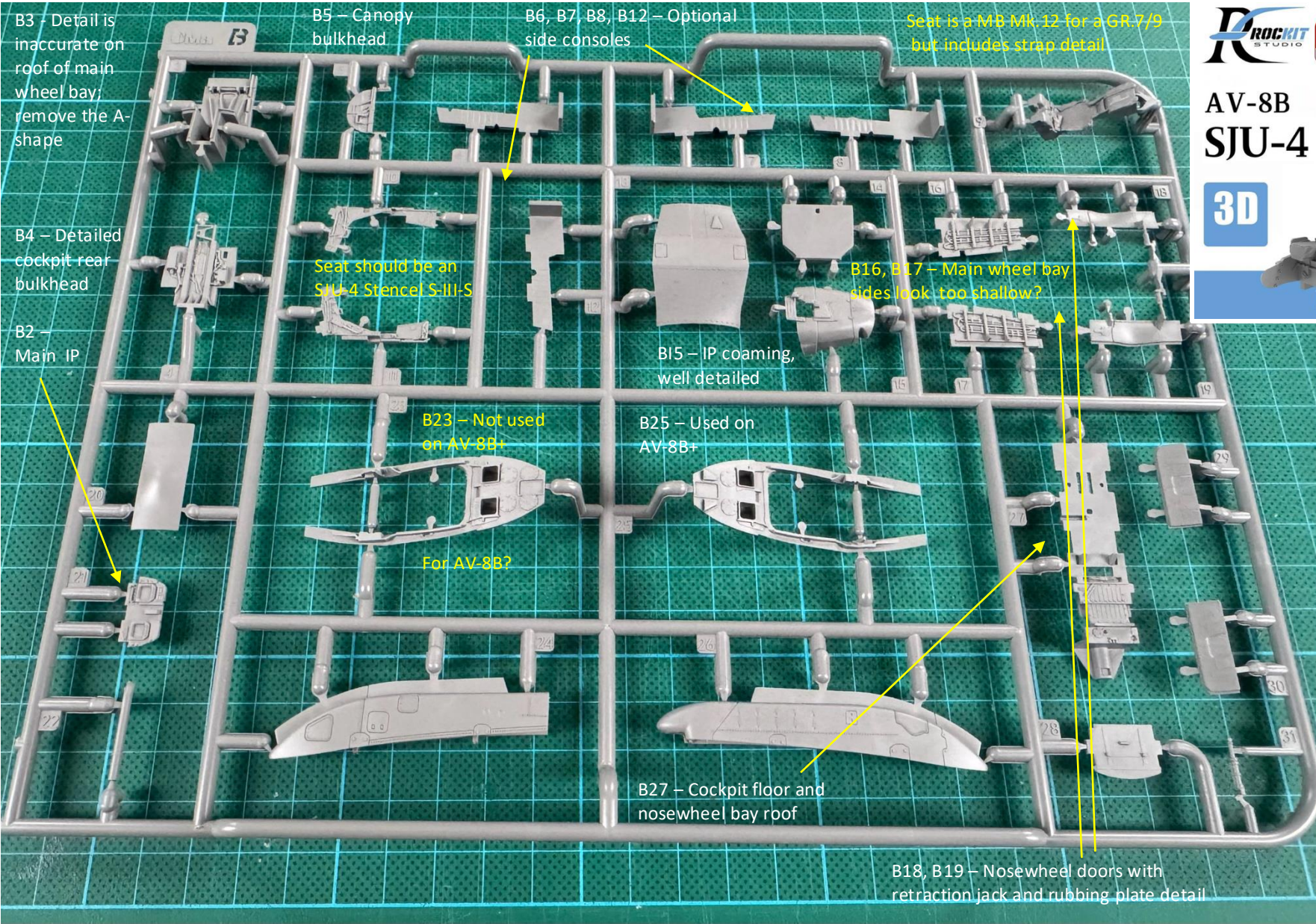
In email correspondence, Mr Yang has told me... *"Regarding the intake issue, our consideration was to reduce manufacturing difficulty by combining multiple parts into a single unit. Due to mold technical limitations, we did not restore the inner intake notch and chose to compromise on this detail. However, we now see this decision has caused some debate, especially leaving authors with very high evaluation requirements feeling confused—hence this explanation. Our product still has many shortcomings, and we will gradually improve them in future products. Nevertheless, we hope it can still bring you joy in creation."*

Hopefully, that means the GR.7/9 will have many of the issues flagged below corrected, we'll have to wait and see. However, I've also been told by a SIG member who knows his Harriers, with high level contacts in the trade and whom I trust that *"UMa have said that all of the shape/size issues are down to their desire to make the kit available for modellers of all standards, so are unapologetic for it not being accurate. In their eyes, ease of assembly beats correct dimensions."*

**If kit building is your thing, try it. If accuracy is more important, I'll let you decide what you do.** Here's the review...









