



**F10XS CNC
BORING AND SURFACING
MACHINE
OPTIONAL EQUIPMENT
PARTS MANUAL**







ORDERING PROCEDURE

Contact your regional Rottler sales rep for assistance in ordering optional equipment, replacement parts, or tooling.

If you are unable to contact your regional Rottler sales rep, call the factory at 253-872-7050 and ask to speak to the parts sales specialist.

Have the following information handy to expedite the ordering process:

1. Your name, business name, and contact number
2. Customer number
3. If you don't have a customer number, your billing address
4. Shipping address if different from billing address
5. Machine model and serial number
6. Part number and description of what you want to order
7. Preferred method of shipment

You may also contact us via e-mail with the above information. For customers within the U.S. send emails to parts@rottlermfg.com, for customers outside of the U.S. use intlparts@rottlermfg.com

In some cases you may be requested to send a photo of the part you are ordering if it is a replacement part, or doesn't appear in the database.

If you are unsure which part you need to order, contact our service department and ask to speak to one of our service consultants. They will assist you in determining which part you require.

THERE IS A MINIMUM ORDER OF \$25.00

F10XS OPTIONAL EQUIPMENT

PARTS MANUAL

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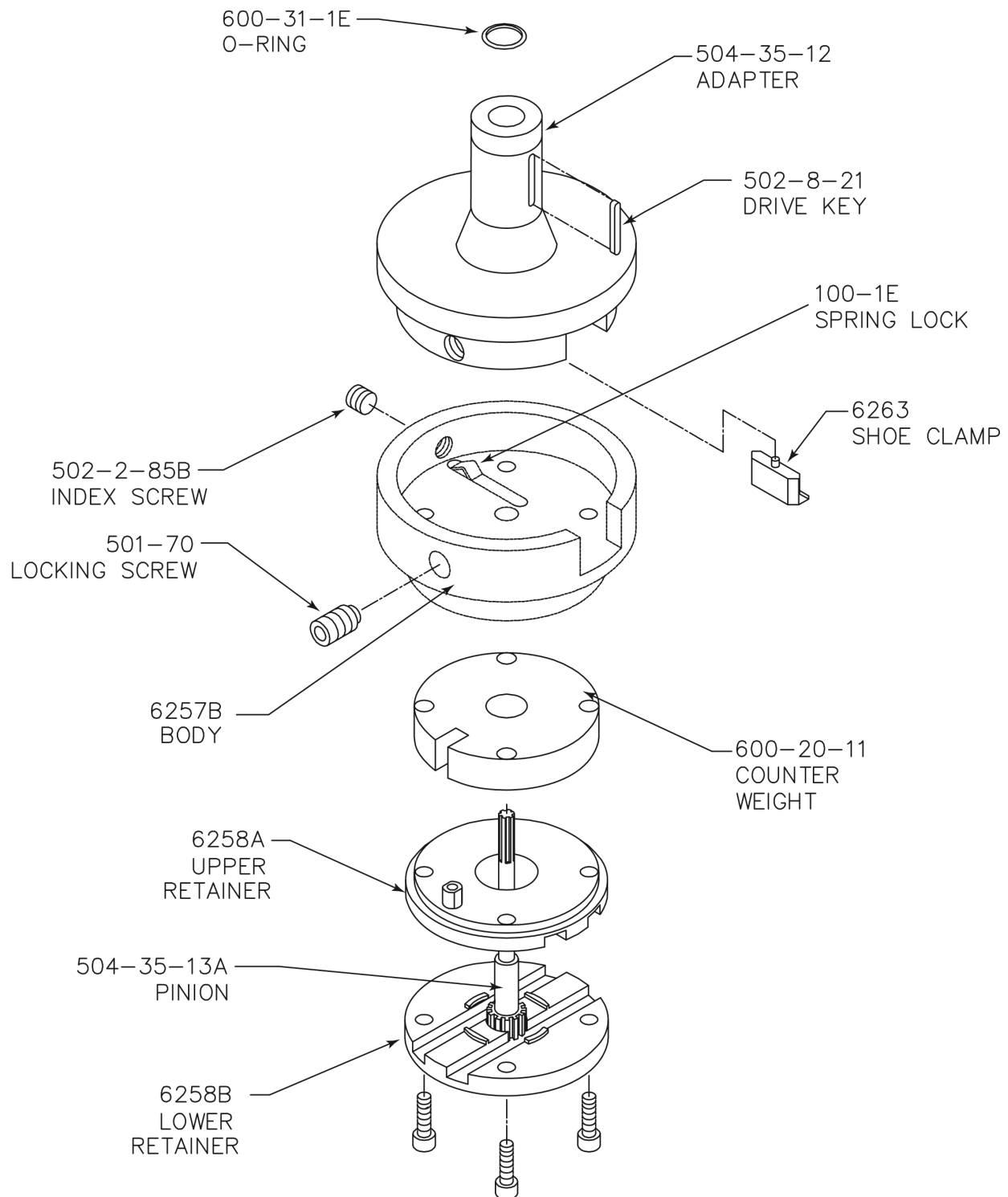
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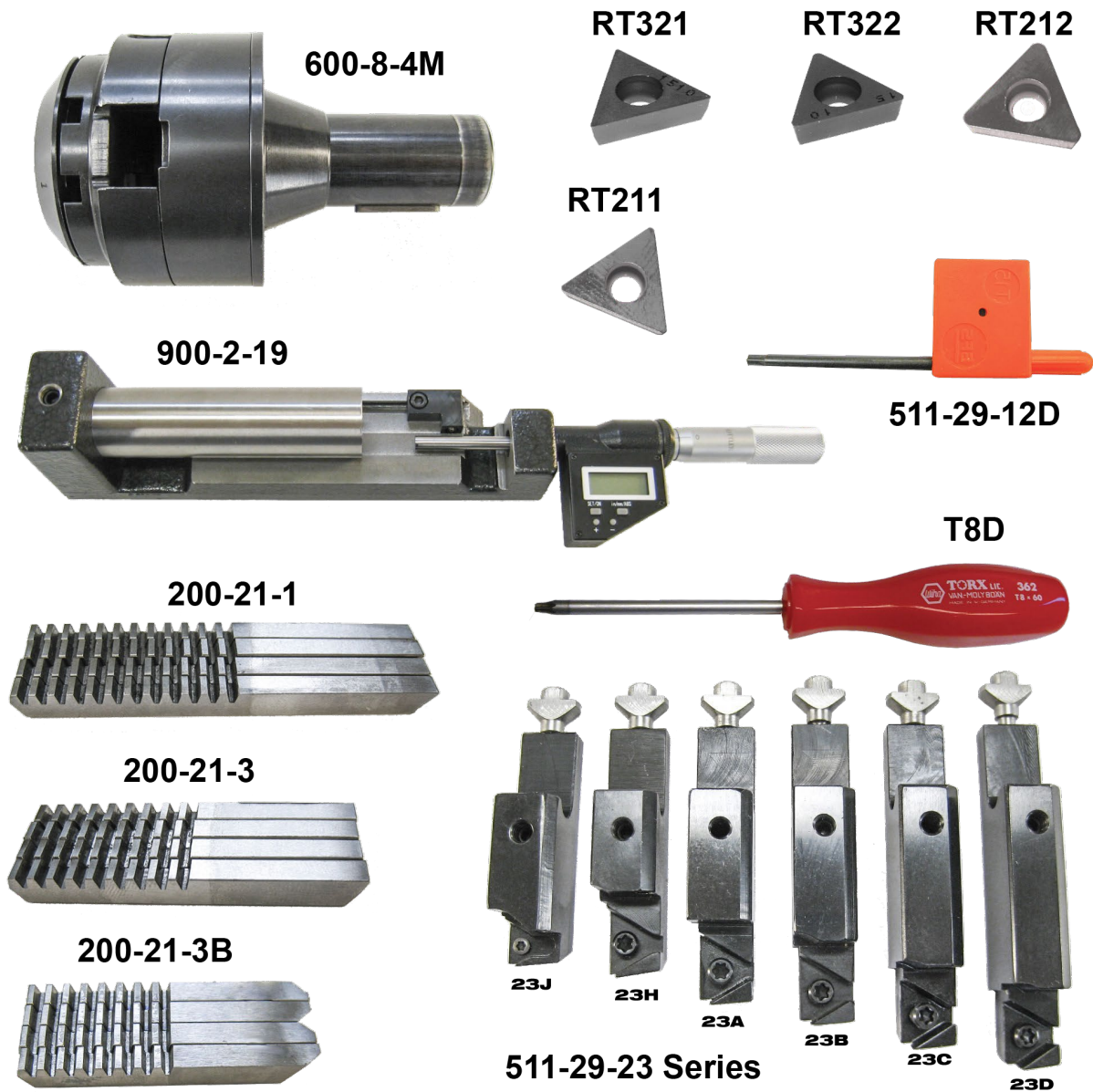
Cutting Tools

