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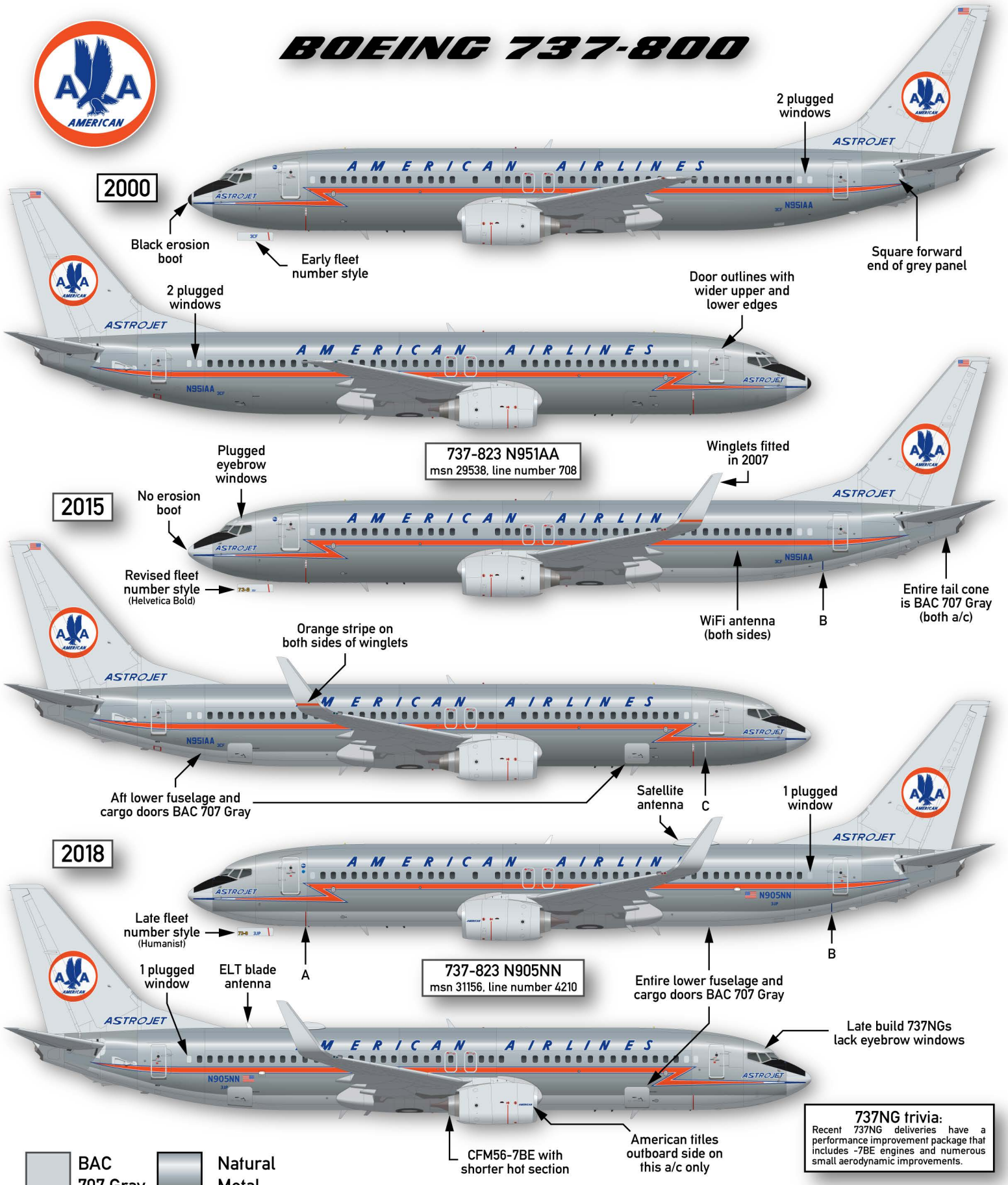
Boeing 737-823
American Airlines Astrojets

BOEING 737-800



737NG trivia:
Recent 737NG deliveries have a performance improvement package that includes -7BE engines and numerous small aerodynamic improvements.

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Boeing 737-823
American Airlines Astrojets

American Airlines was one of the first airlines to paint one of its aircraft in a "retrojet" scheme to celebrate its heritage. The first was a 757-223 in 1999, to celebrate American's first 707 jet service in 1959. Then in 2000, a brand new 737-823, N951AA, was painted in the 1963-era Astrojet lightning bolt scheme. This early delivery remained in the retro colors until it was repainted with the new color scheme in 2017. At the same time, a newer 737-823, N905NN, received the retrojet colors. While the basic livery elements on the two aircraft are identical, they differ in many small details, reflecting the incremental changes made to American's other 737-823s.

