Esci 1/48 Lockheed S-3A Viking

By: Tom Curda

The Plane

Designed as a replacement for the US Navy Grumman S-2 Tracker, the twin-turbojet Lockheed S-3A first flew as the YS-3A prototype on January 21, 1972. Successful testing led to the production of 179 S-3A Viking aircraft, the first of which entered service in July 1974.

The S-3 is equipped with state-of-the-art submarine detection equipment such as the AN/ASQ-81 tail-mounted extendible MAD, an AN/APS-116 maritime search radar, an OR-89 FLIR, and 60 sonobuoys located in the aft fuselage. The S-3B variant was developed in the early 80s, and features an improved ESM, a new sonobuoy receiver system, and provision to carry two AGM-84 Harpoon anti-ship missiles.

Prime contractor: Lockheed
Nation of origin: USA
Function: Anti-submarine warfare
Crew: 4
Year: 1972
In-service year: 1974
Engine: Two General Electric TF34-GE-2 non-afterburning turbofans, 9,275 lb thrust each
Dimensions

Wing span: 20.93 m / 68 ft 8 in
Length: 16.26 m / 53 ft 4 in
Height: 6.93 m / 22 ft 9 in
Weight: 26,650 lb empty / 52,540 lb max. take off
Ceiling: 35,000 ft
Speed: 814 km/h / 506 mph, 296 km/h / 184 mph patrol speed
Range: 5,560 km / 3,455 miles
Armament: Cluster bombs, depth charges, destructors, free-fall bombs, mines, rockets, torpedoes, AGM-84 Harpoon anti-ship missiles, flare launchers, and up to two drop tanks

The Kit

This is the old ESCI 1/48th S-3A Viking from the late 80's. It is a pretty well detailed kit for its time, and its design holds up well against current kits. It's molded in a medium gray plastic that is kind of soft, with each tree bagged separately as I remember. Panel lines are petitely engraved. The canopy is one huge darkly tinted piece, with no mold lines.

The kit was re-released by AMT/ERTL as both an S-3A, S-3B and with additional parts, as an ES-3A

Construction

I started this kit about 13 or so years ago. Unlike most kits, I chose to start with the fuselage. Since the cockpit drops in through the canopy opening, it did not need to be completed and installed prior to closing the fuselage. The fuselage went together fairly cleanly, with no major gaps along the spine. A little filler (I used CA here) and a swipe

with some sandpaper and it was done. I had to be careful here as there are several molded on blade antennas in this area. The belly was another story, with a fairly severe seam to be filled along the centerline, and numerous molded in bumps and protrusions got in the way. A lot of the detail there was wiped out, mainly due to inexperience.

The weapons and sensor bay doors, along with the crew entry can be posed open or closed. I decided to have all of them closed, the thought being it would be easier to finish off, given my somewhat limited skills at the time, as opposed to detailing and masking the open bays. Boy, was I wrong. All of the doors had a terrible fit; I tried to file and sand as best as I could to even things out, and then used putty to cover the worst of it. The area for the sonobuoy tubes is represented with a perforated plate; this fit fairly well, with minimal putty needed. The vertical tail, integral to the fuselage molding, went together quite well, needing only a little sanding and a pass with a rat tail file through the scoop at the base to finish it off.

The horizontal stabilizers are two pieces each, and attach to the fuselage with no gaps. The wings are also two pieces each. I assembled each wing together, and then attached them to the fuselage. It was easy to get a good fit along the upper surface with minimal gap that wound up appearing as a panel line. The underside of the wing-fuselage join looked pretty good also; I wound up leaving it alone, as my ham-handed attempts at filling and sanding would most likely have made it worse. The wing attachment is positive, with the slight anhedral of the center shoulder section transitioning nicely to the level outer wing sections. No special attention was needed to accomplish this.

At this point it was beginning to look like something recognizable. I started on the engines, and here I ran into a problem. The fan casings are molded in two halves, and assemble together with front and rear fan plates. This assembly is attached to the engine core, which is made up of two halves. The problem is filling and sanding the seam along the join of the fan casing. It was nearly impossible to get a good clean finish here, so after a lot of frustration I wound up putting it aside and the kit sat unfinished. And sat. And sat.

It sat from 1987 until early 2000, when I decided to get back into modeling at the encouragement of my wife. During this time I had not built any models, but had several that were sitting in boxes, along with the partially completed S-3. Surprisingly the S-3 weathered being stored in various locations quite well. The box was intact, and no parts had fallen off the airframe. The only things missing were the instructions and the MAD boom, which gets inserted into the base of the tail from the rear. I found some AeroMaster decals for a VS-28 high-vis scheme, operating off USS Forrestal.

Paint

I sprayed the airframe overall MM flat white, both as a primer and for the underside color. After touching up seams here and there, I masked the demarcation line and control surfaces using Scotch magic tape and sprayed MM Light Gull Gray on the upper surfaces. The radome was sprayed MM radome tan. The plane was set aside while I tackled the engines and cockpit.

Construction Continues

The cockpit is rather basic, consisting of two relatively simple seats, and the basic panels, consoles and overhead structure. Decals are provided for instrument panels and consoles, and because the canopy is rather heavily tinted, I went with the decals in stead of aftermarket items. The seats were built without modification, as they looked pretty good under the tinted canopy; they did include the rather prominent canopy breakers, and had finely detailed seatbelts molded on.