1/48  
480302

AV-8B  
SJU-4

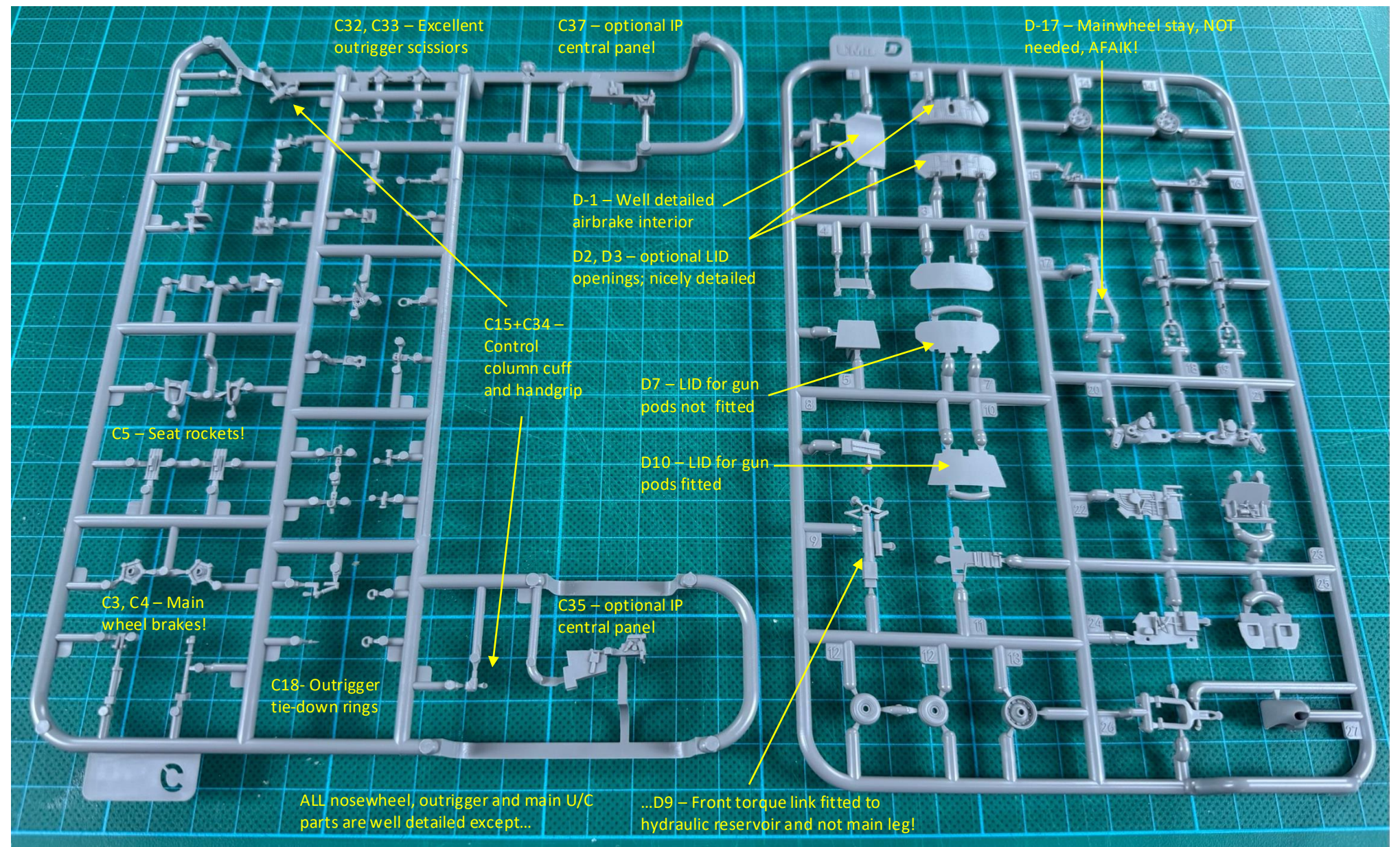
3D



This SJU-4 seat for an AV-8B looks very good!



UMa - AV-8B Harrier II Plus – Runners C and D



C32, C33 – Excellent  
outrigger scissors

C37 – optional IP  
central panel

D-17 – Mainwheel stay, NOT  
needed, AFAIK!

D-1 – Well detailed  
airbrake interior  
D2, D3 – optional LID  
openings; nicely detailed

C15+C34 –  
Control  
column cuff  
and handgrip

D7 – LID for gun  
pods not fitted

D10 – LID for gun  
pods fitted

C5 – Seat rockets!

C3, C4 – Main  
wheel brakes!

C18- Outrigger  
tie-down rings

C35 – optional IP  
central panel

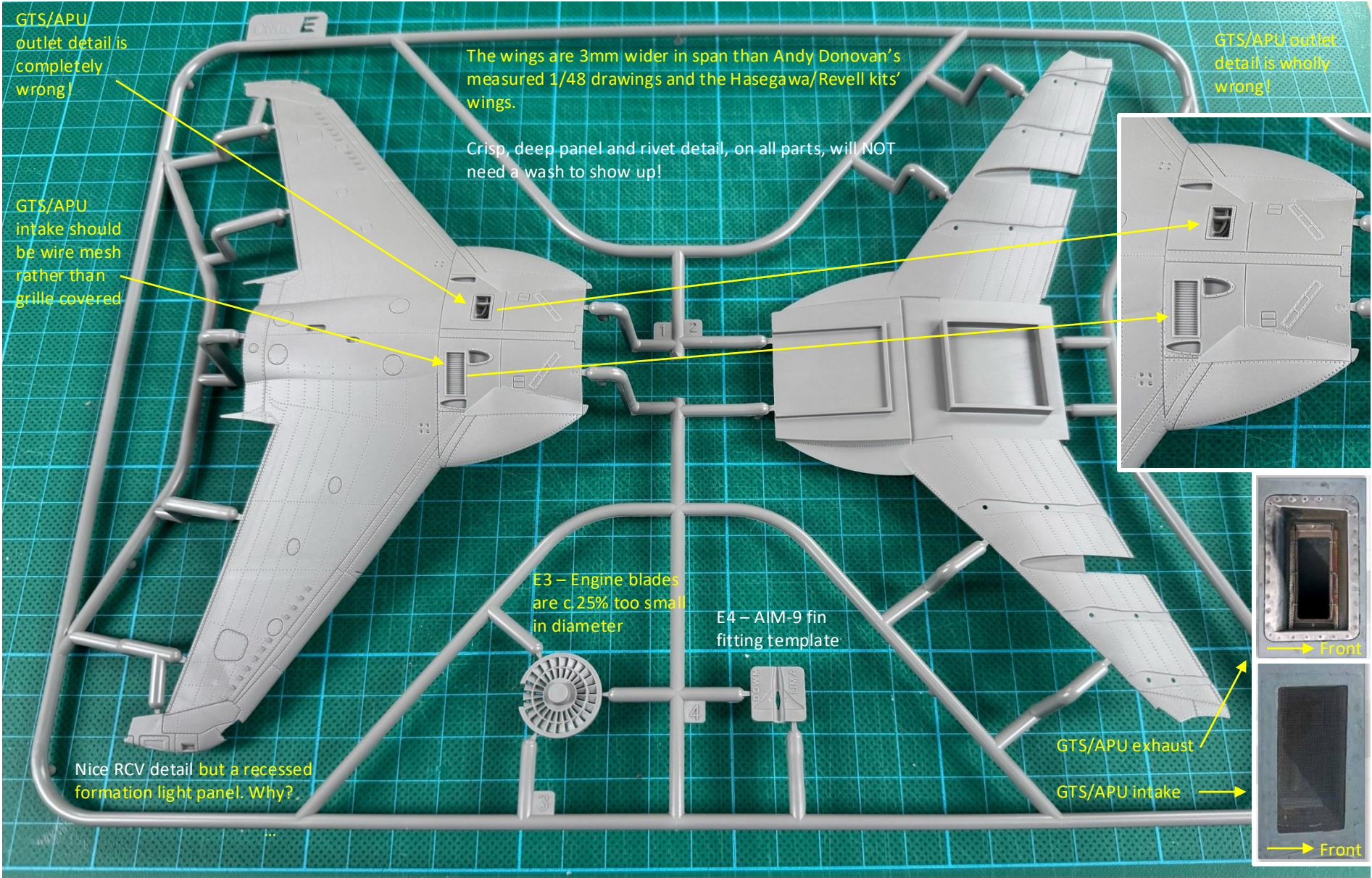
ALL nosewheel, outrigger and main U/C  
parts are well detailed except...