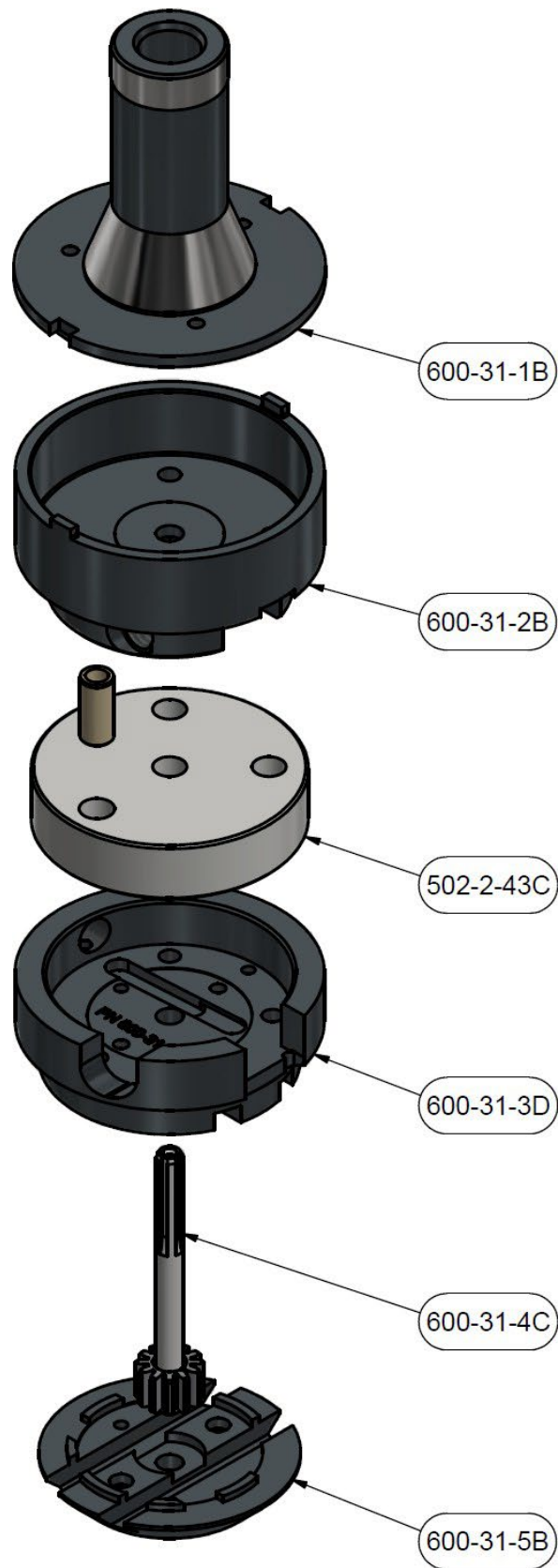
Boring Tools

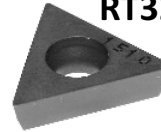
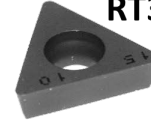
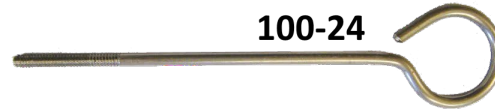
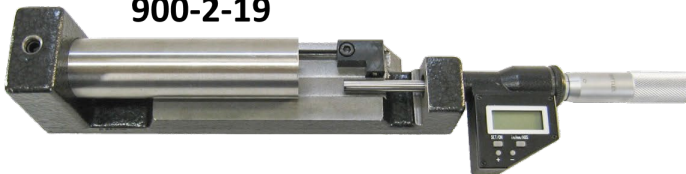
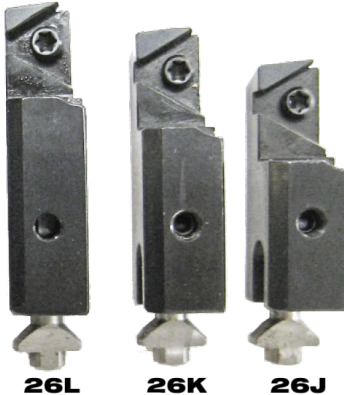
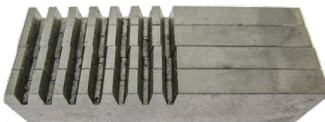
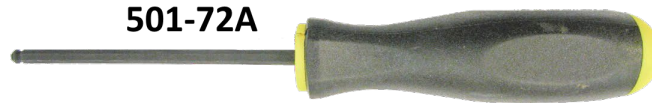
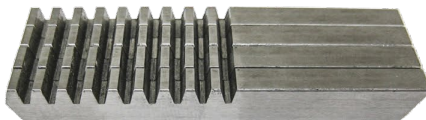
504-35-12A Cutterhead Kit, 4.5-9" Diameter

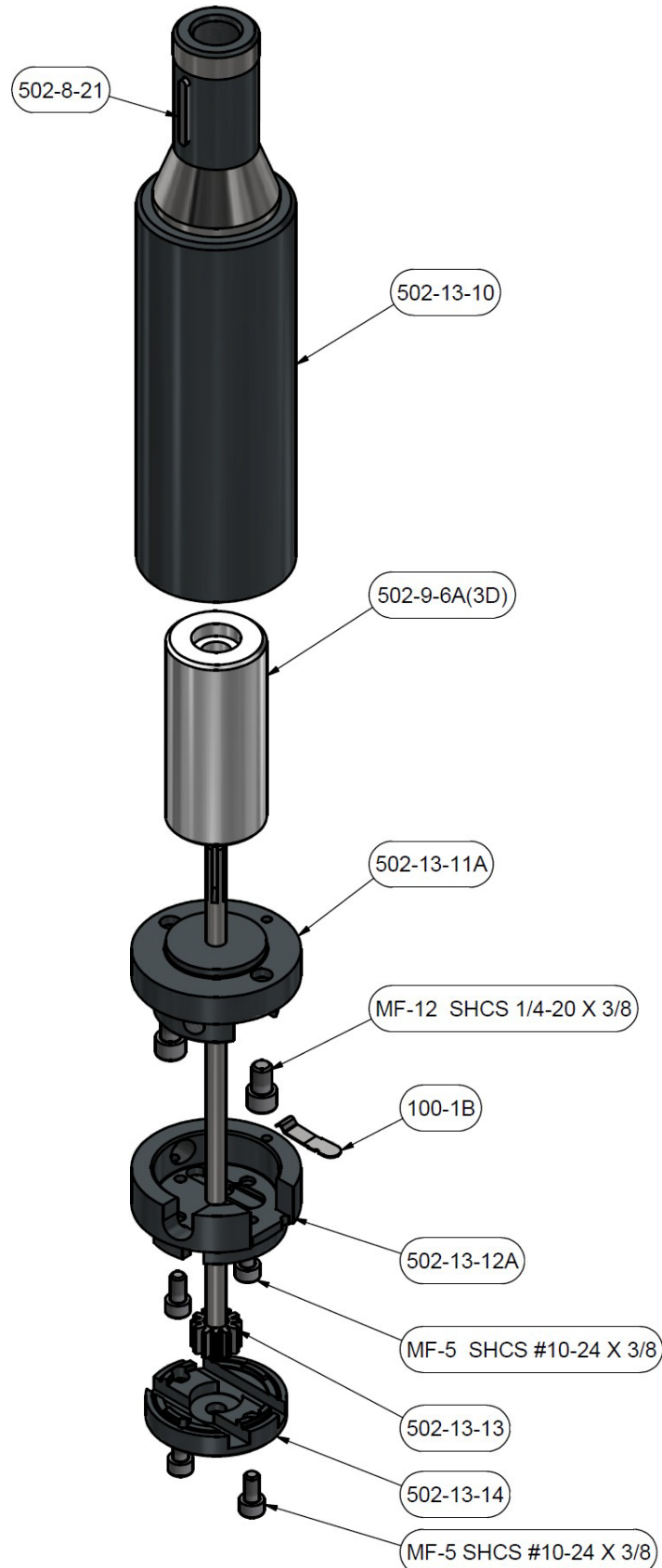


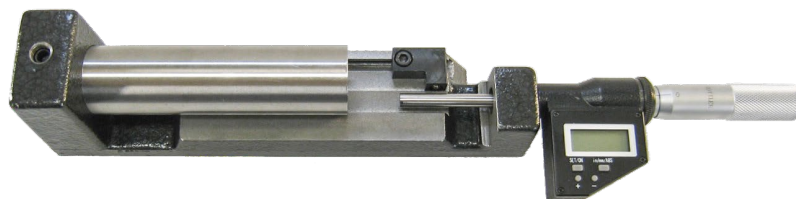
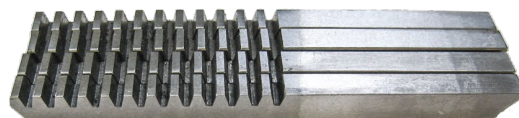
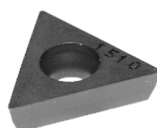
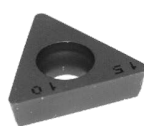


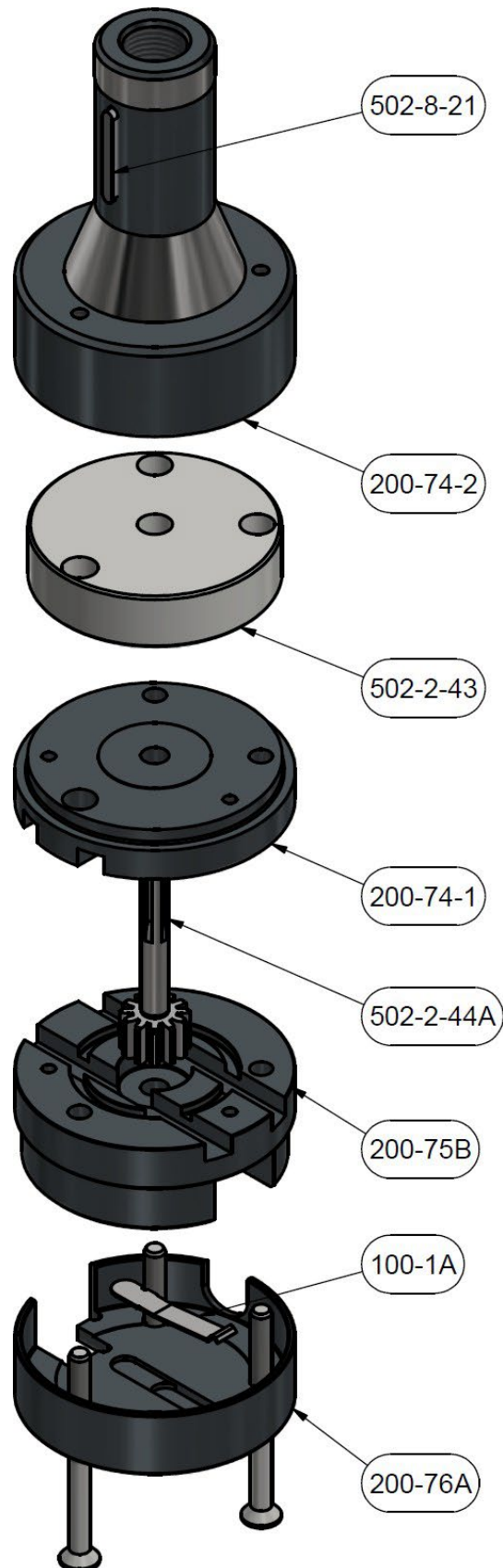
600-8-4 L Cutterhead Kit, 2.875-5.0" Dia



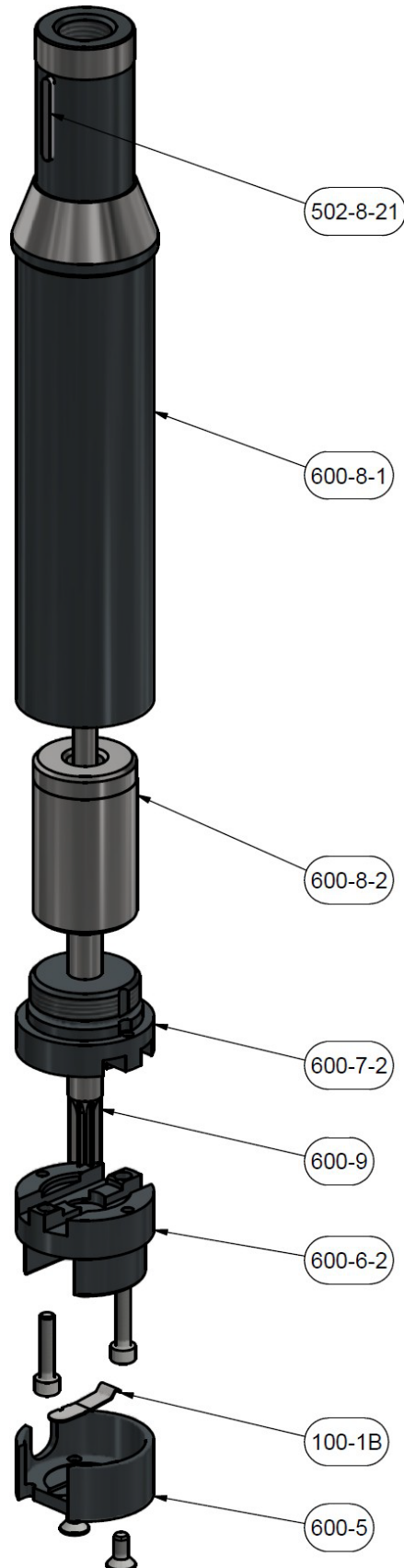
502-13M Stub Bar Cutterhead, 2.19-4.1" Dia. X 6" Long**502-13N****RT321****RT322****100-24****900-2-19****RT211****RT212****511-29-26 Series****32****32A****32B****511-29-32 Series****511-29-12D****511-29-12F****200-12****501-72A****200-10-1****T8D**

