

there were wide variations. High deposition rates produce high rates of hydrogen and poor-quality grain structure. The key parameter of 0.002-inch-per-hour maximum deposition rate (which is a more stringent requirement) provides a safeguard against high deposition rates. There is no significant detrimental effect from low deposition rates, so the minimum requirement requested will not be included. Therefore, we have changed paragraph (d)(2) of this supplemental NPRM to read, "The maximum thickness of the nickel plating that is deposited in any one plating/baking cycle must not exceed 0.002-inch-per-hour."

Request To Remove Nickel Plating Requirement

One commenter asks that the nickel plating requirement specified in paragraph (d)(2) of the original NPRM be removed. The commenter states that if it performs the nickel plating per the new requirement, it must perform a minimum of three plating/baking cycles, which would extend the time necessary for overhaul of the carriage spindle by 15 days. The commenter suggests two alternative methods to use in place of the current proposed requirement, and provides documentation showing those methods.

We do not concur that the nickel plating requirement should be removed. However, as explained under "Request to Change Maximum Thickness of Nickel Plating," we have changed paragraph (d)(2) of this supplemental NPRM to read, "The maximum deposition rate of the nickel plating that is deposited in any one plating/baking cycle must not exceed 0.002-inch-per-hour." No other change to the supplemental NPRM is necessary in this regard.

Requests To Extend Compliance Time

Several commenters request that the compliance time for the overhaul or replacement specified in paragraphs (c), (c)(1), and (c)(2) of the original NPRM be extended as follows:

- One commenter states that the proposed compliance time of 1 year after the effective date of the AD to replace the carriage spindles on Model 737-200C series airplanes is restrictive. The commenter asks that it be changed, due to inspection results, from "1 year after the effective date of this AD" to 24 to 36 months after the effective date, to allow time for procurement/overhaul of the spindles and to schedule the airplane during a heavy maintenance check. The commenter also states that the proposed compliance time of 2 years after the effective date of the AD to

replace the spindles on Model 737-400 series airplanes is also restrictive. The commenter asks that the compliance time be changed, due to inspection results, to 36 to 48 months after the effective date, to allow time for procurement/overhaul of spindles and to schedule the airplane during a heavy maintenance check.

- One commenter asks that carriage spindles that were overhauled per Boeing 737 Component Maintenance Manual 57-53-36 before the effective date of AD 2002-22-05, and have not had all finishes and plating removed, be allowed to remain in service on the airplane for 8 years or 12,000 flight cycles, whichever comes later. The commenter adds that it has found no fractured carriage spindles to date. The commenter also asks that we allow 30 months instead of 24 months to overhaul or replace with new, any in-service carriage spindles that have not been overhauled per the referenced service bulletin. The commenter states that this would allow scheduling of the replacement of the carriage spindle during the current maintenance program without undue burden to its in-service operations.

- One commenter states that it currently has 52 Model 737-200 and 26 Model 737-300 series airplanes that would be affected by the original NPRM and has insufficient data for identifying the date each carriage spindle was overhauled or replaced during heavy maintenance visits. The commenter adds that, due to this fact, it would be forced to overhaul/replace the carriage spindles at the earliest time allowed, which is within 1 year for Model 737-200 series airplanes and 2 years for Model 737-300 series airplanes. The commenter notes that the manufacturer is unable to supply new carriage spindles to operators at a rate that would allow the replacement to be done within the time allotted. For Model 737-300 series airplanes, the manufacturer is producing about two carriage spindles per month, and overhaul of the part using an outside vendor takes approximately 3-4 weeks per airplane. With this turnaround time, the commenter would be unable to overhaul the parts in the timeframe required by the original NPRM. The commenter makes no specific request. We infer that the commenter is requesting that the compliance time be extended.

- One commenter asks that the compliance time for the initial overhaul specified in paragraph (c) of the original NPRM be extended to 2.5 years. The commenter states that, in order to install overhauled carriages on an aircraft, the

flaps must be removed and reinstalled. The commenter adds that it performs a one-quarter D-check every 2.5 years, and this structural visit is the opportune time to perform such extensive maintenance.

- One commenter asks that the initial compliance times for the overhaul on Model 737-100/200 series airplanes and 737-300/400/500 series airplanes be extended to at least 3 years and 4 years, respectively, for the following reasons:

First, the compliance time for the initial inspection does not appear to account for the nondestructive test (NDT) inspection referenced in both the service bulletin and the existing AD. The commenter adds that the inspection in the referenced service bulletin is effective as an interim action in maintaining airplane safety, which indicates there are no urgent reasons to adhere to the short compliance time specified in the service bulletin for the spindle overhaul/replacement.

Second, the carriage spindle overhaul requirement means, in the commenter's case, that the spindle will have to be shipped off-site, which would require additional spares support. The short initial compliance timeframe creates a surge in demand for spares during the first 1 to 2 years. After that time, all additional spares acquired by the operators would sit on the shelf because that demand would go away for the remainder of the 8-year period until the next overhaul.

Third, due to the short initial compliance time, operators will have to remove the flaps outside the regularly scheduled maintenance visits to gain access. According to the procedures in the Boeing 737-300/-400/-500 Maintenance Planning Document D6-38278, the commenter estimates that the initial compliance time should be between 6 and 8 years for Model 737-300, -400, and -500 series airplanes, and between 6 and 10 years for Model 737-100 and -200 series airplanes.

In conclusion, the commenter states that, with immediate safety concerns already addressed in paragraph (a) of the original NPRM, increasing the compliance time specified in paragraph (c) of the original NPRM would allow accomplishment of the actions at regular maintenance intervals and would avoid a sudden demand for spares.

- One commenter asks that the compliance time specified in paragraph (c)(2)(ii) of the original NPRM (for the spindle overhaul/replacement) be changed to read, "Not later than the next major maintenance (D-check), and, until that time, repeat the NDT inspection of the spindles per the existing AD." The commenter states that