...D9 – Front torque link fitted to  
hydraulic reservoir and not main leg!



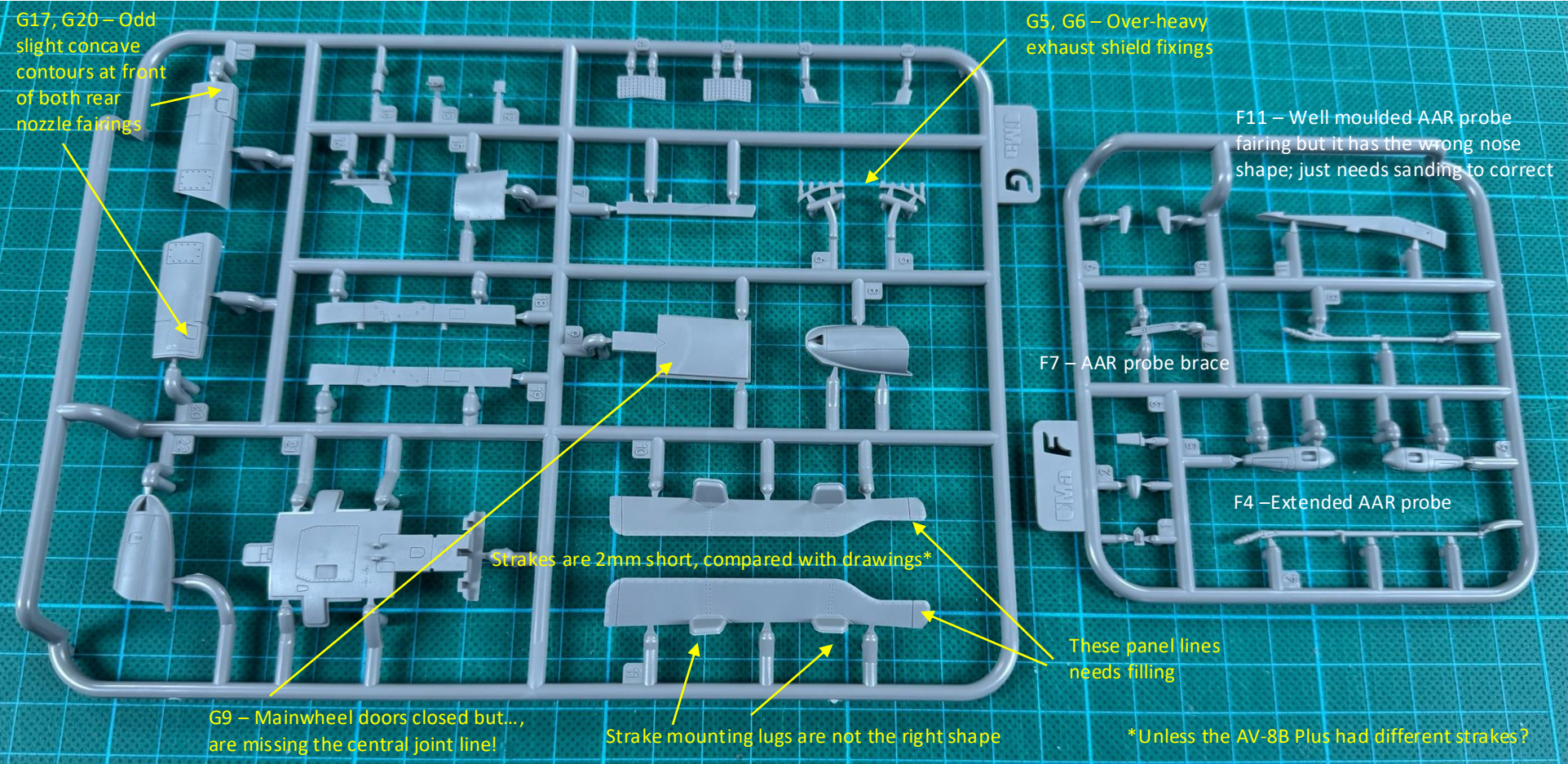
UMa - AV-8B Harrier II Plus – Runner E

The aids to ease of construction with the one-piece LERX and upper wing and the large locating boxes are evident here. The surface detailing is very good when compared with the detail photos of GR.9A ZD433/45A in Andy Donovan's and my book on the GR.9/T.12.