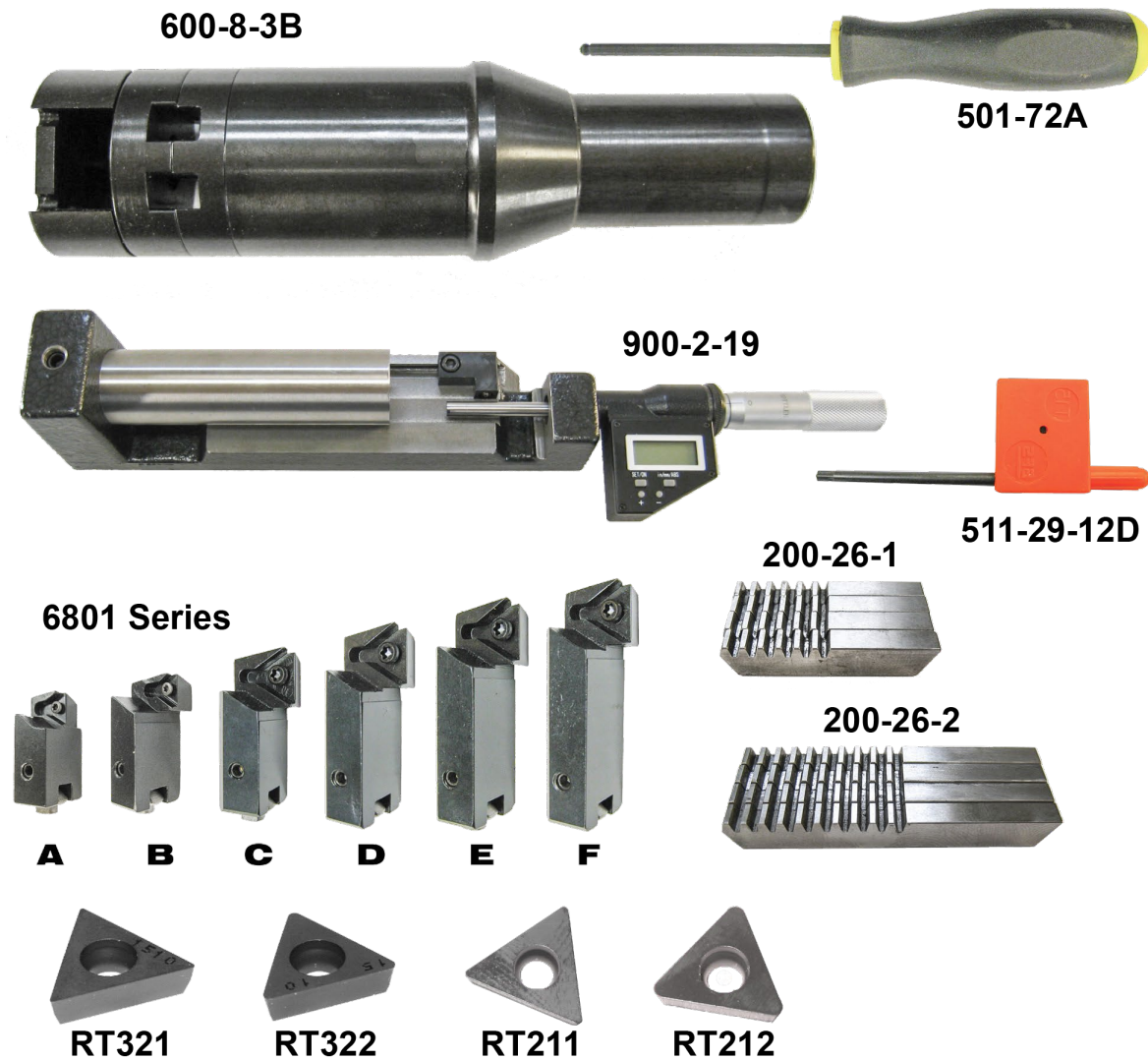


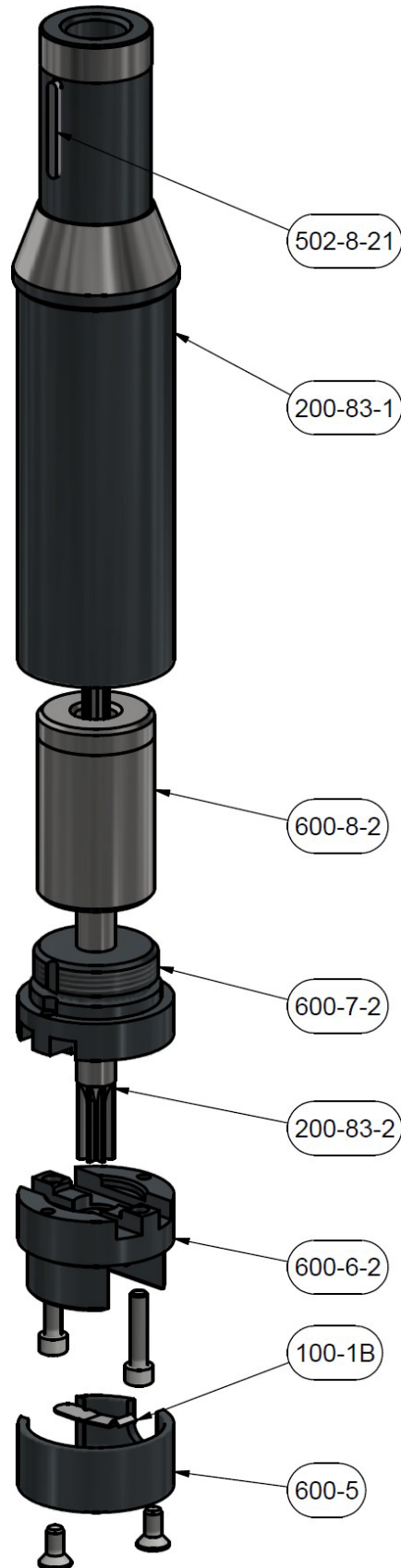
600-8-5 Blind Hole Cutterhead Kit, 2.6-5.0" Dia.**600-8-5A****900-2-19****200-21****200-21-3****501-72J****RT321****RT322****511-29-12D****F****G****H****J****K****L****6801 Series**

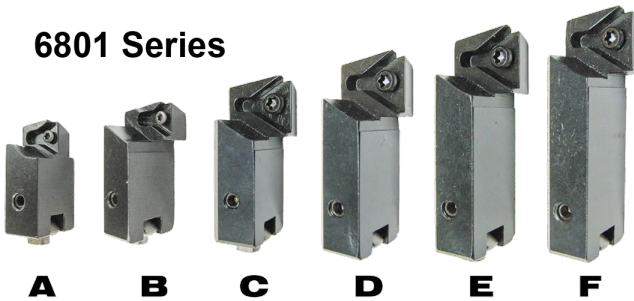
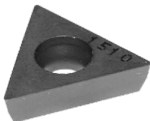
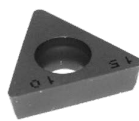


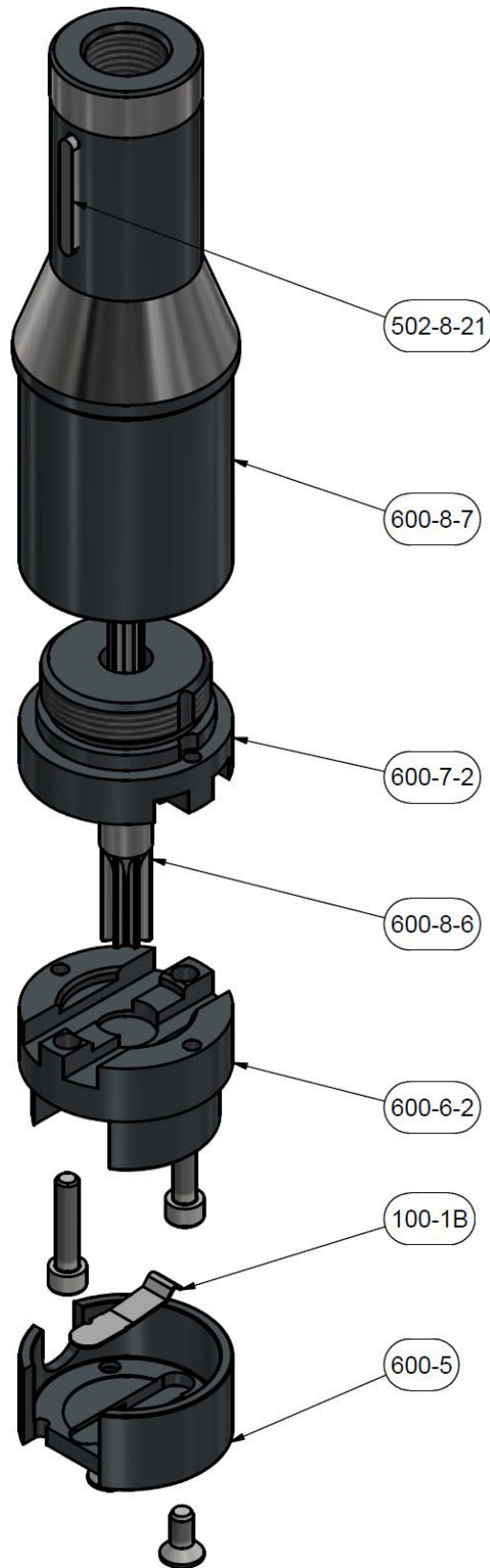
600-2 Blind Hole Stub Cutterhead, 1.5-4.1" Dia. X 6.5" Long



600-8-3 A Blind Hole Stub Cutterhead, 1.5-4.1" Dia. X 5.25" Long


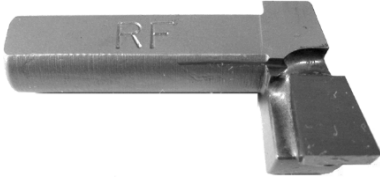
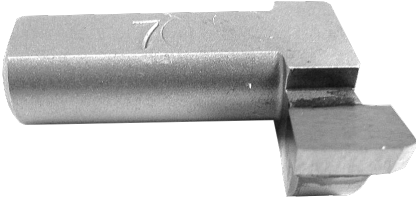
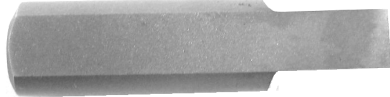
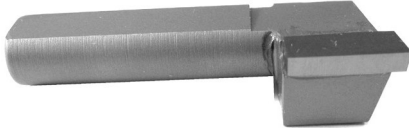
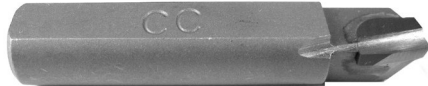
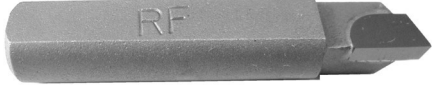
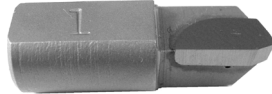
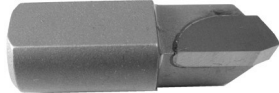


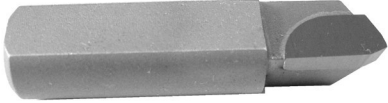
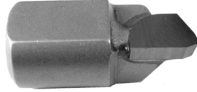
600-8-8A Blind Hole Stub Cutterhead, 1.5-4.1" Dia. X 3" Long**600-8-8B****501-72A****T8D****900-2-19****511-29-12D****200-26-1****200-26-2****6801 Series****A****B****C****D****E****F****RT321****RT322****RT211****RT212**



