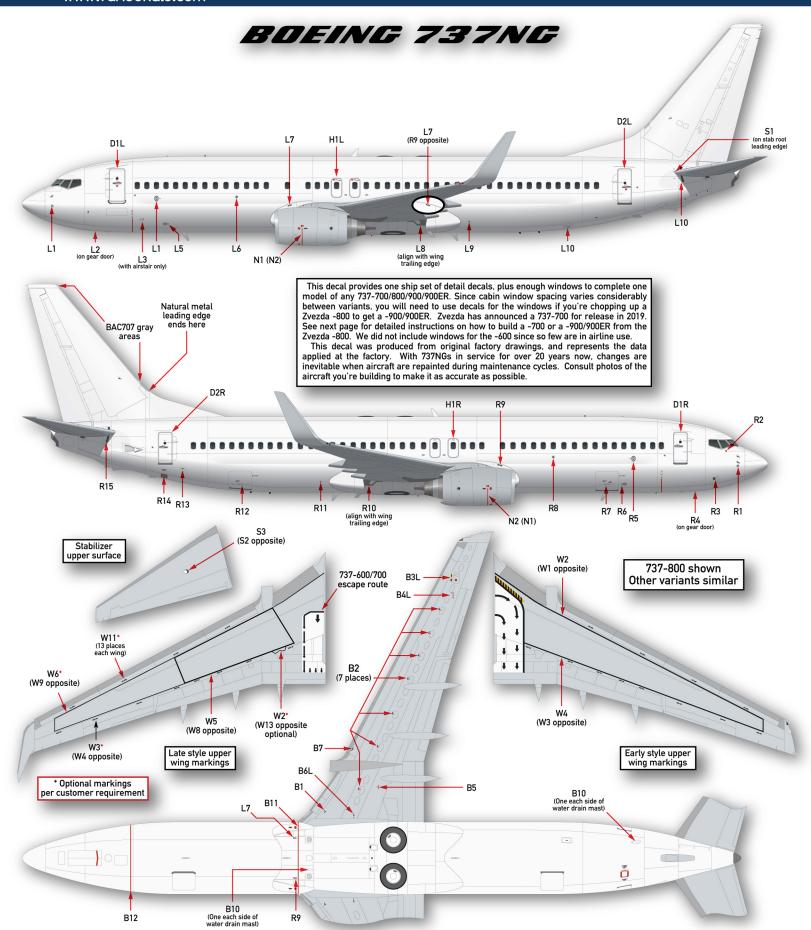
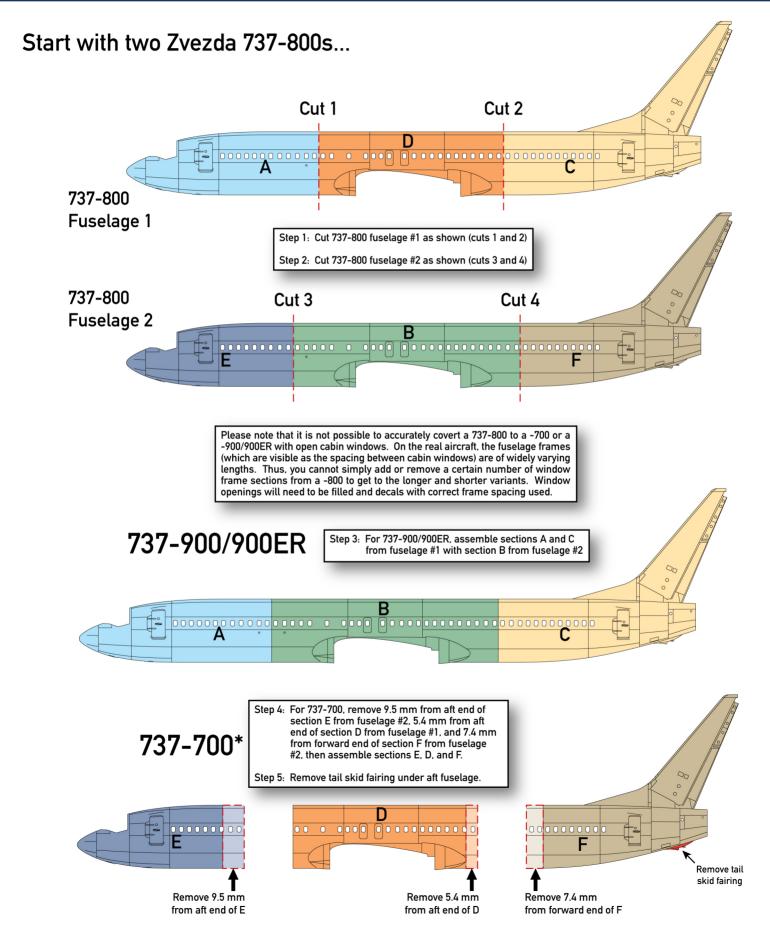


Boeing 737NG Factory Data Stencils





Zvezda 737-800Conversion to 737-700 & 737-900/900ER



^{*} Or wait until the promised Zvezda 737-700 comes out...



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.