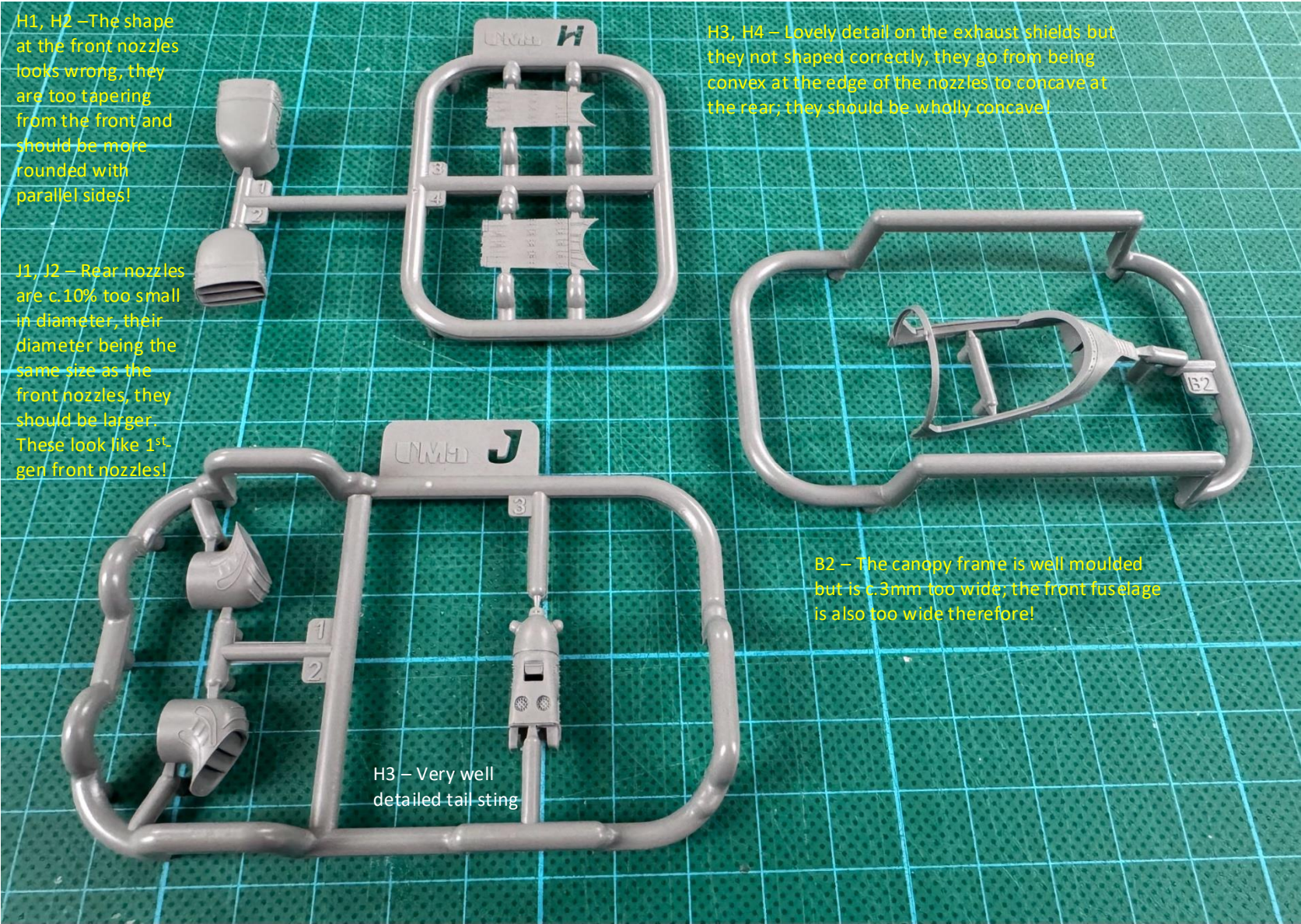


UMa - AV-8B Harrier II Plus – Runners F and G



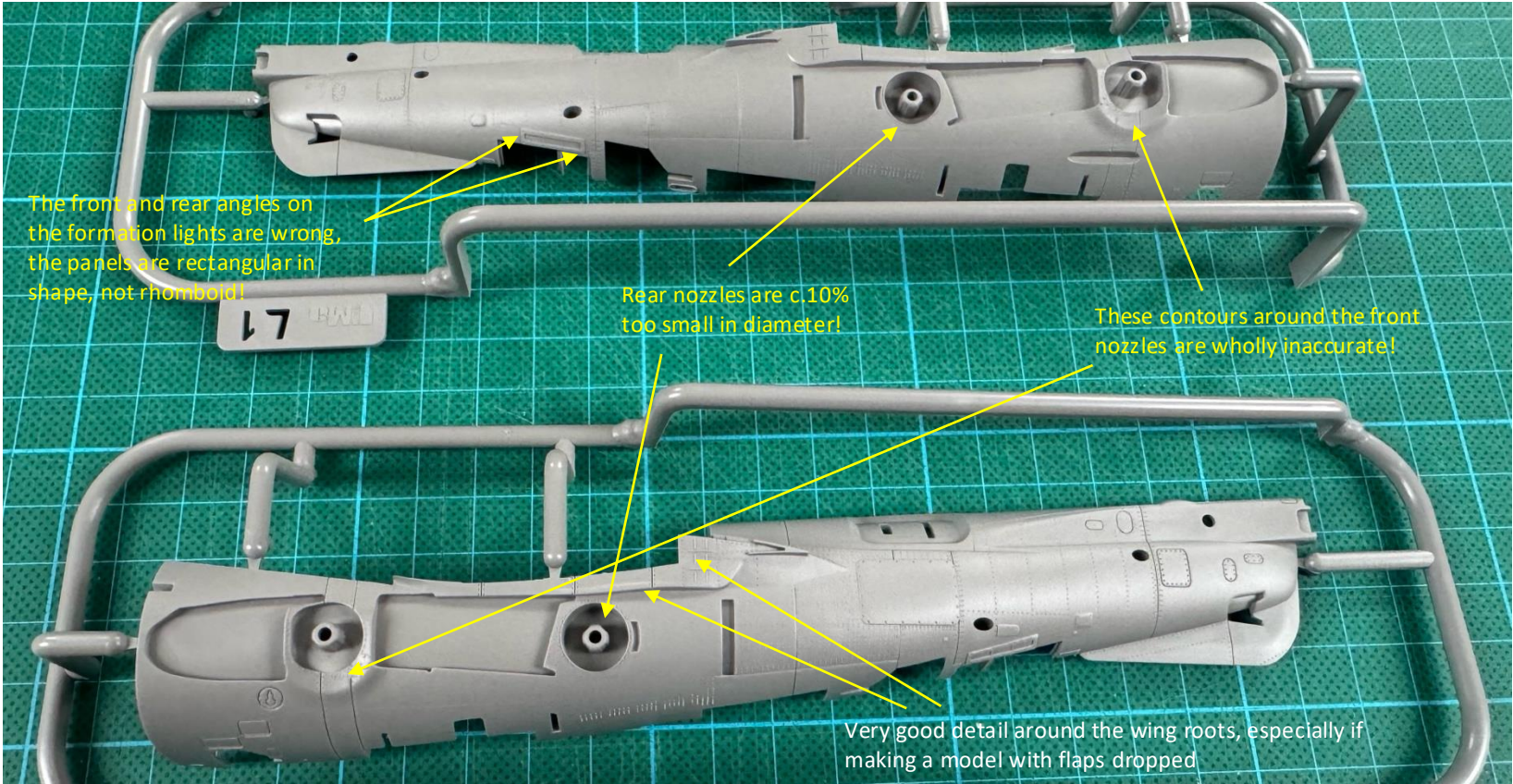


UMa - AV-8B Harrier II Plus – Runners B(2), H and J





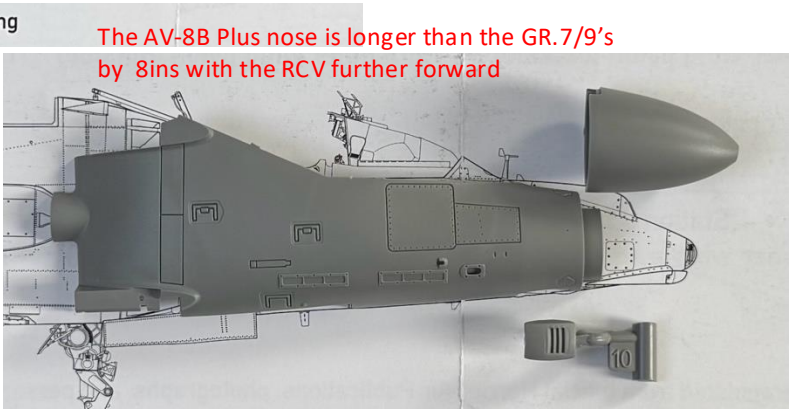
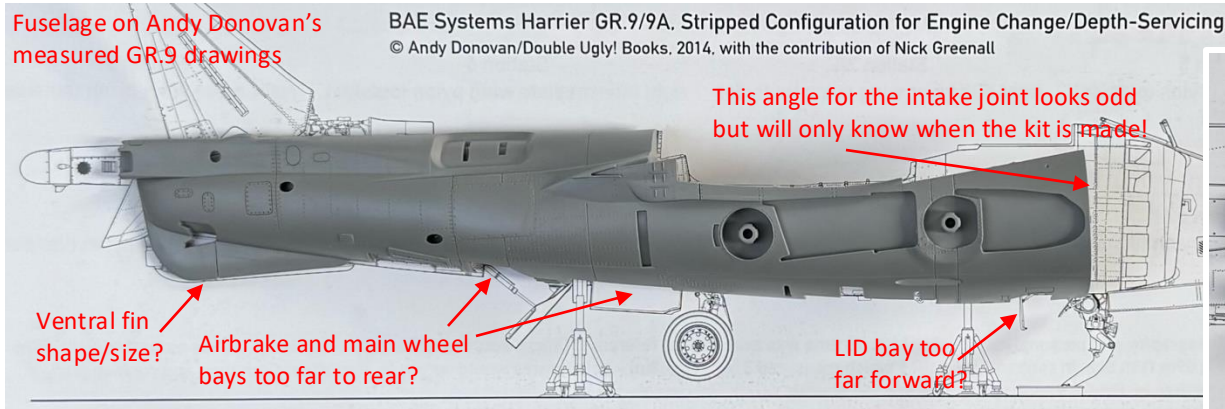
UMa - AV-8B Harrier II Plus – Runners L1, L2



I used the most accurate Harrier II drawings I know of done by Andy Donovan after our visit to GR.9A ZD433 at Yeovilton for the GR.9/T.12 book. Andy, Graham James, Steve Hague and I spent a lot of time measuring 433 with tapes, chalk, levels, plumb-lines, etc.; i.e. the old way!

