

Synchro, Torque Receiver Transmitter, Type 31TRX4A

FSC 5990

RATIONALE

This Revision consists of a 5 (five) year review, which provides updates to current format and references.

NOTICE

This specification is approved for use by all Departments and Agencies of the Department of Defense. The requirements for acquiring the Synchros described herein shall consist of this specification and the latest issue of SAE AS20708.

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TABLE 1 – REQUIREMENTS

Requirement	Value	Unit	Tolerance
Frequency	400	Hz	±1%
Primary Voltage	115	volts	±1%
Primary Current	1650.0	milliamps	maximum
Primary Power	14.4	watts	maximum
Impedance:			
Z _{ss}	2.5-5.5	ohms	min.-max.
Impedance Angle:			
Z _{ss}	60.0-75.0	degrees	min.-max.
Transformation Ratio	0.783	----	±2%
Phase Shift (Lead)	2.0	degrees	maximum
Electrical Error	8.0	minutes	maximum
Receiver Error	36.0	minutes	maximum
Null Voltage:			
Total	170.0	millivolts	maximum
Fundamental	35.0	millivolts	maximum
Synchronizing Time			
30° ± 2°	1.0	seconds	maximum
Synchronizing Time:			
177° ± 2°	2.0	seconds	maximum
Torque Gradient	0.67	ounce-inches per degree	minimum
Radial Play	0.0008	inches	maximum
End Play	0.0030	inches	±0.0020
Temperature Rise	60.0	degrees (C)	maximum
Variation of Voltage (+10%) and Freq. (-5%)	27.0	watts	maximum

This unit shall not be subjected to the altitude requirements of SAE AS20708.

TABLE 2 – MILITARY PART NUMBER VARIANT CHARACTERISTICS

Military Part No. ^{1/}	A ± .010	B ± .010	G Maximum	Shaft Style	Terminal End	U + .0000 - .0002
M20708/62-01A	.700	.730	3.380	Splined	Terminal Board	.2405

^{1/} Military part number M20708/62-01A shall be the NATO standard.

^{1/} The suffix letter following the numerical dash number corresponds to the latest modification letter in the type designation.