WEATHERING SCALE AIRCRAFT

Quick Techniques and Tips on Weathering Model Aircraft

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Weathering scale aircraft is a matter of personal preference and interpretation. Some modelers may want a pristine model, just as it was delivered from the factory. I prefer to finish my models to represent the way they looked during a particular time in the aircraft’s history. If the aircraft I am modeling was involved in a combat role and suffered from the day to day rigors of combat, climate and maintenance, I want to capture that look in the most realistic way possible.

If you are planning to weather your model it is important to study your reference material and note the look of the aircraft. How did it weather? Note the exhaust stains, oil, fuel and hydraulic leaks, wear from maintenance, fading from adverse weather conditions, etc. In most cases, the ground crews were more focused on the aircraft’s combat reliability than it’s overall look. Pristine aircraft with polished finishes were usually for PR purposes. However, in some cases, crew chiefs did polish the aircraft to gain additional speed. So, it is important to study your reference material.

Over the next few pages you will find a number of ways to create weathered effects on model aircraft. I model 1/48th scale aircraft. The same techniques will work in other scales as well. However, remember that the scale you build in will determine the amount of visible weathering. The larger the scale of the model the more apparent the weathering effects will become.
STARTING OUT, OVERALL PAINTING

Once the model is painted with the base colors you can proceed with the weathering process...Dust the upper surfaces (wings, horizontal stabilizers, top of fuselage) with the base color lightened 10 to 15% with white. This lighter shade represents fading from sunlight and promotes a “scale effect” bringing more life to the model.

DUST UPPER WINGS AND FUSELAGE WITH LIGHTENED BASE COLOR

NOTE

If the model you are weathering has fabric covered control surfaces, lighten your dusting color slightly when spraying the fabric surfaces. They usually faded at a faster rate when compared to the surrounding metal surfaces. Do this only on the upper surfaces that receive strong sunlight.
ACCENTING PANELS

Many aircraft show a definite weathering effect on paneled surfaces, especially surfaces that are continually exposed to sunlight. Carrier-based aircraft especially suffer from this effect. Duplicating this look can be accomplished in a number of ways...

- HIGHLIGHTING PANEL INTERIORS (AIRBRUSH)
- ACCENTING PANEL LINES (AIRBRUSH)
- MULTI COLOR SCHEME PANEL ACCENTS (AIRBRUSH)
- DRY-BRUSHING PANEL INTERIORS

AIRBRUSHING PANEL INTERIORS

Start by mixing your interior panel color slightly lighter than the base color. The paint should be thinned to a water consistency (approximately 50/50 paint/thinner) and tested on a spare wing or piece of plastic. Spray light coats to achieve a subtle blend between the interior and exterior edges of the panel.

Use an index card as a guide holding it slightly above the edge of the panel. Mist the thinned paint over the edge of the card towards the middle of the panel. Finish each panel by moving the card to each panel edge highlighting the center of each panel.

The distance you hold the card away from the panel will determine the subtleness of the blend from the panels edge to the middle of the panel.

ACCENT PANEL LINES with AIRBRUSH

This creates the same effect as the first process, but is applied in a reverse manner. I find this my favorite method for highlighting panels. If you make a mistake, you can correct it by just overspraying the area with the base color.

Start by cutting a 1/16th inch wide by 2 to 3 inch wide slit in an index card. This is the mask that will be positioned over the panel lines. Mix your paint as in the first process, but instead of making it lighter, darken the the shade by about 10 to 15%.

Hold the card slightly above the panel line and mist on a light coat of your darkened base color. Take your time and work slowly, remember, it is much easier to add paint enhancing the accent effect than to go back and repaint the area.
NOTE:
You can tape pennies to the bottom of the index card to adjust the width and softness of the accented panel line. The pennies will help keep the panel accent look consistent as long as you keep the air pressure and amount of paint you are misting over the card even. I like to use heavy cards or tape 2-3 together.

MULTI COLOR CAMOUFLAGE SCHEMES
Both the prior processes work fine on solid color or closely related color schemes (F-16 grays for example). However, when you have a camouflage scheme that combines two or more diverse colors it becomes difficult to highlight the panels or accent the panel lines using just one color. And, it is difficult to blend different colors when highlighting panels or accenting panel lines.

This unique process, adopted from a Tamiya Magazine article, solves the problem. Start by preparing the model for painting, just as you normally would. Before you apply the color scheme, accent all the necessary panel...

Under-shading panel lines for light and multi-color schemes

PENNIES TAPE TO THE BOTTOM OF CARD

APPLYING DECALS
At this point apply decals in your normal fashion. If you gloss your aircraft prior to applying the decals it will be necessary to apply a coat of clear flat over the decals and let it thoroughly dry before proceeding.
ACCENTING AIRCRAFT PANEL LINES AND CONTROL SURFACES

The next step in weathering is highlighting access panels, doors, intakes, cowl flaps and control surfaces. Some people like accent every panel line in a color that is in stark contrast to the base color (Dark brown or gray against a light gray base). This is considered ok by contest judges ok but, in my opinion, it is more realistic to subtly accent panel lines and control pieces or panels that open, close or move.