Insert Holders

Brazed Carbide Tools

100-29 Offset Tool Bit for Blind Holes 	100-29-6 Offset FR Tool Bit (Mercury outboard blind hole sleeves) 
100-29-7 Offset GM Tool Bit (GM 60° V6) 	100-74 VW Thrust Facing Tool Bit 
100-76 Offset Tool Bit ½" (12.7mm) Wide, VW Cylinder Head Facing 	501-28 Steel Cutting Tool Bit w/ Chip Curler 
501-29A FR Facing and Counterboring Tool Bit (For Cast Iron blocks, sleeve cutoff) 	501-30-1 R1 Carbide Tool Bit 1" (25.4mm) Hi-speed Finishing, non-interrupted cuts 
501-30-2 R1 Carbide Tool Bit 1 ⅜" (34.9mm) 	501-31-1 R8 Carbide Tool Bit 1" (25.4mm) General Purpose & Heavy cuts on cast iron, recommended for interrupted cuts 

501-31-2 R8 Carbide Tool Bit 1 3/8" (34.9mm) 	501-31-1A R8 Carbide Tool Bit 11/16" (17.5mm) 
501-31A Cummins Counterbore Tool Bit 	501-32-1 Special Grooving Tool Bit, 048 (O-Ring Tool) 
501-32-2 Special Grooving Tool Bit, 072 	501-32-3 Special Grooving Tool Bit, 037 
501-32-4 Special Grooving Tool Bit, 152 	501-32-6 Special Grooving Tool Bit, 039 
501-33B Chamfer Tool Bit, 15° (For chamfering Cummins Blocks) 	501-33D Chamfer Tool Bit, 30° (For general Cast Iron) 

501-33E Chamfer Tool Bit, 45°**501-33-1 R8 Carbide, 12° Hi-Rake Tool Bit**
(For roughing cuts)**501-33-2 R1 Carbide, 12° Hi-Rake Tool Bit**
(For Aluminum – Vega)

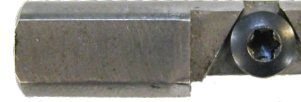
Indexable Insert Cartridge Tool Bits

501-29-5G Cartridge, 6° Rake, 1/4" IC Triangle, 1.34" Long

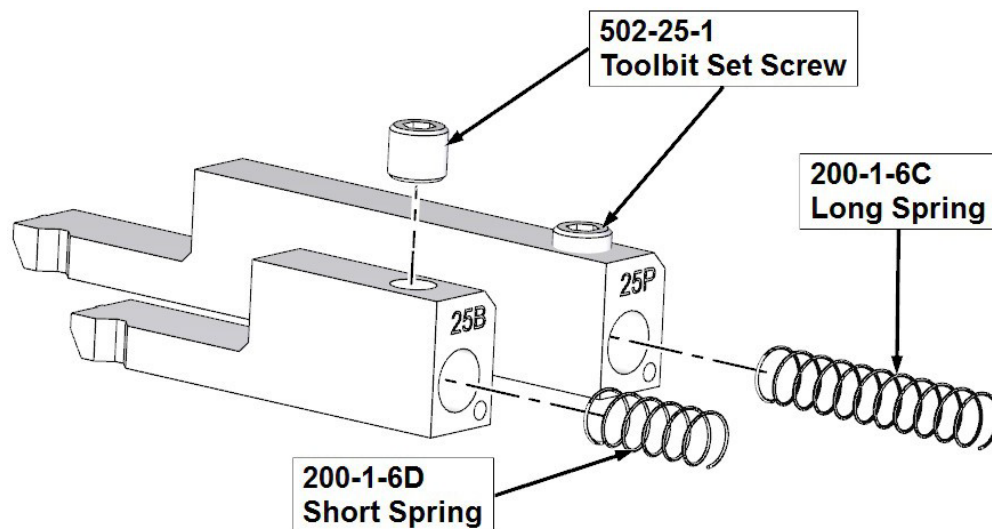
(General purpose boring of Cast Iron)



501-29-5H Cartridge, 6° Rake, 1/4" IC Triangle, 1.02" Long



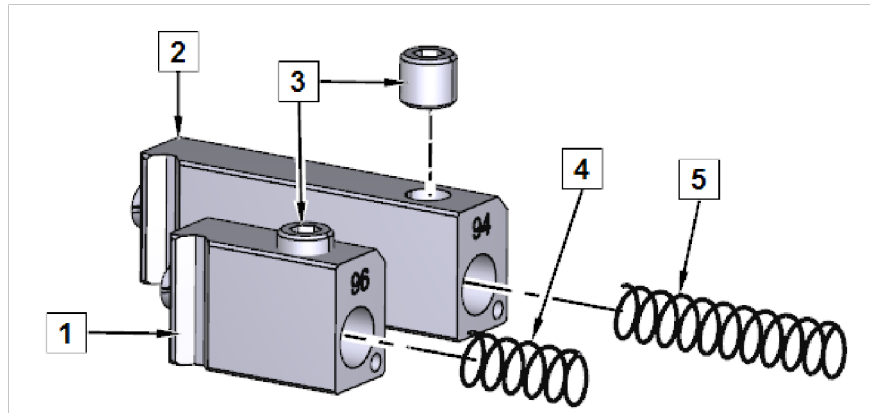
502-25 Series, "F" Type Tool Holders for Braze Bits



502-25 Series Tool Holder Bore Range Chart		
Tool Holder Number	Cartridge Length Used	Bore Range
502-25A	Long	3 7/8 – 5" (98.4-127.0mm)
502-25B	Short	3 1/8 - 4 1/8" (79.38-104.78mm)
502-25C	Long	2 7/8 – 3 5/8" (2.88-92.08mm)
502-25D	Long	4 3/4-6" (120.65-152.4mm)
502-25E	Long	5 5/8-7 1/8" (142.88-180.98mm)
502-25F	Long	7 1/8-8 1/8" (180.98-206.38mm)
502-25G	Long	3 3/8-4 3/8" (85.7-111.13mm)
502-25H	Short	2 1/4-3" (57.15-76.2mm)
502-25I	Short	2 3/8-3 3/8" (60.33-85.73mm)
502-25J	Short	2 7/8-3 7/8" (73.03-98.43mm)
502-25K	Short	3 5/8-4 5/8" (92.08-117.48mm)

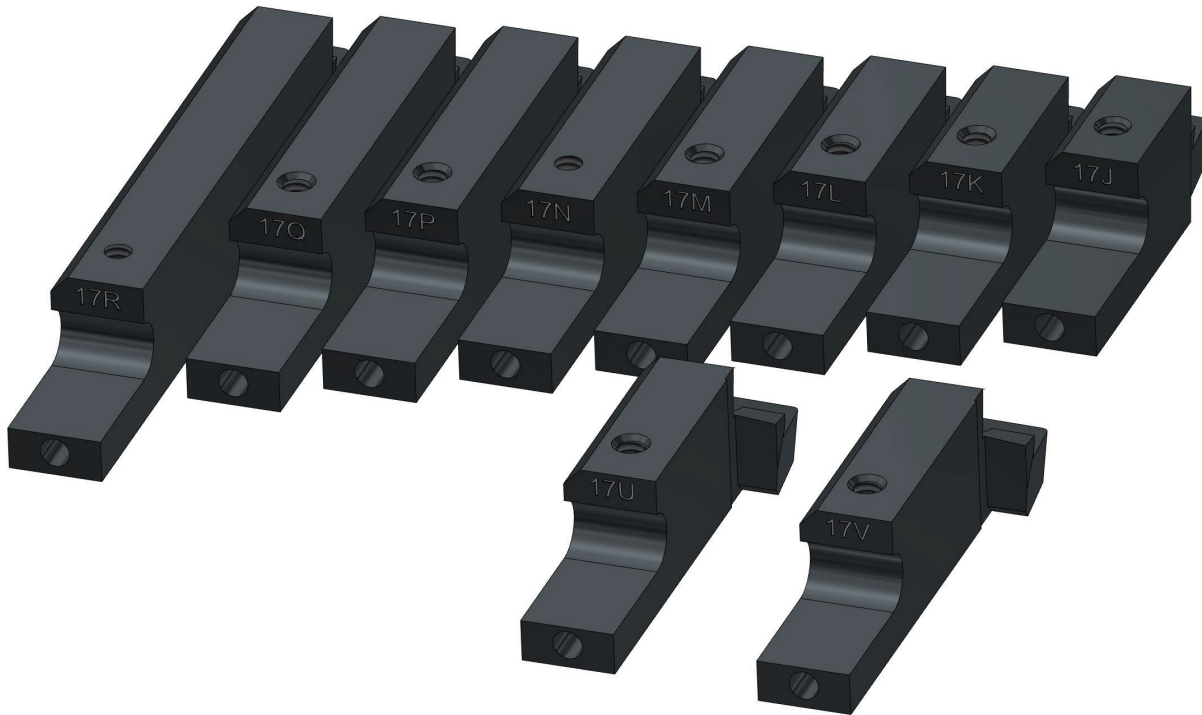
“D” Type Tool Holders for Brazed Tool Bits

199 Series Tool Holders



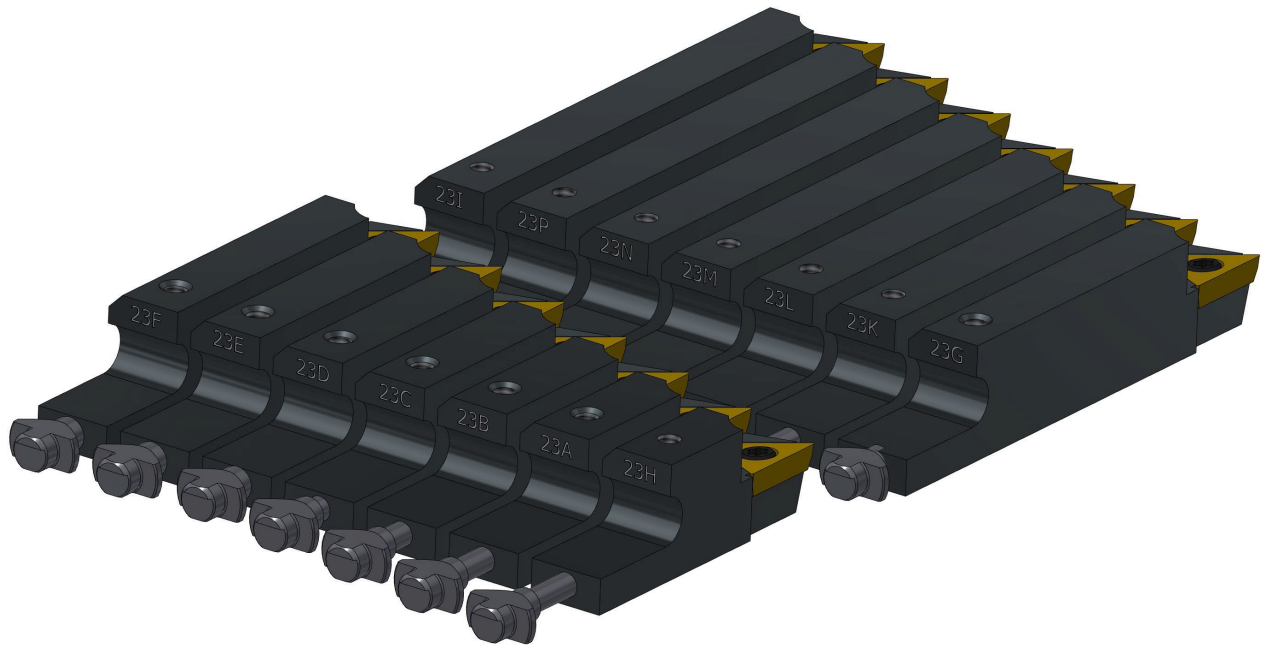
ITEM	PART #	DESCRIPTION
1	199-96	HOLDER, TOOL 1 1/4"
2	199-94	HOLDER, TOOL 2 1/4"
3	502-25-1	SCREW, SOCKET SET 5/16-18 X 5/16" LG
4	200-1-6D	SPRING, TOOL BIT 3/4"
5	200-1-6C	SPRING, TOOL BIT 1 7/16"