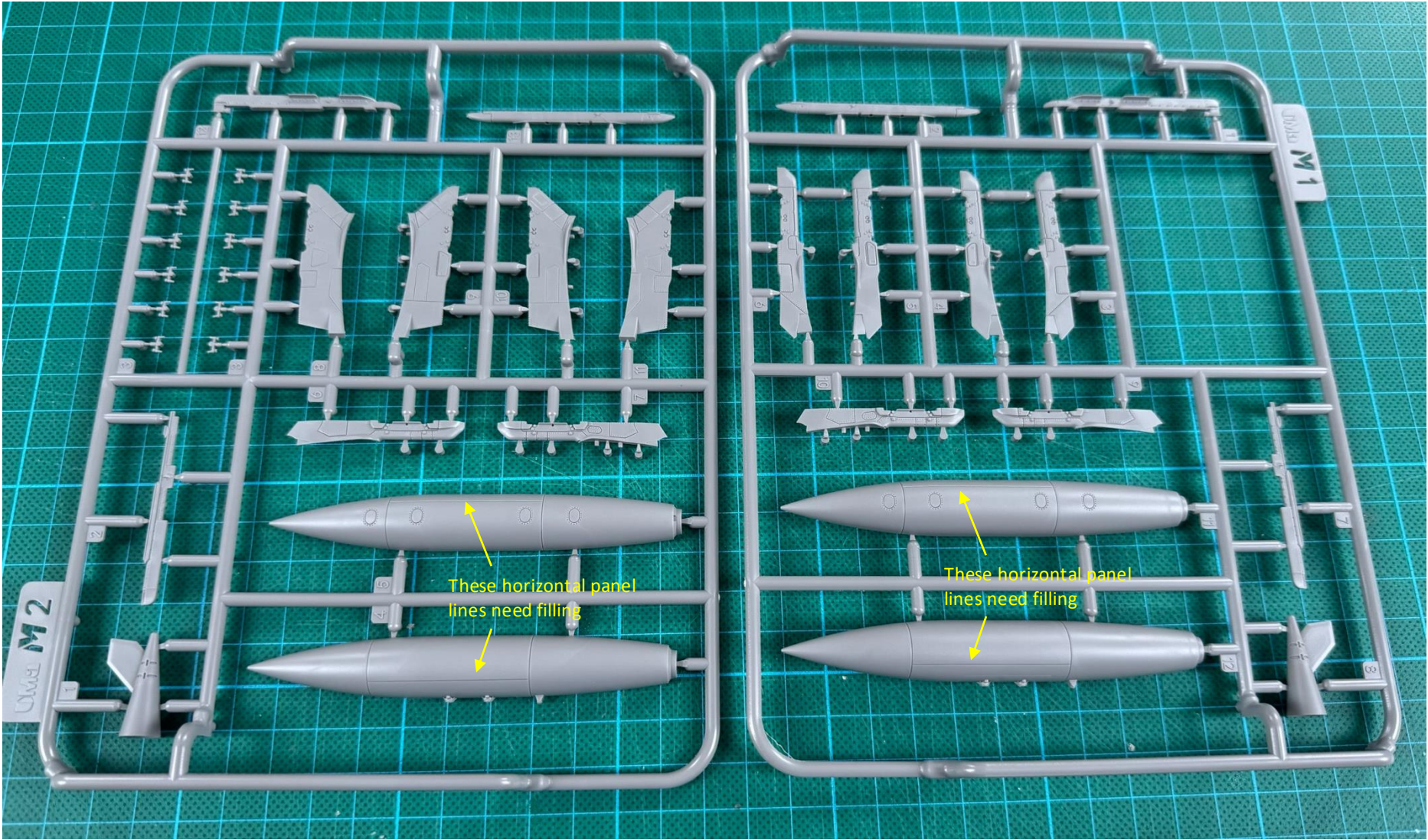
Note, the AV-8B Plus nose looks more than 8ins longer in this photo due to lens distortion and perspective. I have BAE full dimension plans for the GR.7 and US NATOPS dimension plans for the AV-8B Plus.

Inside the fuselage, not visible here are two locating pegs to simplify construction and hold things in place well, they do! The nozzles are designed to be a push fit.

