



NATIONAL AEROSPACE STANDARD

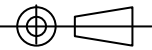
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FED. SUPPLY CLASS

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FORM 09-01	THIRD ANGLE PROJECTION 	CUSTODIAN ENGINEERING MANAGEMENT COMMITTEE	REVISION 2
	PROCUREMENT SPECIFICATION NONE	TITLE SPECIFICATION FOR DUAL TURNING MACHINES	CLASSIFICATION SPECIFICATION NAS931 SHEET 1 OF 8



NATIONAL AIRCRAFT STANDARDS COMMITTEE

AIRCRAFT INDUSTRIES ASSOCIATION OF AMERICA, INC., 610 SHOREHAM BUILDING, WASHINGTON 5, D. C.

SPECIFICATION FOR DUAL TURNING MACHINES

1. Scope

1.1 Scope - This requirement covers a series of high and low speed dual turning machines.

1.2 Classification

Machines shall be of the following class and size groups, as specified by the procuring agency. (See Table I)

Class		Sizes	
Class I	Hi-Speed	Size I	Small
Class II	Lo-Speed	Size II	Medium
		Size III	Large

TABLE I

	Class I Hi-Speed			Class II Lo-Speed		
	Size I	Size II	Size III	Size I	Size II	Size III
1. Maximum Finished O.D.	20"	36"	48"	20"	36"	48"
2. Minimum Finished I.D.	0"	0"	0"	0"	0"	0"
* 3. Maximum R.P.M.	1200	750	500	600	450	300
4. Minimum R.P.M.	40	25	17	20	15	10
* 5. Number of Steps (Minimum)	2	2	2	2	2	2
* 6. Range of Spindle Speeds Stepless						
7. Maximum cut each side	.250	.250	.250	.250	.250	.250
8. Feeds constant per Rev.	{ .002 to .030	{ .002 to .030	{ .002 to .030	{ .002 to .030	{ .002 to .030	{ .002 to .030
* 9. H.P. @ Spindle	60	75	125	30	40	60

*These items for reference only: Procuring agency to specify at time of procurement to obtain ideal conditions for each manufacturer's parts requirements.

1.3 Intended Use

The machines covered by this requirement are intended for use in the aircraft manufacturing industry, and provide the preferred relation of spindle horse power, speeds and feeds for the simultaneous turning of each side of jet engine compressor and turbine rotor discs, or other parts of a similar configuration, where oil canning is a hazard in the turning operation in relation to finished part requirements.

These discs are mostly forgings of aluminum, of stainless steel, titanium and other hi-heat alloys now commonly used in aircraft manufacture.

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PREPARED BY THE POWERPLANT MANUFACTURING COMMITTEE

INACTIVE FOR NEW DESIGN AFTER 29 MAY 2012

TITLE

SPECIFICATION FOR DUAL TURNING MACHINES

CLASSIFICATION

SPECIFICATION

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AIRCRAFT INDUSTRIES ASSOCIATION OF AMERICA, INC.. 610 SHOREHAM BUILDING. WASHINGTON 5, D. C.

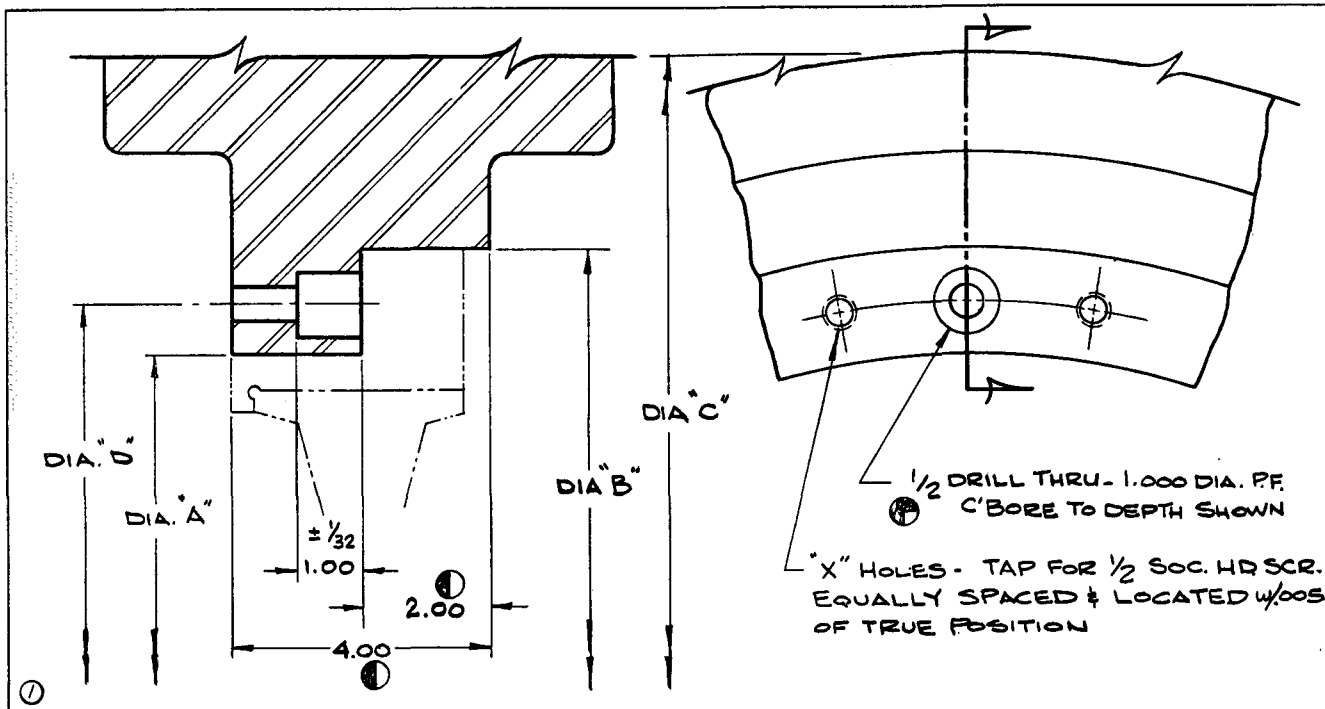
2. Requirements

2.1 Design

These machines shall consist of a bed, a driven variable speed annular work holding spindle, and slides on each side of spindle.

- 2.2 The work piece shall be held on a prepared O.D. in a manner that both sides of the work piece shall be readily accessible for simultaneous machining.
See illustration 1-A.

Illustration 1-A.



- ① Drill & ream for (1) 1" dowel 1 1/4" long, locate on tapped holes, bolt circle and equally between any 2 holes.
② Tooling Area - These Dim. Must be Maintained.

Dia. A.	Dia. B.	Dia. C.	Dia. D.	"X"-Holes
SIZE NO. 1 - 20.00 Max. Dia.				
22.001	25.01	31.00 Min.	23.625	16
22.000	25.00		23.635 B.C.	
SIZE NO. 2 - 36.00 Max. Dia.				
38.001	41.01	47.00 Min.	39.625	26
38.000	41.00		39.635 B.C.	
SIZE NO. 3 - 48.00 Max. Dia.				
50.001	53.01	59.00 Min.	51.625	36
50.000	53.00		51.635 B.C.	

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APPROVAL DATE April 1957 REVISION ① 15 July 1957

SPECIFICATION FOR DUAL TURNING MACHINES

CLASSIFICATION
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