The canopy had a refreshing dip or two in Future, and the frames were brush painted in black (I didn't want to trust my lack of masking skills here).

The landing gear was built up at this point. The nose gear is very accurately done, and responds well to an umber oil wash. The main gear also is quite detailed, but the design presents some problems. The plastic is quite soft, and the way the main gear goes together involves some very thin pins, along with some very small butt joints. It looks great, but it is very fragile. The weight of the completed aircraft has been known to cause one or both main gear to collapse (happened to me). One would be advised to use an aftermarket white metal set, if available, or pin the joints with metal pins. I've had both main gearwheels break off; I drilled the hubs out and used steel wire pins with epoxy to reattach. The nose gear bay has basic rib detail and no representation of hydraulic lines, etc. Ditto for the main gear bays. I decided to leave them as is, since they would not be very visible. Wheels and tires have great detail, only needing a wash and brake lines. The gear assemblies were set aside at this point till decaling and weathering were done.

Fanjet Redux

Now, on to the engines. I put them off as long as I could, and now I had to find a way to finish them. I had the outside of them done, but I still couldn't get the inside intake seam to my liking. I painted the exterior light gull gray over white, the fan blades aluminum, and (horror of horrors) the intakes black. Yes, I know the intakes were supposed to be white, but if I was to finish this model, I had to take the path of least resistance. The anti-ice rings along the nacelle leading edge were painted aluminum, the pylons were attached, and all of the subassemblies were given a couple of coats of Future.

Decals

I used the AeroMaster decals for the unit markings, and the kit decals for stencils, wing walk stripes, insignia, etc. The kit decals were thick, but responded well to Micro-set/Micro-sol. The wing walk stripes wound up needing a hit with Solvaset before they would snuggle down. The large Aces over Eights Full House decal on the tail was one piece, wrapped around the leading edge of the tail. It went on beautifully, and slid into place with no problem. The small red stripes on the tail were from the kit and also went on well.

Another coat of Future, and a burnt umber oil wash was applied to all surfaces with a soft wide brush. After a few minutes for it to set up, a combination of tissues and q-tips, both moistened with turpentine, were used to wipe in the direction of airflow to give the illusion of grime and add depth. Interestingly, I had completed this procedure the weekend before Mike Hanlon and Paul Hackman did their presentation on pre/post shading at the McKinstry meeting.

Final Assembly

Engines and weapons pylons were attached, landing gear and doors glued on, and it was time to install the cockpit. It was a snap fit, with only a little glue needed to secure it in place. The canopy was attached with Micro Kristal Kleer, the various pitot and AOA probes/sensors were attached, and the beast was done.

Overall Impressions

I brought this model to my third McKinstry meeting, where it seemed to go over well. Afterward I had a conversation with Norris, which prompted me to attempt redoing the intakes. After several months (and the discovery of Mr. Surfacer!!!) I removed the engines, built up layers of Mr. Surfacer 500 on the inner intake surface, and sanded with sanding sticks. This was repeated until I was satisfied with how the intakes looked. I brush painted succeeding lighter coats of gray, finishing off with white. A little touch up on the fans and anti-ice rings, and the engines were re-installed on the airframe. Now it looked right!!!

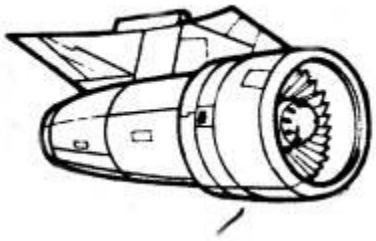
This is one massive twin-engine airplane!!! Would I do it again? Most definitely!!!

The model builds up well, looks very impressive on the shelf, and I believe most of the problems I experienced were due more to a lack of my own skills as opposed to deficiencies in the model. Next time I'd want to try an aftermarket resin cockpit, and the main gear would be replaced with something stronger.

I have one of the recent SuperScale sheets for the S-3, and I want to do both of the subjects on it. Now to just find a couple of kits, and the space to display them...

Here's a simple solution for the intake problem mentioned in Tom's article. I had the same seam-filling problem Tom had & on the advice of Steve Konie, successfully overcame the problem by using this technique. It was quick & easy:

Assemble each nacelle but don't glue the turbine blade faces (parts 2 & 3), just trap them inside. Use a fine saw blade and cut just aft of the panel line towards the back of the turbine blade face. Remove the front nacelle section, fill and sand as necessary & then trapping the turbine between the front and back nacelle sections, glue the pieces back together. Light sanding to blend should do it. –Norris



Cut just back of the panel line behind the turbine blade piece.

Tom utilized the sub average kit stenciling to good effect. Next time he will be able to take advantage of the recent Viking data sheet available from AeroMaster (Sheet# 148-028A)

Tom used markings from AM # 48-469 for VS-28.

Decals currently available:

AeroMaster 48-468 S-3A Hi-vis Pt I for VS-41, NATC, VS-SU (VS-27).
AeroMaster 48-469 S-3A Hi-vis PT II for VS-22, VS-28, VS-38.
AeroMaster SP-48-14 Aircraft of CVN 68-1977/78. Includes 2 Hi-vis S-3A's for VS-24.
AeroMaster 148-028 Viking Hi vis Stencils.

SuperScale 48-689 S-3B and ES-3A for VS-35 CAG and VQ-5 Commemorative.
SuperScale 48-690 S-3B and ES-3A for Hi-vis VS-37 and VQ-5