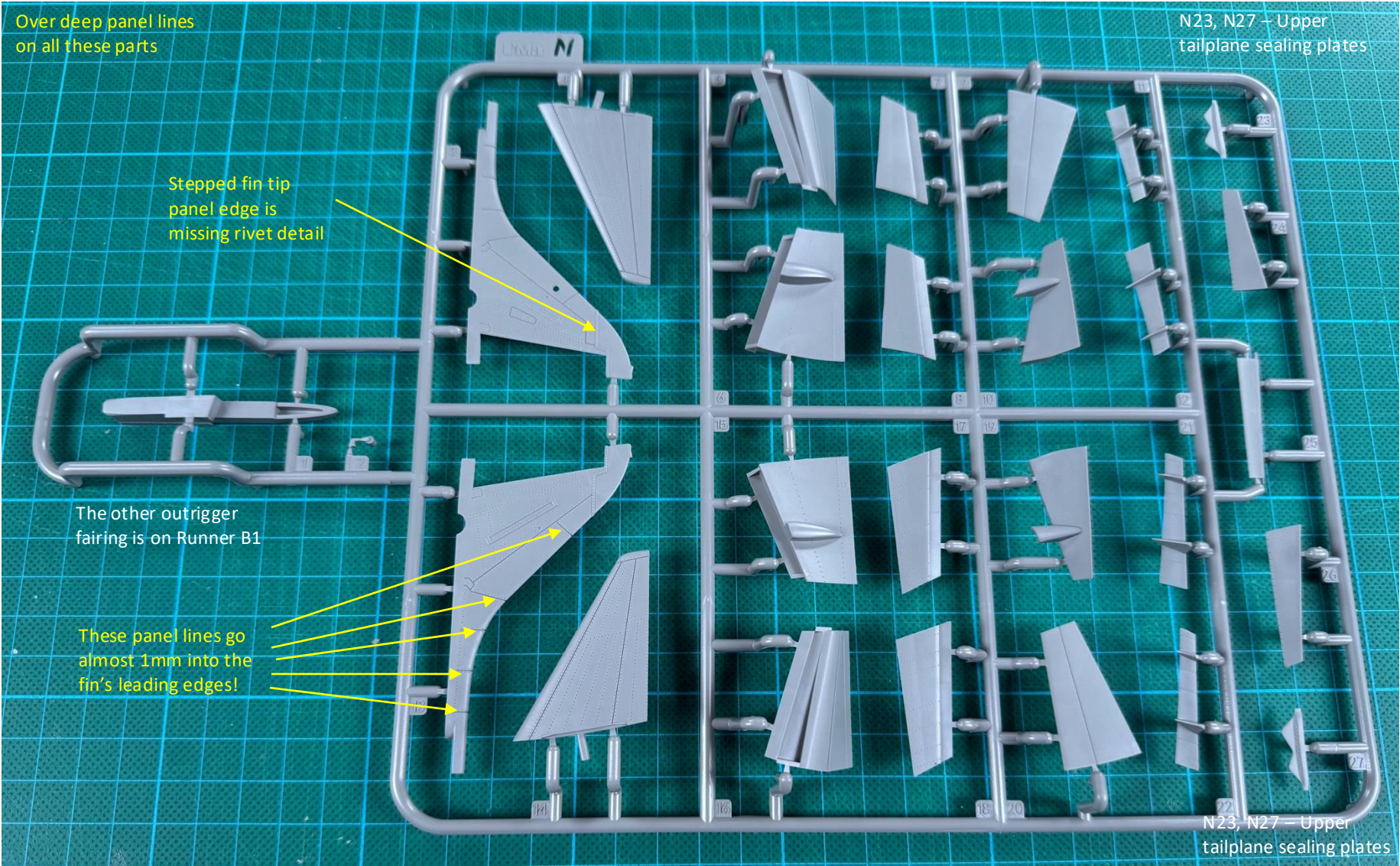




UMa - AV-8B Harrier II Plus – Runners M1 and M2

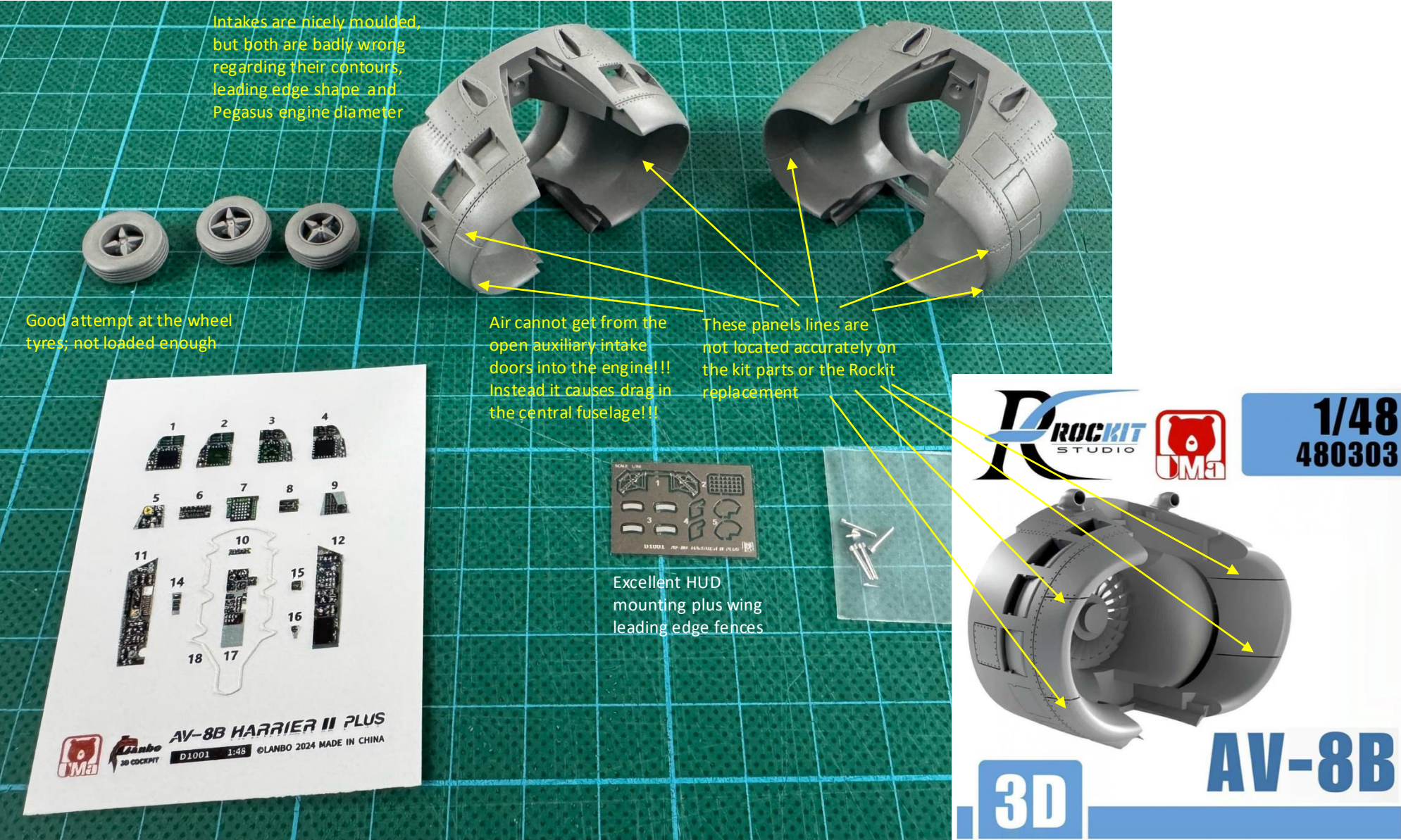








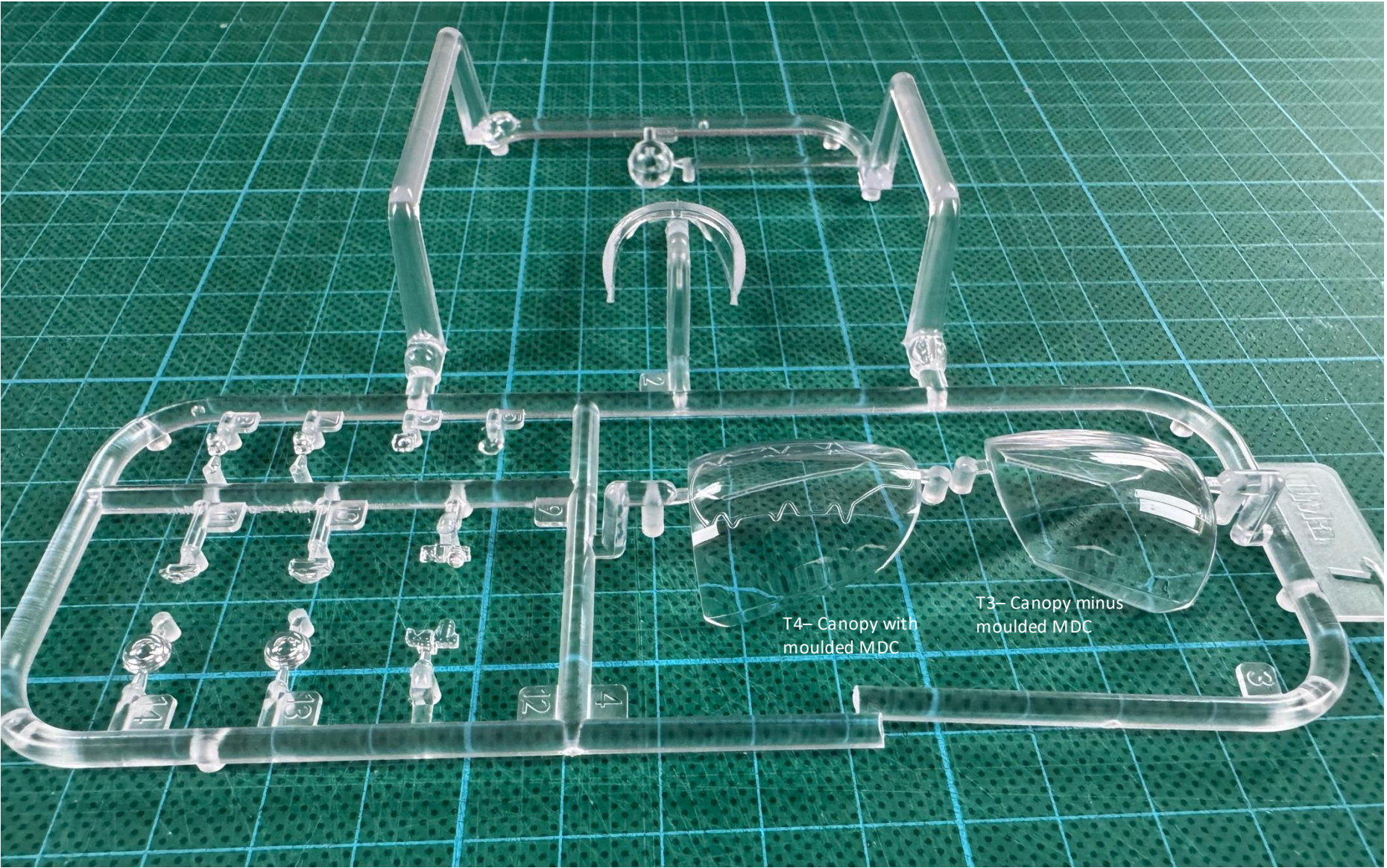
UMa - AV-8B Harrier II Plus – Intakes, 3D IP and console decals, PE and metal parts



<https://www.scalemates.com/kits/rockit-studio-480303-av-8b-movable-air-intake-duct-with-engine-fan-blades-162550>



UMa - AV-8B Harrier II Plus – Runner T, intakes, 3D IP and console decals, PE and metal parts



T3- Canopy minus  
moulded MDC

T4- Canopy with  
moulded MDC



## UMa - AV-8B Harrier II Plus – Summary of the problems with the kit

Crisp, deep panel and rivet detail, on all parts, will NOT need a wash to these details show up in a realistic way from looking at the full-sized airframe.

Inaccuracies noted from examining the runners

- A4, A16 – The cockpit area measure as being too wide by c.3mm.
- B2 – The canopy frame is well moulded but is c.3mm too wide.
- B3 – Detail is inaccurate on main roof
- B9-11, C5, C11, C25 – Seat is a Martin Baker Mk.12 seat used on UK Harrier GR.5/7/9s, some issues with the headbox shape.
  - Seat should be an SJU-4 Stencil S-III-S for an AV-8B Plus. (Rockit 480302 resin SJU-4 seat is an option.)
- B16, B17 – Main wheel bay sides look too shallow.
- D9 – Front torque link fitted to hydraulic reservoir and not main leg.
- D-17 – Mainwheel stay, NOT needed outside of a museum, the wheel could not be retracted with it fitted!
- E1 – The wings are 3mm wider than the best 1/48 scale measured plans available of a Harrier II by Andy Donovan of GR.9A ZD433.
- E1 – GTS APU intake and outlet detail is completely wrong – the intake should be a wire-mesh rather than grille covered; the outlet is an open vent.
- E1 – Not sure why the formation light panel is recessed, it should not be.
- E3 – Engine blades are c.25% too small in diameter.