Once the base color of the aircraft has dried it must be sealed. I use Testors Dullcoat Lacquer. The application of this clear dull coat acts as a barrier between the oils and the enamel or acrylic base paints. Once the barrier is thoroughly dry (overnight), you are ready to accent the panel lines.

Thin the desired color of artist oil paints to water consistency with turpenoid. Using a fine brush just touch the recessed panel line or area to be highlighted. Capillary action will pull the thinned oils around the panels or recesses.

I recommend using a quality artist oil paint to accent panel lines and recesses. I use dark browns, greens or grays, never black. Black creates to harsh of contrast. Using good quality oil paints with their fine grain pigments allows the modeler to thin the paint to water consistency and still not break down the color.

Don’t worry if you make a mistake or the oils bleed outside of the panel line. Allow the oil to set up and proceed to use a Q-tip or soft cloth dampened with turpenoid to lightly wipe the area clean. The turpenoid and oils should not harm the enamel or acrylic base colors.

TOOLS & PRODUCTS

• GOOD QUALITY SMALL BRUSH
• GOOD QUALITY ARTIST OILS
  RAW UMBER - GRAY
  RAW SEPIA - GREEN
• ODORLESS TURPENOID
• Q-TIPS / SOFT CLOTHS

NOTE: Use slightly darker shades for moving parts or Access panels
**CHIPPED AND WORN PAINT**

Combat aircraft are prone to chipped and worn paint due to maintenance, prop and jet blast and the rigors of combat. This must be handled very subtly otherwise it will look like it was painted on rather than paint chipping and worn away with use revealing the bare metal of the aircraft.

Use a small fine brush and take your time applying a stippled effect on and around the desired areas such as leading wing edges, props, fasteners, access panels, cockpit entries etc. I prefer using Testors Chrome Silver for the effect. **IMPORTANT:** Study reference pictures of your subject!

**TOOLS & PRODUCTS**
- GOOD QUALITY BRUSH
- TESTORS CHROME SILVER

**NOTE:**
Once the weathering is finished, make sure the chipped and worn areas are over-sprayed with a dull coat finish. The metal revealed by chips and wear will always have a dull sheen.

**FABRIC COVERED SURFACES**

Fabric surfaces on wings and control surfaces will weather at a different rate than the surrounding metal panels. You can leave the finish painted a lighter shade as indicated on the section on painting the aircraft. However to enhance the effect further you can bring out the fabric texture using artist oils and dry brushing to simulate this aging effect.

**NOTE**
When dry-brushing fabric covered areas use a cross hatching technique, this will help emphasize the texture of the fabric.

**TOOLS & PRODUCTS**
- GOOD QUALITY BRUSH
- TITANIUM WHITE ARTIST OILS
OIL, FUEL AND HYDRAULIC LEAKS AND STAINS

Combat aircraft reveal numerous stains and leaks from fuels, oils and hydraulic systems. Make sure any stains and leaks follow the air flow on the fuselage or wings.

OIL LEAKS
Use dark brown artist oil. Put a small thinned amount on the spot where the leak starts and using a clean brush or Q-tip pull the leak back in the direction of the air flow.

HYDRAULIC LEAKS
Use a thinned red/brown artist oil. Put a small thinned amount on the spot where the leak starts and using a clean brush or Q-tip pull the leak back in the direction of the air flow.

FUEL LEAKS/SPILLS
Use a very thinned solution of brown artist oils (water consistency). Put a small amount on the spot where the leak starts and using a clean brush or Q-tip pull the leak back in the direction of the air flow.

NOTE
Study your reference material and note where the leaks and stains appear. Engine cowlings, fuel caps, landing gear bays and drop tanks are extremely dirty and show stains and leaks.

TOOLS & PRODUCTS
• QUALITY SMALL BRUSH
• QUALITY ARTIST OILS
   OIL: ..............RAW UMBER
   HYDRAULICS: ..SEPIA
   FUEL: ..............RAW SEPIA
• ODORLESS TURPENOID
• Q-TIPS / SOFT CLOTHS
EXHAUST STAINS

When recreating exhaust stains, it is important to study your reference material. Note how the exhaust follows the airflow and contours over the fuselage or engine nacelle.

Use a combination dark brown, gray and Testors Metalizer “Exhaust” and “Burnt Metal” to simulate exhaust stains depending on the aircraft being modeled.

Mask off the area around the exhaust stacks and lightly spray a light shade of Black Exhaust or Burt Metal for the base. Then using brown on the inside areas and finishing with a gray immediately behind the exhaust stacks.

NOTE

Exhaust stains are not all black...the gasses exiting the engine are hot and cause paint to discolor, turning brown or even white from the heat.

GUN BLASTS

Normally, guns that are mounted in the wings of fighters left black powder residue across the wing. You can use an airbrush with thinned flat black paint or pastels blended with a Q-tip to simulate this blast residue. Once again, make sure the blasts match the air-flow over the wing surface. Study your reference material!

You can find more pictures on the web at www.hyperscale.com
MORE EXAMPLES...
Here are more examples of what I feel are excellent weathering techniques.

NOTE:
the subtle shading on panel lines on this Iraqi MiG-21

NOTE:
the worn and chipped paint on the cowling of this Oscar

NOTE:
the subtle weathering on the sides of this model