Tool Holder	Holder Length	Tool Bit Grooving	Tool Bit Chamfer	Degree or Width	Bore Range
199-96	1.25"		501-33B	15°	2.15-2.80"
			501-33C	20°	
			501-33D	30°	
		501-31-3		.037"	
		501-31-1		.048"	
199-89	1.50"		501-33B	15°	2.80-3.45"
			501-33C	20°	
			501-33D	30°	
		501-31-3		.037"	
		501-31-1		.048"	
199-90	1.75"		501-33B	15°	3.45-4.10"
			501-33C	20°	
			501-33D	30°	
		501-31-3		.037"	
		501-31-1		.048"	
199-94	2.25"		501-33B	15°	4.10-4.75"
			501-33C	20°	
			501-33D	30°	
		501-31-3		.037"	
		501-31-1		.048"	

511-29-17 Series Indexable Cartridges, Negative Rake, $\frac{3}{8}$ " IC Square

Tool Holder Assembly Number	Tool Holder Length	Bore Range
511-29-17J	1.95"	2.90-3.12"
511-29-17K	2.15"	3.12-3.52"
511-29-17L	2.35"	3.52-3.92"
511-29-17M	2.55"	3.92-4.32"
511-29-17N	2.75"	4.32-4.72"
511-29-17P	2.95"	4.72-5.12"
511-29-17Q	3.15"	5.12-5.52"
511-29-17R	3.98"	6.17-7.17"
Offset Tool Holders for 600-8-4L Production Cutterhead Only		
511-29-17U	2.33"	3.48-3.88"
511-29-17V	2.53"	3.88-4.28"

511-29-23 Series Indexable Cartridges, $\frac{3}{8}$ IC Triangle

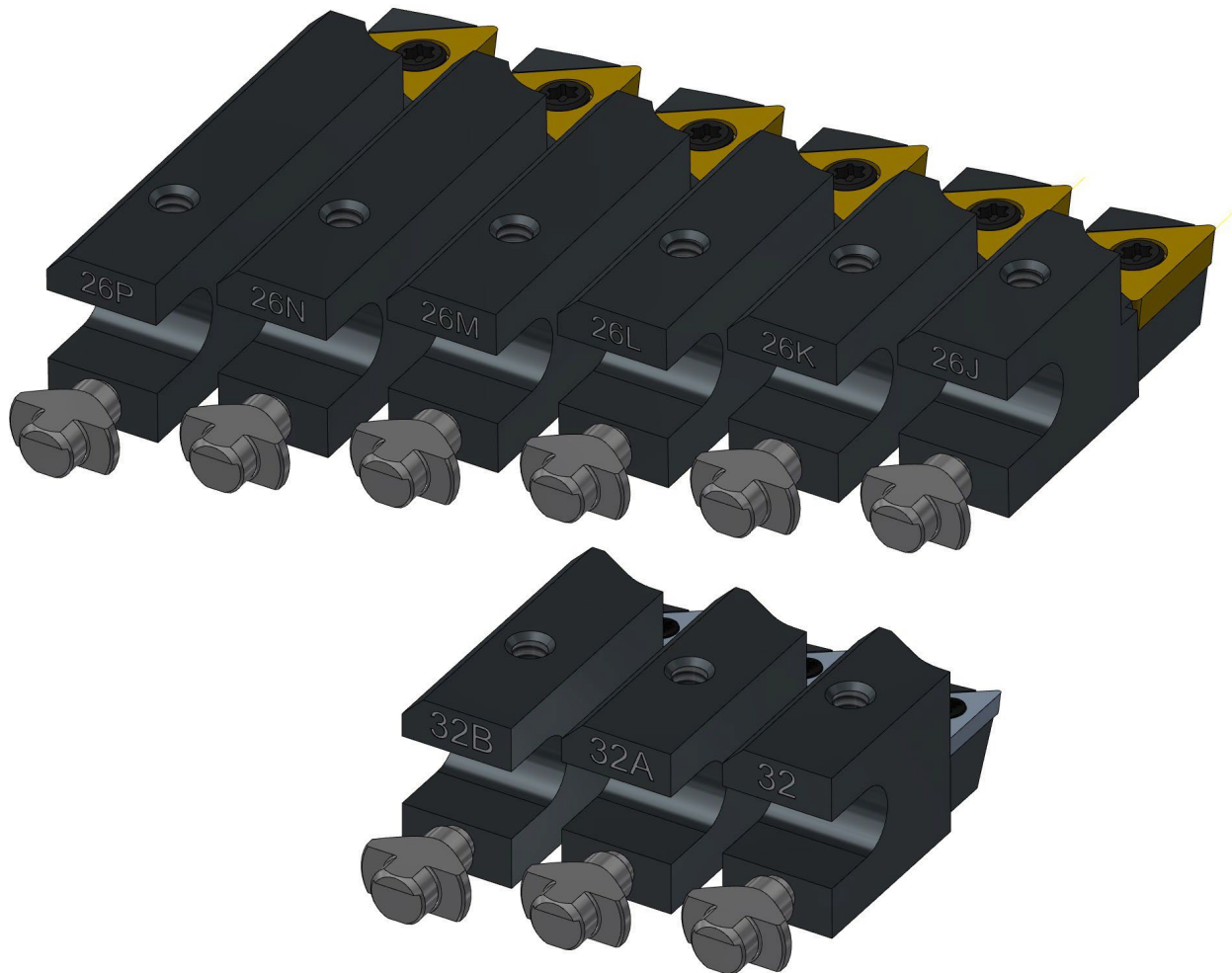


Tool Holder Assembly Number	Tool Holder Length	Bore Range
511-29-23H	2.13"	3.10-3.50"
511-29-23A	2.33"	3.50-3.88"
511-29-23B	2.53"	3.88-4.28"
511-29-23C	2.73"	4.28-4.68"
511-29-23D	2.93"	4.68-5.08"
511-29-23E	3.13"	5.08-5.48"
511-29-23F	3.33"	5.48-5.88"
511-29-23G	3.53"	5.88-6.28"
511-29-23K	3.75"	6.28-6.68"
511-29-23L	4.00"	6.68-7.08"
511-29-23M	4.19"	7.08-7.48"
511-29-23N	4.38"	7.48-7.88"
511-29-23P	4.56"	7.88-8.28"
511-29-23I	4.75"	8.28-8.68"

511-29-24 Series Indexable Cartridges, Negative Rake, $\frac{3}{8}$ " IC Square

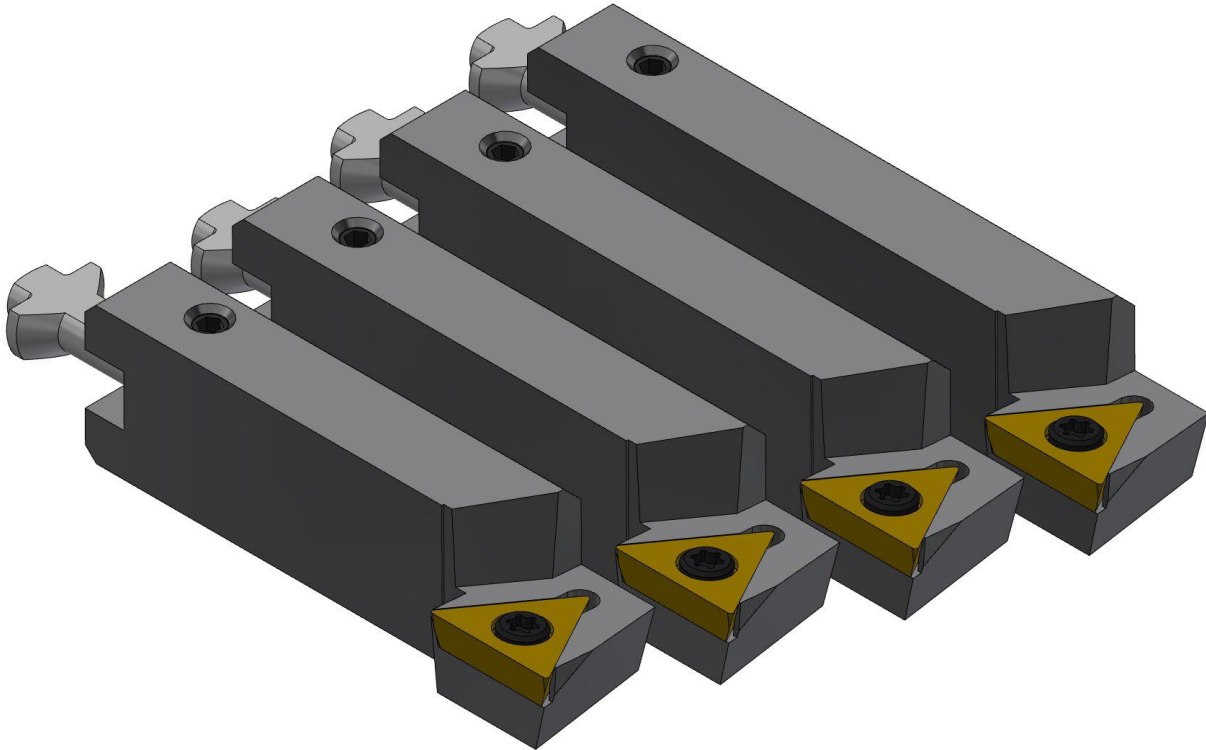

Tool Holder Assembly Number	Tool Holder Length	Bore Range
511-29-24G	1.31"	2.19-2.44"
511-29-24H	1.43"	2.44-2.69"
511-29-24J	1.56"	2.69-2.94"
511-29-24K	1.68"	2.94-3.34"
511-29-24L	1.88"	3.34-3.74"
511-29-24M	2.08"	3.74-4.14"
511-29-24N	2.26"	4.14-4.54"
511-29-24P	2.46"	4.54-5.00"

**511-29-32 Series Indexable Cartridges, Positive Rake, ¼" IC Triangle and
511-29-26 Series Indexable Cartridges, Positive Rake, ⅜" IC Triangle**