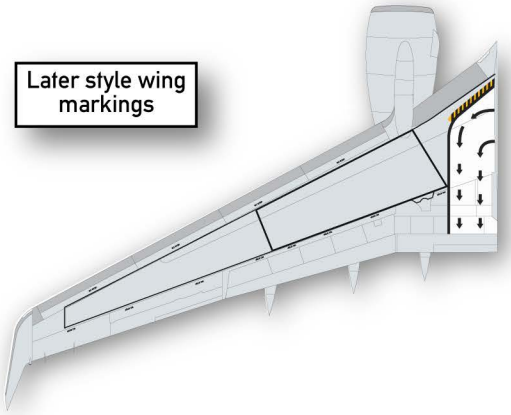
All 737s up through line number 1637 were built with the familiar four eyebrow windows above the windscreen. After that, they were deleted completely on new aircraft (and the small vortex generators added forward of the windscreen), and older aircraft had their windows plugged during heavy maintenance cycles, with the plugged windows painted BAC 707 Gray on American's bare aluminum scheme.

Winglets were approved for the 737NG in September of 2000, but it took a number of years for American's entire fleet to be retrofitted. N951AA received her winglets in 2007. Early aircraft used block style letters and numbers for the registration and fleet number, but this was changed on later aircraft to the Humanist font style. Both styles are provided. Also after the mid-2000s the "73-8" was added to the forward end of the nose gear doors. Aircraft with the block style registrations used a Helvetica Bold font for this, and later aircraft used the Humanist font.

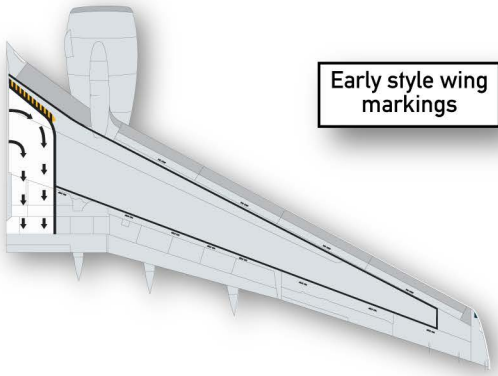
The wing markings on 737NGs have evolved over the years. Early aircraft used a full span set of walkway markings as shown on the illustration at right below. Later a lighter line weight was used outboard, with a heavier line weight for the trapezoidal "Allowable Cold-soaked Fuel Frost Area" inboard. We are not certain when the change was made at the factory, but the later style appears to have been applied during heavy maintenance on American's aircraft.

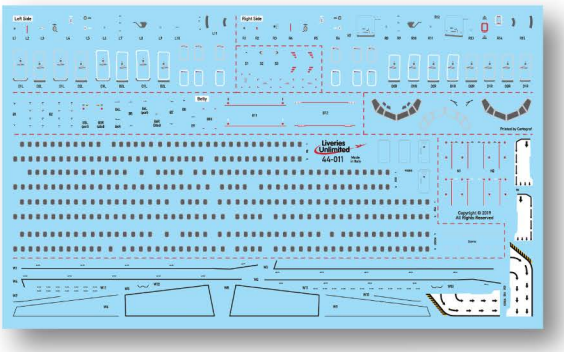
As always, we recommend consulting as many photos of your subject as possible to get all the details correct. A wealth of American 737 photos can be found online at any of several airliner photo sites.

Later style wing markings



Early style wing markings





Use Liveries Unlimited sheet #44-011 for a complete set of factory data stencilling and other markings. Many variations are provided and it will make your model stand out. Produced from original Boeing factory documentation.

If you have even the slightest interest in the Boeing 737, we cannot recommend highly enough this amazing book by our good friend Capt. Dan Dornseif. It covers the entire history of the 737 program, and includes a treasure trove of great technical information and photographs that will help you build the most accurate model possible.

ISBN-13: 978-0764353253

BAC 707 Gray

Natural Metal

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737NG Family
Performance Improvement Package

Starting in 2011, Boeing implemented a Performance Improvement Package (PIP) designed to reduce drag and improve fuel efficiency for the 737NG family. Although most of the PIP modifications are very small, and in fact some are not even visible to the naked eye, together they have made a significant impact on overall drag reduction and increased fuel efficiency over the original design.

The PIP changes visible on a 1/144 scale model include the change from slightly angled, oval shaped exhaust outlets for the air cycle machines just forward of the main gear well, to a pair of rectangular slotted type exhausts, simiar to those on the earlier generation 737s. This change took effect with line number 4302 (msn 36599). Note that Zvezda punted on this issue and molded the entire area solid. Around this same time, the upper and lower fuselage rotating anti-collision beacons were changed from a cylindrical shape to a more aerodynamic teardrop shape, demonstrating the level of detail Boeing went to to wring every bit of aerodynamic drag reduction out of the design.

