

# NIST Fully-Toleranced Test Case 06 - Feature and Specification Index [FTC06]

12/14/2016

Rev. D

Bryan Fischer

Advanced Dimensional Management LLC

Feature ID	Feature Description	Specification	Element ID	Comments
F1	Datum Feature A	Flatness .01	T1	
		Datum Feature Symbol A	DF1	
F2	Datum Feature B	12.00 ±.01	D1	
		Perpendicularity .012 A	T2	
		Datum Feature Symbol B	DF2	
F3	Datum Feature C	Perpendicularity .012 A B	T3	
		Datum Feature Symbol C	DF3	
F4	Datum Feature D	Profile Surface .02 A B C	T4	
		Flatness .01	T5	
		Datum Feature Symbol D	DF4	
F5	Datum Feature E	Profile Surface .02 A B C	T6	
		Flatness .01	T7	
		Datum Feature Symbol E	DF5	
F6-F9	Datum Feature F	4X $\varnothing$ .281 ±.008	D2	
		Position $\varnothing$ .015 E A B	T8	
		Datum Feature Symbol F	DF6	
		4X INDIVIDUALLY	STR1	
F10	Datum Target G1	Datum Target Symbol G1	DT1	
		Represented line element	RLE1	Circular line element for datum target G1 and controlled element
		( $\varnothing$ 1.000)	D3	Defines RLE1
F11-F12	Datum Target H1	Datum Target Symbol H1	DT2	
		Represented line element	RLE2	Circular line element for datum target H1 and controlled element
		( $\varnothing$ 1.000)	D4	Defines RLE2
F12-F13	Datum Target J1, J2	Datum Target Symbols J1-J2	DT3, DT4	
		Profile Surface .05 D B C Profile Surface .01 D	T9	Surfaces are grouped
		2 SURFACES	STR2	Groups surfaces for T9
		Represented line element	RLE3	
		Represented line element	RLE4	
		(1.106)	D5	Applies to datum target lines
F14-F15	Datum Target K1, K2	Datum Target Symbols K1-K2	DT5, DT6	
		Profile Surface .05 D B C Profile Surface .01 D	T10	Surfaces are grouped
		2 SURFACES	STR3	Groups surfaces for T10
		Represented line element	RLE5	
		Represented line element	RLE6	
		(1.106)	D6	Applies to datum target lines
F16-F17	Spherical Diameter Surfaces	2X $S\varnothing$ 1.250 ±.008	D7	
		Position $S\varnothing$ .025 D B C	T11	
F18-21	Counterbored Holes - Set 1	4X $\varnothing$ .415 ±.008	D8	
F22-F25		$\perp$ $\varnothing$ .625 ±.020	D9-1	
		Position $\varnothing$ .025 $\text{\textcircled{M}}$  A B C	T12	Applies to F18-F28
F26-F29		$\nabla$ .50 ±.02	D9-2	
F30-F31	Counterbored Holes - Set 2	2X $\varnothing$ .562 ±.008	D10	
		Position $\varnothing$ .015 C A B	T13	
F32-F33		2X $\perp$ $\varnothing$ .812 ±.020	D11-1	
		Position $\varnothing$ .025 $\text{\textcircled{M}}$  C A B	T14	
F34-F35		$\nabla$ .56 ±.02	D11-2	
F36-F39	Counterbored Holes - Set 3	$\perp$ $\varnothing$ .40 ±.01	D12-1	
		Position $\varnothing$ .02 $\text{\textcircled{M}}$  F	T15	Applies individually to 4 holes
F40-F43		$\nabla$ .31 ±.02	D12-2	

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Feature ID	Feature Description	Specification	Element ID	Comments
		4X INDIVIDUALLY	STR4	
F44-F67	Fillets	24X R.125 ±.020	D13	
F68	Spherical Cutout	(SR.500)	D14	Reference Dimension
F69-F70	Large External Rounds	2X CR.50 ±.02	D15	
F71	Tapered Center Rib Surface	 1.00 : 2.00	D16	Basic Dimension
		Profile Surface .04 A B C	T16	
F72-F73	Conic Surfaces	2X 1.00 : 3.00 	D17	Basic Dimension
	Cone w/ G1	Profile Surface .05 D B C Profile Surface .01 D	T17	Applies to cone and cylinder
F74	Cylindrical Cone Support	Profile Surface .05 D B C Profile Surface .01 D	T17	Applies to cone and cylinder
	Cone w/ H1	Profile Surface .05 D B C Profile Surface .01 D	T18	Applies to cone and cylinder
F75	Cylindrical Cone Support	Profile Surface .05 D B C Profile Surface .01 D	T18	Applies to cone and cylinder
F76	Cylindrical hole in cone w/ G1	∅.250 ±.008	D18	
		Position ∅.015 D G	T19	
F77	Bottom of Hole	∇.50 ±.05	D19	
F78	Cylindrical hole in cone w/ H1	∅.250 ±.008	D20	
		Position ∅.015 D H	T20	
F79	Bottom of Hole	∇.50 ±.05	D21	
F80	Width feature of size @ J1-J2	.500 ±.008	D22	
		Position .025 D C J	T21	
F81	Width feature of size @ K1-K2	.500 ±.008	D23	
		Position .025 D C K	T22	
-	General Profile Tolerance 1	Profile Surface .05 A B C	T23	
MCS1	MCS for Views 1, 2, 3		CS1-1	Main MCS for model
	MCS for DRF A		CS1-2	Same location as CS1-1
	MCS for DRF A B		CS1-3	Same location as CS1-1
	MCS for DRF A B C		CS1-4	Same location as CS1-1
	MCS for DRF C A B		CS1-5	Same location as CS1-1
MCS2	MCS for DRF D B C		CS2	
MCS3	MCS for DRF E A B		CS3	
MCS4	MCS for DRF F1		CS4	First of 4 individual datum reference frames for F
MCS5	MCS for DRF F2		CS5	Second of 4 individual datum reference frames for F
MCS6	MCS for DRF F3		CS6	Third of 4 individual datum reference frames for F
MCS7	MCS for DRF F4		CS7	Fourth of 4 individual datum reference frames for F
MCS8	MCS for DRF D G		CS8	
MCS9	MCS for DRF D H		CS9	
MCS10	MCS for DRF D C J		CS10	
MCS11	MCS for DRF D C K		CS11	
-	General Notes	NOTES...	STR5	Flat to screen

Notes:

- There are no specifications in this FTC that contain semantically-important extension lines or annotation plane placement.

Revisions:

LEGEND	
CS	Coordinate System
D	Dimension
DF	Datum Feature
DT	Datum Target
RLE	Represented Line Element
SIELD	PMI entity contains Semantically-Important Extension Line Direction
STR	String
T	Tolerance