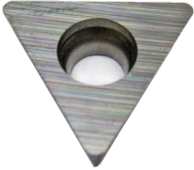
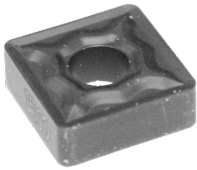
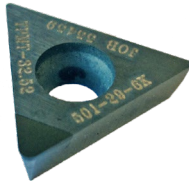
Tool Holder Assembly Number	Bore Range
511-29-32	2.11-2.44"
511-29-32A	2.36-2.69"
511-29-32B	2.62-2.94"
511-2-26J	2.74-3.30"
511-2-26K	3.14-3.70"
511-2-26L	3.54-4.10"
511-2-26M	3.94-4.50"
511-2-26N	4.34-4.90"
511-2-26P	4.74-5.30"

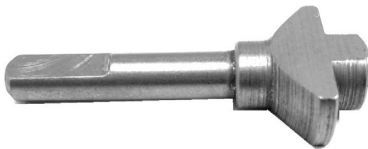
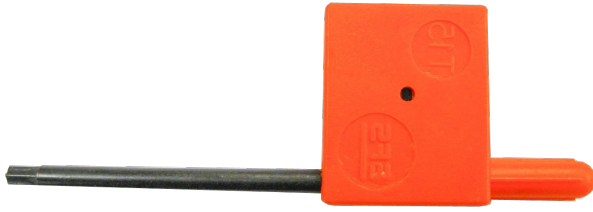
6801 Series Offset Indexable Cartridge, Positive Rake Insert Holders



Tool Holder Assembly Number	Tool Holder Length
6801A	1.23" (31.242mm)
6801B	1.44" (36.576mm)
6801C	1.65" (41.91mm)
6801D	1.85" (46.99mm)
6801E	2.05" (52.07mm)
6801F	2.25" (57.15mm)
6801G	2.55" (64.77mm)
6801H	2.75" (69.85mm)
6801J	2.95" (74.93mm)
6801K	3.15" (80.01mm)
6801L	3.35" (85.09mm)

Inserts and Hardware for Tool Cartridges/Holders

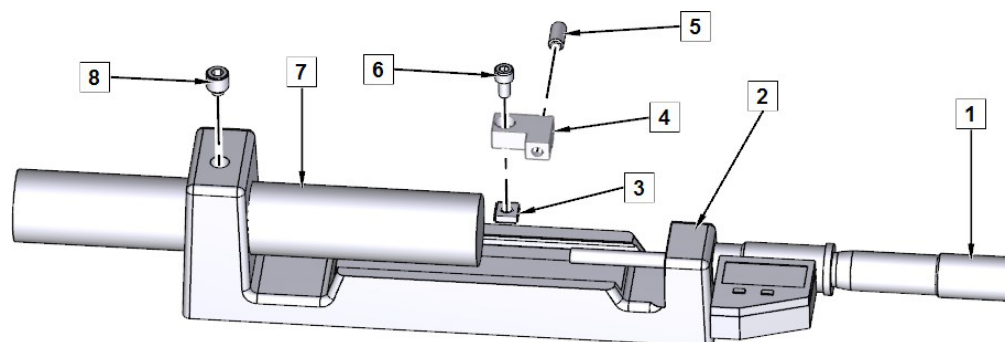
RT321F 1/64" (397mm) radius, 3/8" (9525mm) IC Precision counterboring 	RT322F, 1/32" (787mm) radius, 3/8" (9525mm) IC Precision counterboring 	RT321, 1/64" (397mm) radius, 3/8" (9525mm) IC general purpose and sleeving 
RT322 1/32" (787mm) radius, 3/8" (9525mm) IC General purpose and sleeving 	RS322 1/32" (787mm) radius, 3/8" (9525mm) IC Black ceramic coated for high speed oversize thru boring 	501-29-6K 1/32 radius, diamond tipped carbide, 3/8" (9525mm) IC Aluminum boring 
511-29-20E 1/32" (787mm) radius, positive rake, 3/8" (9525mm) IC For cutting steel & ductile iron 	RT212 1/32" (787mm) radius, 1/4" (635mm) IC General purpose and sleeving 	RT212F 1/32" (787mm) radius, 1/4" (635mm) IC Precision counterboring 
RT211 1/64" (397mm) radius, 1/4" (635mm) IC General purpose and sleeving 	RT211F 1/64" (397mm) radius, 1/4" (635mm) IC Precision counterboring 	

511-29-17 Adjusting pin (511-29-17 series & 511-29-23 series) 	100-82-3 Adjusting pin (511-29-5 series) 	511-29-17W Adjusting pin (511-29-24K - M) 
511-29-17X Adjusting pin (511-29-24G - J) 		
511-29-12D Torx wrench for 3/8" (9.525mm) triangular insert cartridge tool holders 		
100-82-2A Set screw brass tipped for indexable insert tool holder assemblies. (10-24NC x 3/8) (511-29-17, 511-29-23, 511-29-24 series) 	511-29-12C M4 x 7 x 10mm, torx screw (to hold triangular inserts) 	511-29-12 6/32 x 7/16" (4775 x 11125mm) long SHCS (to hold square inserts) 

100-82-2 Set screw brass tipped for square cartridge/tool holder assemblies. (10-24NC x 3/16) (51129-5 series)” 	511-29-12B Washer precision, insert holding square cartridge tool holder assembly 	100-82-1 Adjusting pin spring, short (for 511-29-5J) 
100-82-4 Adjusting pin spring, long (for 511-29-5A-S) 	100-82-5 Adjusting pin spring, short (for 511-29-17J & K and 511-29-23H) 	100-82-5A Adjusting pin spring, long (for 511-29-17L -R & 511-29-23A - G) 

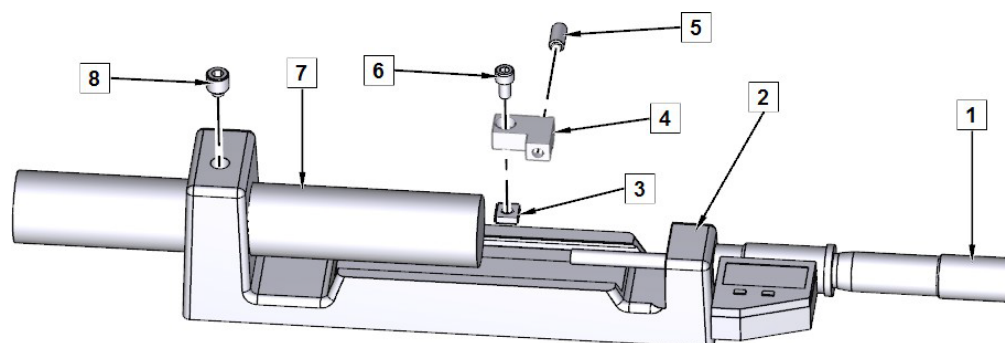
Micrometers:

900-2-19 Tool Setting Micrometer, 1/2" Tooling



ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	501-34-2T	HEAD, MICROMETER, UNIVERSAL MIC HEAD DIGITAL READING INCH/METRIC
2	1	502-30-10B	FRAME, MICROMETER
3	1	502-30-10J	SQUARE NUT - #10-24 MICROMETER FRAME
4	1	502-30-10M	CLAMP, MICROMETER
5	1	502-30-10K	BALL PLUNGER, 1/4-20 MICROMETER FRAME
6	1	MF-9A	SOCKET HEAD CAPSCREW #10-32 X 3/8"
7	1	502-30-10A	ANVIL, MICROMETER 7/8" DIA X 5 5/8" LG
8	1	502-30-10L	SET SCREW, BRASS TIPPED 3/8-24 X 3/8"

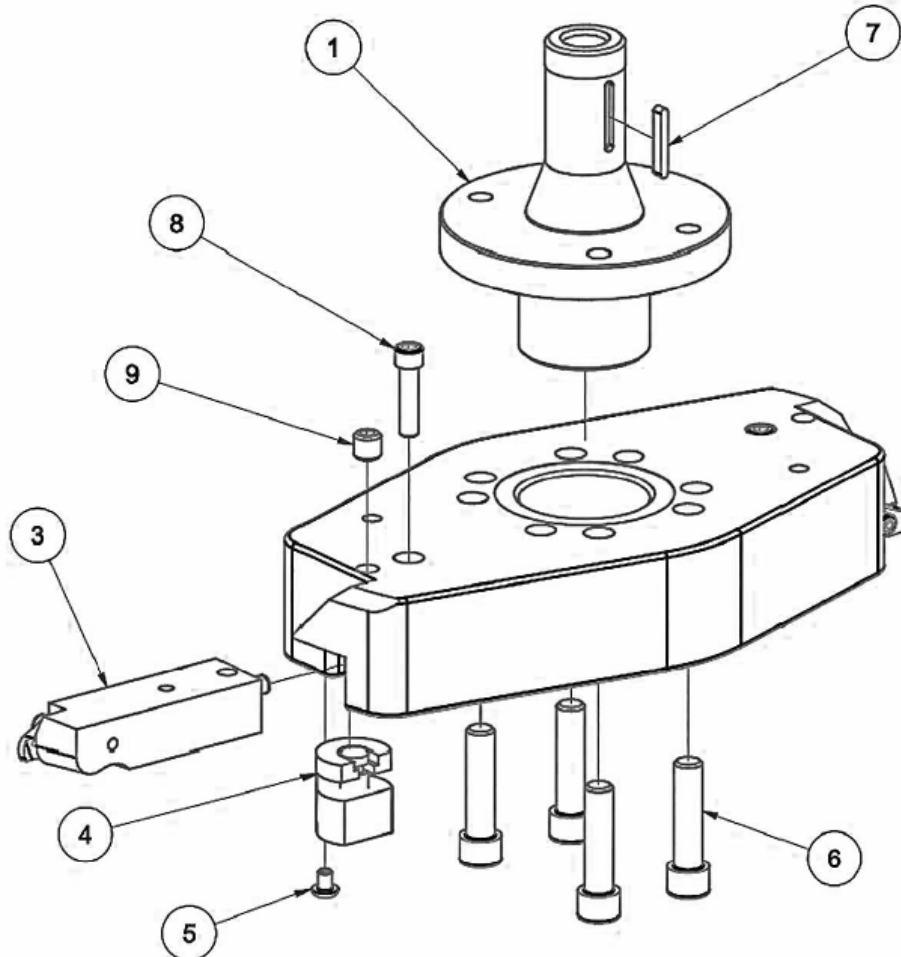
900-2-20 Tool Setting Micrometer, 3/4" Tooling



ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	501-34-2T	HEAD, MICROMETER, UNIVERSAL MIC HEAD DIGITAL READING INCH/METRIC
2	1	502-30-10C	FRAME, MICROMETER
3	1	502-30-10J	SQUARE NUT - #10-24 MICROMETER FRAME
4	1	502-30-10M	CLAMP, MICROMETER
5	1	502-30-10K	BALL PLUNGER, 1/4-20 MICROMETER FRAME
6	1	MF-9A	SOCKET HEAD CAPSCREW #10-32 X 3/8"
7	1	502-30-10A	ANVIL, MICROMETER 7/8" DIA X 5 5/8" LG
8	1	502-30-10L	SET SCREW, BRASS TIPPED 3/8-24 X 3/8"