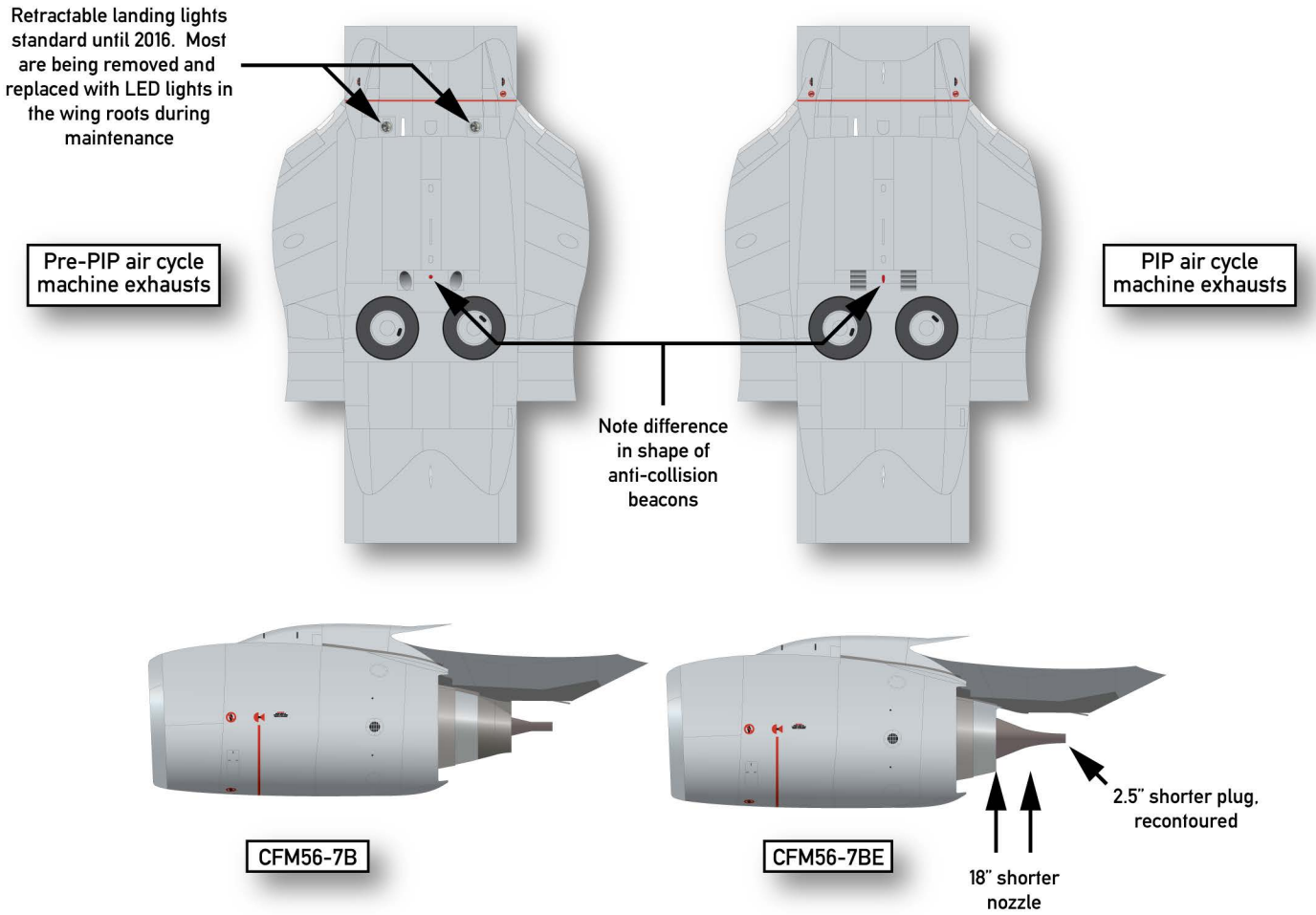
The other visible external change was in the CFM56 engines. Starting with line number 3700 (msn 38964), the CFM56-7BE engine became available. This engine features a number of internal improvements in addition to a shorter hot section cowling, with a slightly recontoured exhaust "stinger". See diagram below. This modification can be easily made to kit engines by simply removing the aft-most segment of the hot section cowling and thinning down the trailing edge lip. The difference in the shape of the exhaust "stinger" is so miniscule as to be invisible in 1/144.

Although not part of the PIP, beginning with line number 1638 (msn 32482), the four eyebrow windows above the windscreen were deleted in production. At the same time, a row of small vortex generators was added on the upper nose just behind the radome joint line to reduce cockpit noise. Most earlier aircraft as of 2019 have had their eyebrow windows plugged and painted over during heavy maintenance, although they do not have the vortex generators fitted.

As noted elsewhere, many carriers are replacing the original blended winglets with the split scimitar type, although this is by no means universal as of mid-2019.

Beginning in 2016, the retractable landing lights under the center fuselage were deleted and replaced by much brighter LED lights mounted in the existing light fixtures in the wing leading edges. Older aircraft are receiving this modification, but it is not yet universal.

Note the line number of the aircraft you are building, and compare to the starting line numbers (above) for the various changes so you can make your model as accurate as possible.



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