



Aerospace Bearing Staking, Removal and Testing

Bearing Installation Tools

Standard and Custom
Tri-Roller - Portable, Machine
Two-wheel, Anvil
Impression - Segment, Ball
Sleeve

Removal & Extraction Tools

Cutter - Portable, Machine
Push-Out

Testing Tools

Proof Load
Breakaway Torque

Kits

Standard and MS Bearing
Program Application Specific
Service Bulletins and Airworthiness Directives

Technical Assistance

Engineering
Training



Portable Swager

Portable Cutter



Drill Press Swagers

(800) 426-8038

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Global Solutions on a National Level

Bearing Tools & Kits for MS Series Bearing

MIL-B-81820		Tri-Roller		Cutter		Swaging Kit		Proof Load	
Bearing # (MS14101)	Bearing # (MS14103)	Drill Press Tool Model #	Portable Tool Model #	Drill Press Tool Model #	Portable Tool Model #	Drill Press Kit Model #	Portable Kit Model #	Drill Press Kit with Dial Indicator & Strain Gage	Portable Kit with Dial Indicator & Strain Gage
MS14101-3		AST1000	AST3000	ASC4101-3 DP	ASC4101-3	ASK4101-3 DP	ASK4101-3	ASKP4101-3 DP	ASKP4101-3
	MS14103-3	AST1001	AST3001	ASC4103-3 DP	ASC4103-3	ASK4103-3 DP	ASK4103-3	ASKP4103-3 DP	ASKP4103-3
	MS14103-4	AST1002	AST3002	ASC4103-4 DP	ASC4103-4	ASK4103-4 DP	ASK4103-4	ASKP4103-4 DP	ASKP4103-4
MS14101-4		AST1003	AST3003	ASC4101-4 DP	ASC4101-4	ASK4101-4 DP	ASK4101-4	ASKP4101-4 DP	ASKP4101-4
	MS14103-5	AST1004	AST3004	ASC4103-5 DP	ASC4103-5	ASK4103-5 DP	ASK4103-5	ASKP4103-5 DP	ASKP4103-5
MS14101-5		AST1005	AST3005	ASC4101-5 DP	ASC4101-5	ASK4101-5 DP	ASK4101-5	ASKP4101-5 DP	ASKP4101-5
MS14101-6	MS14103-6	AST1006	AST3006	ASC4101-6 DP	ASC4101-6	ASK4101-6 DP	ASK4101-6	ASKP4101-6 DP	ASKP4101-6
MS14101-7	MS14103-7A	AST1007	AST3007	ASC4101-7 DP	ASC4101-7	ASK4101-7 DP	ASK4101-7	ASKP4101-7 DP	ASKP4101-7
	MS14103-7	AST1008	AST3008	ASC4103-7 DP	ASC4103-7	ASK4103-7 DP	ASK4103-7	ASKP4103-7 DP	ASKP4103-7
MS14101-8		AST1009	AST3009	ASC4101-8 DP	ASC4101-8	ASK4101-8 DP	ASK4101-8	ASKP4101-8 DP	ASKP4101-8
	MS14103-8	AST1010	AST3010	ASC4103-8 DP	ASC4103-8	ASK4103-8 DP	ASK4103-8	ASKP4103-8 DP	ASKP4103-8
MS14101-9		AST1011	AST3011	ASC4101-9 DP	ASC4101-9	ASK4101-9 DP	ASK4101-9	ASKP4101-9 DP	ASKP4101-9
	MS14103-9	AST1012	AST3012	ASC4103-9 DP	ASC4103-9	ASK4103-9 DP	ASK4103-9	ASKP4103-9 DP	ASKP4103-9
MS14101-10		AST1013	AST3013	ASC4101-10 DP	ASC4101-10	ASK4101-10 DP	ASK4101-10	ASKP4101-10 DP	ASKP4101-10
	MS14103-10	AST1014	AST3014	ASC4103-10 DP	ASC4103-10	ASK4103-10 DP	ASK4103-10	ASKP4103-10 DP	ASKP4103-10
	MS14103-12	AST1015	AST3015	ASC4103-12 DP	ASC4103-12	ASK4103-12 DP	ASK4103-12	ASKP4103-12 DP	ASKP4103-12
MS14101-12		AST1016	AST3016	ASC4101-12 DP	ASC4101-12	ASK4101-12 DP	ASK4101-12	ASKP4101-12 DP	ASKP4101-12
MS14101-14		AST1017	AST3017	ASC4101-14 DP	ASC4101-14	ASK4101-14 DP	ASK4101-14	ASKP4101-14 DP	ASKP4101-14
	MS14103-14	AST1018	AST3018	ASC4103-14 DP	ASC4103-14	ASK4103-14 DP	ASK4103-14	ASKP4103-14 DP	ASKP4103-14
MS14101-16		AST1019	AST3019	ASC4101-16 DP	ASC4101-16	ASK4101-16 DP	ASK4101-16	ASKP4101-16 DP	ASKP4101-16
	MS14103-16	AST1020	AST3020	ASC4103-16 DP	ASC4103-16	ASK4103-16 DP	ASK4103-16	ASKP4103-16 DP	ASKP4103-16

Housing Stake & Sleeve Swage

Other methods of bearing retention include staking the housing over the bearing or using a sleeve over the outer race and the housing. This can be accomplished with various methods including ball and segment impression staking using flat rollers.

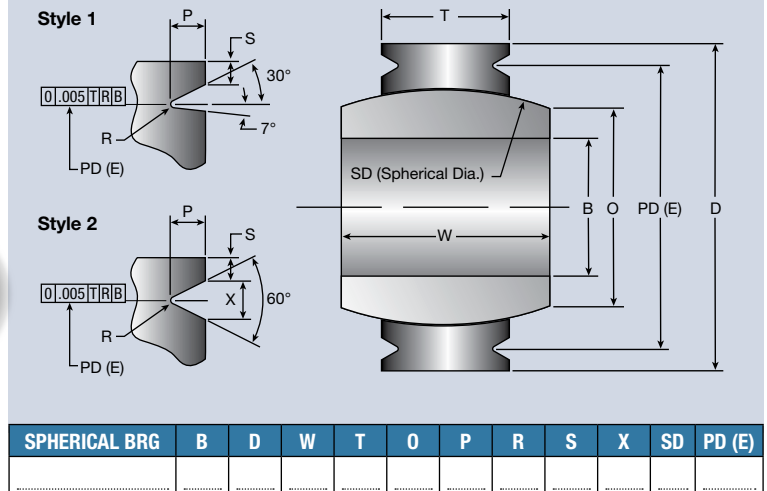
Combo Tool

National Precision Bearing offers the most advanced tool concept in bearing installation and removal. This innovative design combines the convenience of the portable swaging and cutting tools into one. Eliminating loose parts, by simply changing heads for each operation.



Custom Design Tools

Many custom designed tools exist or can be designed to meet your application. A complete bearing size description and housing as listed below and any clearance restrictions must be known for proper design.



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