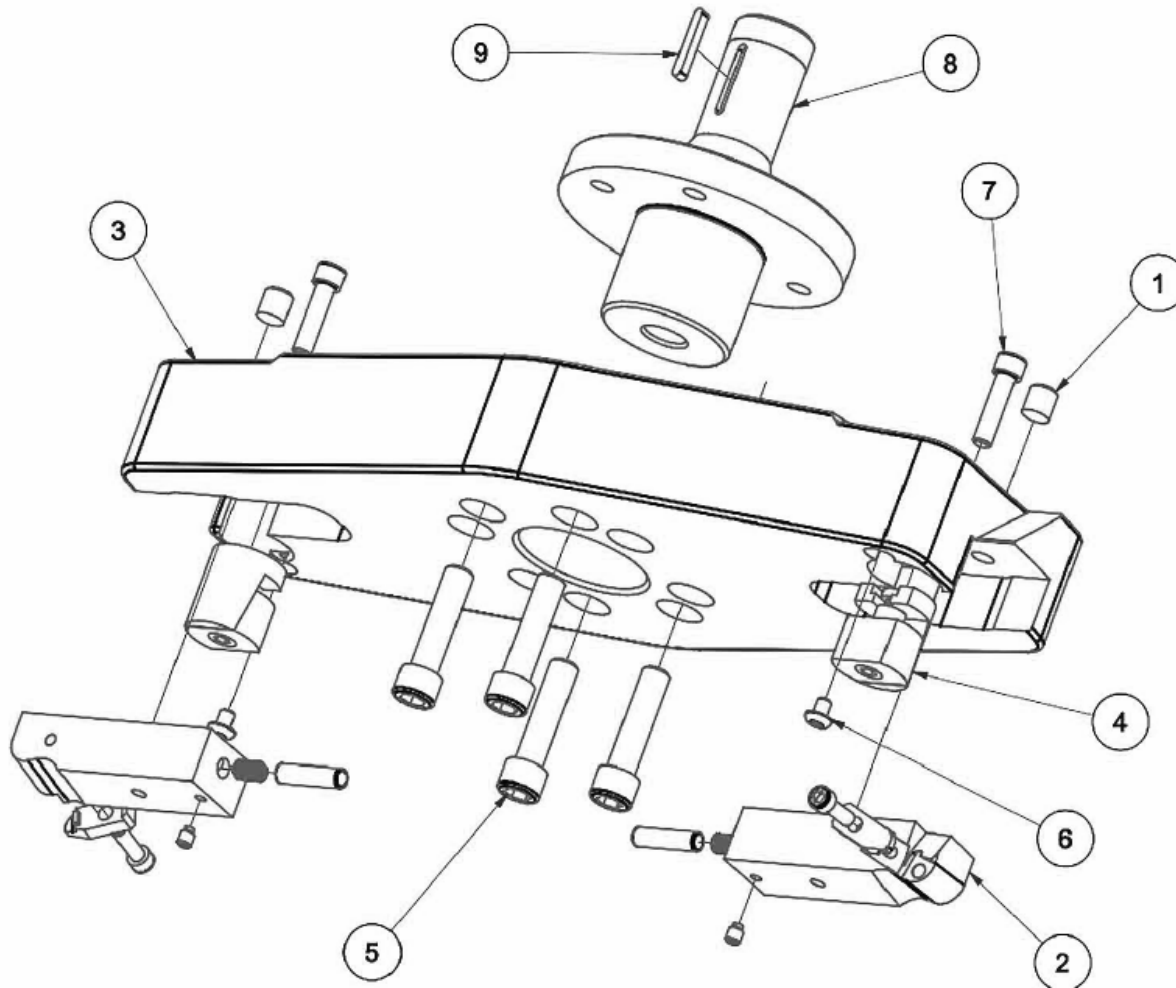
Surfacing Tools:

7206Z – 10 Inch Flycutter Assembly



7206Z 10" FLYCUTTER ASSEMBLY - F10XS			
ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	7206Y	ADAPTER - FLYCUTTER - F10XS
2	1	7206X	MILLING CUTTERHEAD 10-1/4" DIA. WITH 3/4" x 1" TOOL HOLDER
3	2	7202W	TOOL HOLDER ASSEMBLY, FLY CUTTER
4	2	7206K	L' LOCK
5	2	MF-87	SOCKET BUTTON SCREW #10-24UNC x 1/4" LG.
6	4	MF-33	3/8-16UNC x 1-1/2" LG. S.H.C.S.
7	1	502-8-21	Drive Key
8	2	MF-14	1/4-20UNC x 3/4" S.H.C.S.
9	2	7202C	SOCKET SET SCREW, OVAL POINT 3/8-16UNC x 3/8" LG.

7206C – 14 Inch Flycutter Assembly



7206c 14" FLYCUTTER ASSEMBLY - F10XS			
ITEM	QTY	PART NUMBER	DESCRIPTION
1	2	7202C	Hexagon Socket Set Screw - Oval Point
2	2	7202W	TOOL HOLDER ASSEMBLY, FLY CUTTER
3	1	7206G	MILLING CUTTERHEAD, 14" DIA. WITH 3/4 x 1 TOOL HOLDER
4	2	7206K	L' LOCK
5	4	Mf-33	Socket Head Cap screw 3/8 - 16 UNC - 1 1/2
6	2	Mf-87	Socket Button Head Cap Screw 10 - 24 x 1/4
7	2	MF-15	S.H.C.S. 1/4 - 20 UNC - 1
8	1	7206Y	ADAPTER - FLYCUTTER - F10XS
9	1	502-8-21	Drive Key

Cutting Inserts – 3/8" IC

6303B 3/8" IC, Round, CBN Insert Double Sided, for cast iron 	6301J 3/8" IC, 1/16" radius, CBN Insert Double Sided, for heavy stock removal 	6303M 3/8" IC, Round, PCD Insert for finishing aluminum 
6303R 3/8" IC, Round, CBN Insert for cast iron heads with steel pre-cups 	6303S 3/8" IC, Round, CBN Insert for cutting aluminum heads with steel pre-cups and aluminum blocks with liners 	6303X 3/8" IC, Positive Rake Octagonal, CBN Insert for spray weld cutting – requires 7202PR insert holder 
6303U 3/8" IC, Round, CBN Insert Single Sided, For hard cast iron 	6303V 3/8" IC, Octagonal, CBN Insert for surfacing large diesel blocks 	

Cutting Inserts – 1/2" IC

6303Q 1/2" IC, Round, CBN Insert Double Sided, for general cast iron surfacing 	6303P 1/2" IC, Round, PCD Insert for finishing aluminum 	6303W 1/2" IC, Round, PCD Insert for aluminum with steel liners 
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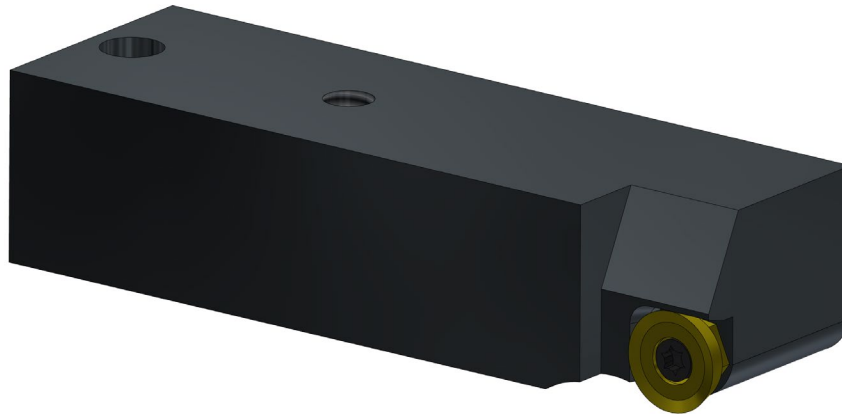
Tool Holders

7202V Holder, Flycutter, ½" IC Inserts, Negative Rake



7202U Holder, Flycutter, ½" IC Inserts, 11° Positive Rake

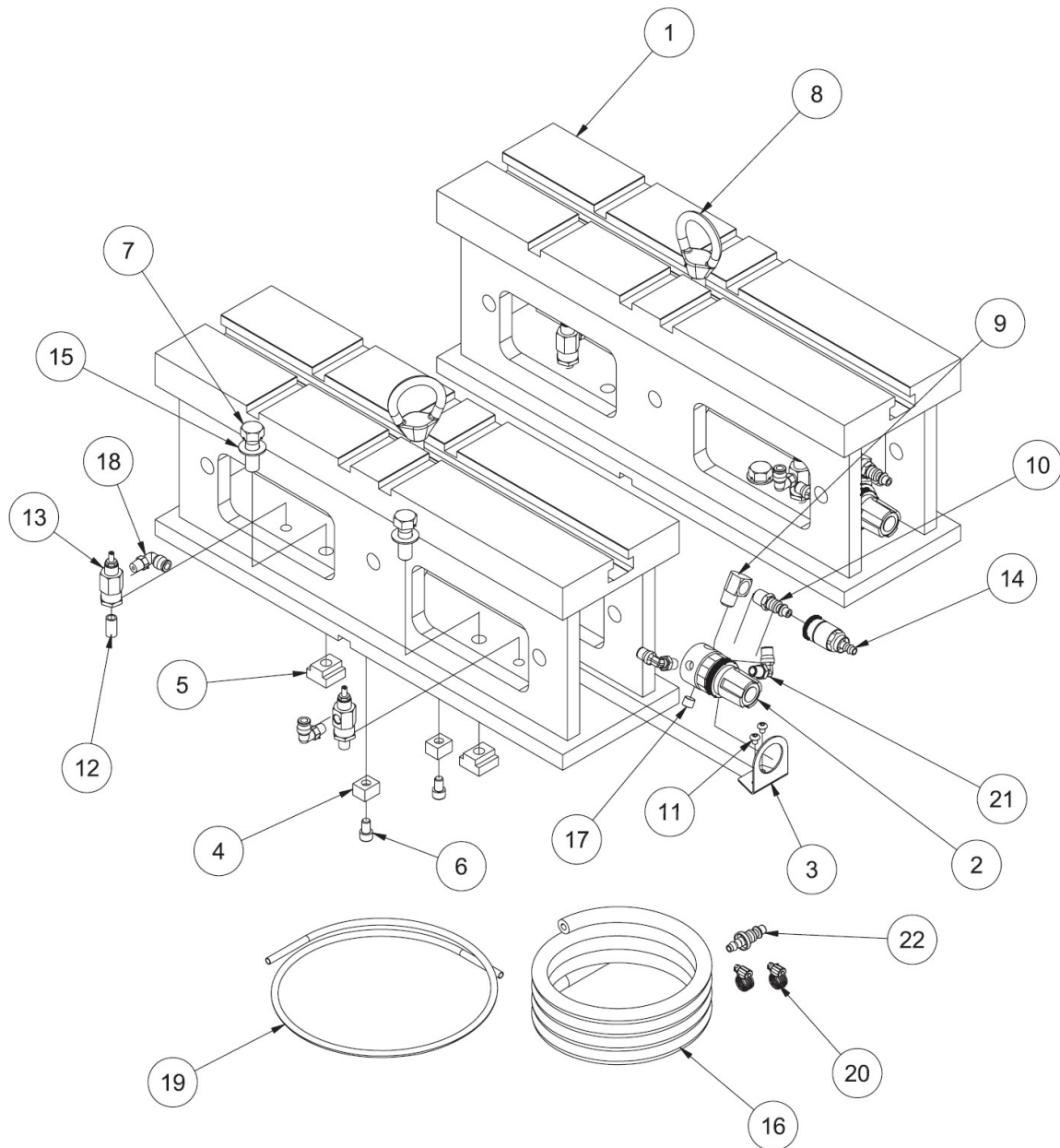


7202X Holder, Flycutter, $\frac{3}{8}$ " IC Inserts**7202PR Holder, Flycutter, $\frac{3}{8}$ " IC Positive Rake – Must use 6303X Insert**

