

ENGINEERING PRACTICE STUDY

TITLE:
DISCONTINUED USE BY MANUFACTURERS OF "GO-NO GO" GAGES
FOR INSPECTIONS OF SPLINES ON SAE AS20708B,
"GENERAL SPECIFICATION FOR SYNCHROS".

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STUDY PROJECT 5990-2015-001

FINAL REPORT

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I. OBJECTIVES: The objective of this study was to address the discontinued use by manufacturers of "GO-NO GO" gages for inspections of splines, the requirement for inspection was revised (see 3.4.4 of SAE AS20708B). This revision also provides deletion and addition of applicable documents, clarification of qualification and first article test information, replacements for an obsolete MS17182 (see note 4 for figures 5 thru 9), and updates to the index.

II. BACKGROUND: As the responsible engineer for Federal Stock Class (FSC)-5990 at the DLA Land and Maritime, Columbus (CC) preparing activity, I was asked by NAVAIR (Navy-AS) to address the discontinued use by manufacturers of "GO-NO GO" gages for inspections of splines.

Following a recent update to the family of standards under SAE AS20708 {Synchros}, it became apparent that the U.S. Navy is longer controlling the fabrication, serial number assignment, nor Master Plug Gage inspection of "GO-NO GO" Gages, for the inspection of full involute splines on the main shafts. The Government facility that provided these functions is now closed.

Upon investigation, I discovered that QPL manufacturers are using the more practical method called "Over Pin (ball) Measurement". The absence of any Product Quality Deficiency Reports (PDQR's) related to this feature supports the decision to go to a more open statement within the requirements section (paragraph 3.4.4) of the AS20708 Basic.

III. RESULTS: Along with the above changes, there were other incidental changes to be made that do not impact the technical content of the document, such as the replacement of an obsolete terminal lug (MS17182) by an SAE AS25036-148 or AS7928/12-148, which appears in the notes of Figures 5 thru 9 of the AS20708B Basic.

IV. CONCLUSIONS: Based upon no negative comments and all responses to coordination with the registered users [U.S. . Army (AR), U.S. Navy (AS) and U.S. Air Force (85)] were in concurrence with the above proposed actions, the SAE AS20708 was updated to "Revision B" to add the above described configuration.

(Copies of this document are available online at <http://standards.sae.org/> or from SAE International, 400 Commonwealth Drive, Warrendale, PA 15096-0001.)

V. RECOMMENDATIONS: DLA should continue to monitor these applications, testing, and inspections, in order to meet the subject application requirements.