- H1, H2 – The shape of the front nozzles looks wrong, they are too tapering from the front and should be more rounded with parallel sides.
- H3, H4 – The exhaust shields are not shaped correctly, they go from being convex behind the nozzles to concave at the rear; they are wholly concave.
- J1, J2 – Rear nozzles are c.10% too small in diameter, their diameter in the kit being the same size as the front nozzles, they should be larger.
  - These look more like 1<sup>st</sup> generation Harrier front nozzles!
- K1, K2 – The intakes interior contours are incorrect, lacking any gap for the air from the auxiliary intake doors to get to the Pegasus engine;
- K1, K2 – The nicely open auxiliary intake doors should enable you to see the engine front through the open doors, which open to get more air into the engine during low speed and hovering flight; with solid interiors to the intake, this could not happen! The Pegasus opening itself is c.25% undersized.
- L1, L2 – The length and shape of the of the ventral fin and opening of the airbrake bay and main wheel bay do not align with Andy Donovan's plans.
- L1, L2 – The bulged contours around the front nozzles are wholly inaccurate, the fuselage had smooth contours under and around the nozzles.
- L1, L2 – The front and rear angles on the formation lights behind the airbrake are wrong, the light panels should be rectangular in shape, not rhomboid!
- M1-11, 12; M2-4,5 – The horizontal panel lines on the tanks need filling, they are not visible on the full-size.
- N3 – The stepped fin-tip aerial panel edge is missing any rivet detail on this piece; compare with N13.
- N3, N13 – The fin leading edge panel lines go almost 1mm into the fin's leading edge.
- T2, T3, T4 – The canopies and windscreen are all about 3mm too wide! This shows especially on the canopy with the MDC. Both canopies have very thick lower sections to their glazing.