Fixturing

Parallels

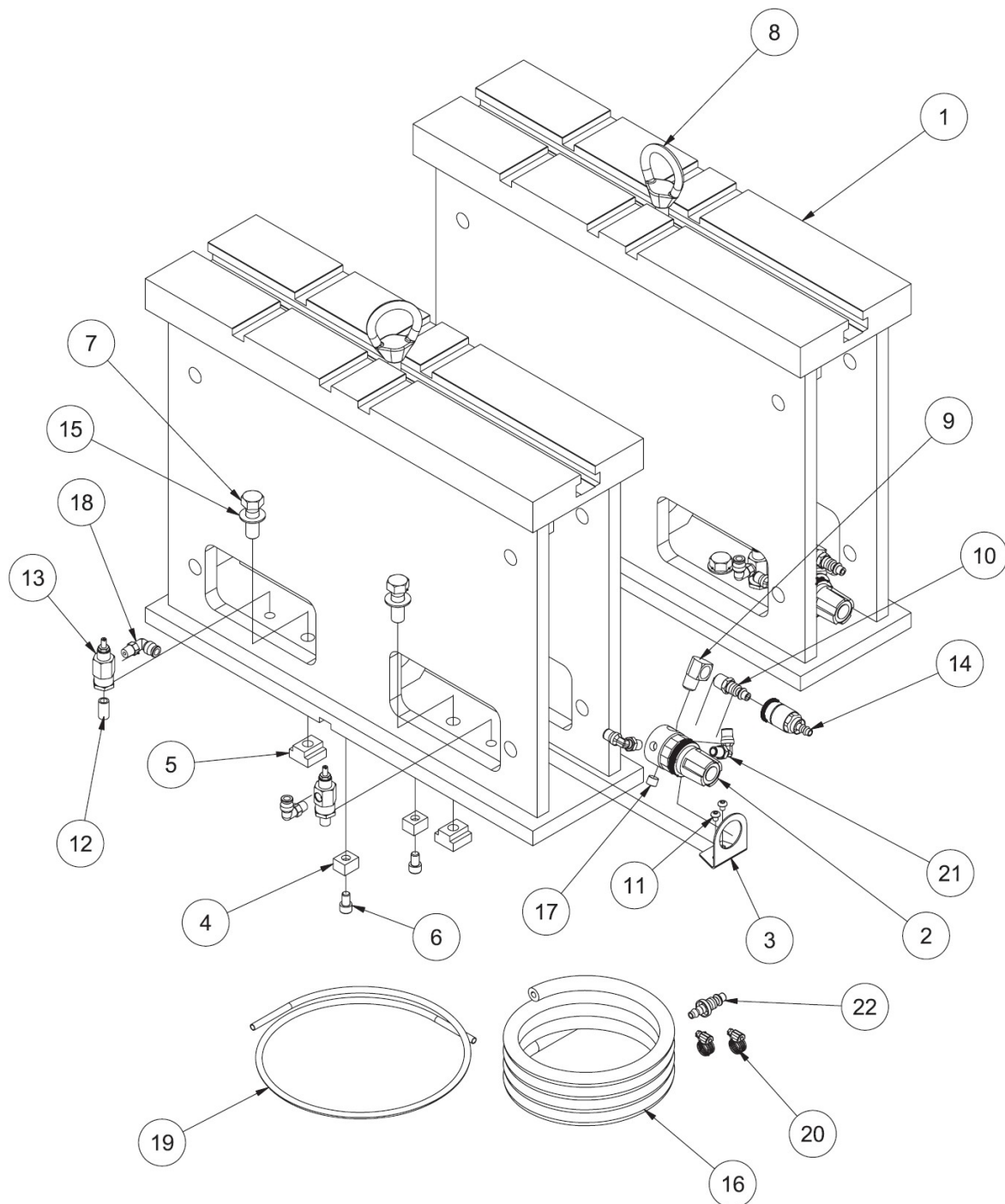
11112 Universal 8" (203mm) Heavy Duty T-Slot Parallels Parts



11112
8" SUPPORT PARALLEL ASSEMBLY
F70

11112 PARALLEL, 8", ASSEMBLY			
ITEM	QTY	PART NUMBER	DESCRIPTION
1	2	11112A	SUPPORT PARALLEL 8" (MACHINING)
2	2	502-27-17	REGULATOR, 0-60 PSI
3	2	502-27-17A	REGULATOR BRACKET
4	4	650-3-9	KEY
5	4	650-3-10	TN-5 T-NUT
6	4	MF-21A	SOCKET HEAD CAPSCREW 5/16-18 X 1/2"
7	4	MF-137A	HEX HEAD CAPSCREW 1/2-13 X 1 1/2"
8	2	502-3-13	LIFT EYE
9	2	502-11-17S	STREET ELL, 1/4"
10	2	502-1116X	CONNECTOR, MALE, 1/4 NPT
11	4	MF-87	SOCKET BUTTON HEAD SCREW #10-24 X 1/4"
12	4	502-11-17J	NIPPLE, CLOSE, 1/8" NPT
13	4	502-11-35A	FLOW CONTROL
14	1	502-11-16W	QUICK CONNECT AIR FITTING, FEMALE
15	4	MF-180	FLAT WASHER 1/2"
16	15 FT	502-1-98	AIR HOSE, 1/4"
17	2	MF-234	HEX SOCKET PLUG 1/8" NPT
18	4	514-4-17E	ELBOW, 90 DEG MALE, 1/4" POLY X 1/8" NPT
19	4 FT	502-11-15	TUBING, BLACK POLYFLO, 1/4"
20	2	502-1-97	CLAMP, 1/4" HOSE
21	4	514-4-17V	FITTING, 90 DEG, 1/8 NPT X 1/4 POLY
22	1	502-11-16Y	CONNECTOR, MALE, AIR 1/4 NPT

11114 Universal 16" (406mm) Heavy Duty T-Slot Parallels

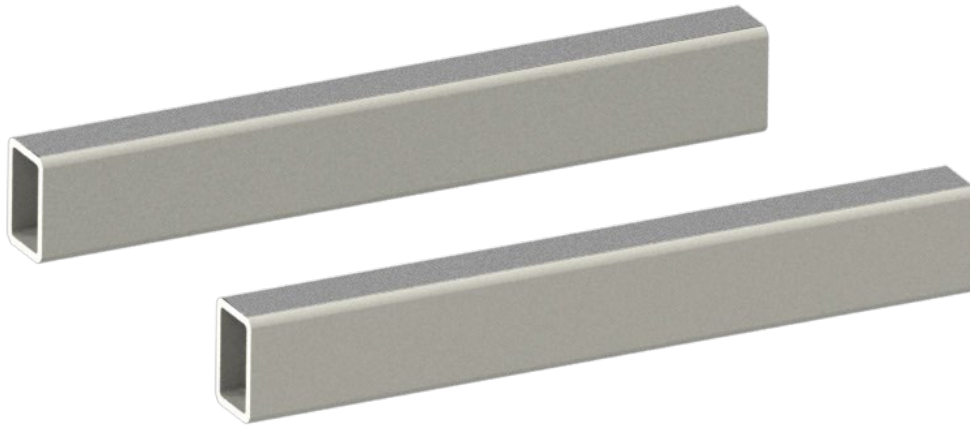
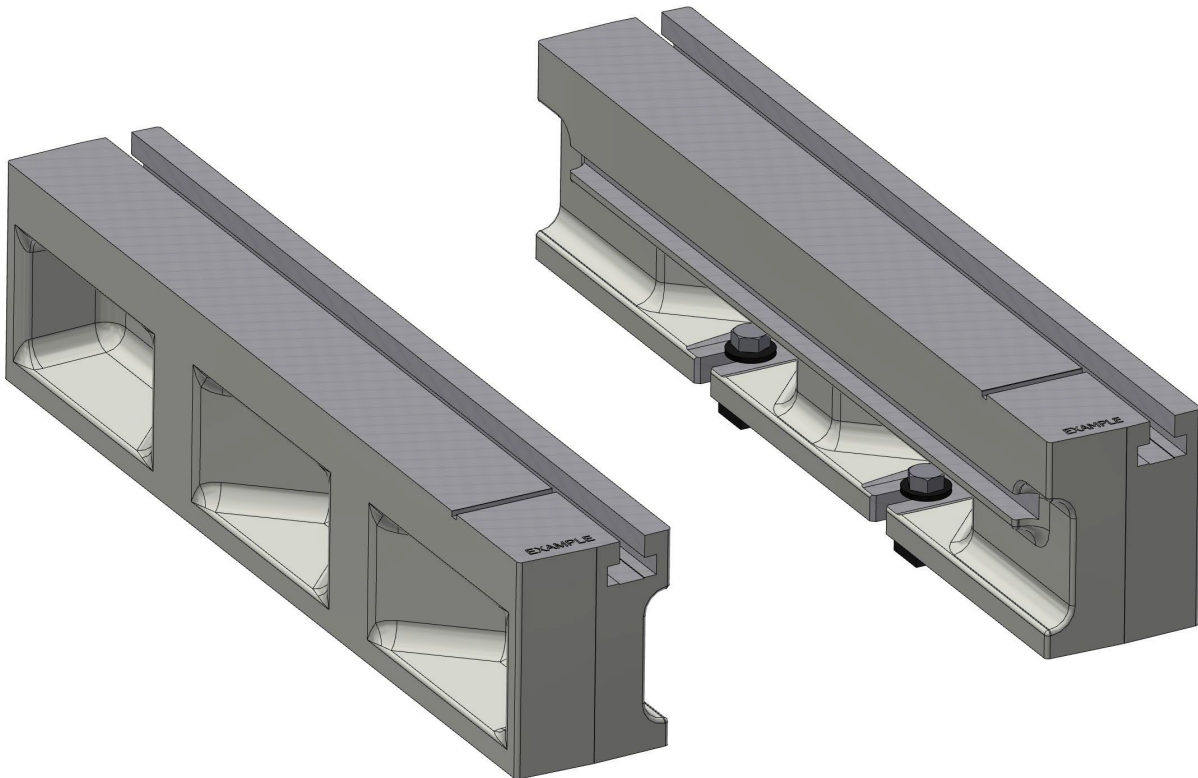


11114
16" SUPPORT PARALLEL ASSEMBLY
F70

11114 PARALLEL, 16", ASSEMBLY			
ITEM	QTY	PART NUMBER	DESCRIPTION
1	2	11114A	SUPPORT PARALLEL 16" (MACHINING)
2	2	502-27-17	REGULATOR, 0-60 PSI
3	2	502-27-17A	REGULATOR BRACKET
4	4	650-3-9	KEY
5	4	650-3-10	TN-5 T-NUT
6	4	MF-21A	SOCKET HEAD CAPSCREW 5/16-18 X 1/2"
7	4	MF-137A	HEX HEAD CAPSCREW 1/2-13 X 1 1/2"
8	2	502-3-13	LIFT EYE
9	2	502-11-17S	STREET ELL, 1/4"
10	2	502-1116X	CONNECTOR, MALE, 1/4 NPT
11	4	MF-87	SOCKET BUTTON HEAD SCREW #10-24 X 1/4"
12	4	502-11-17J	NIPPLE, CLOSE, 1/8" NPT
13	4	502-11-35A	FLOW CONTROL
14	1	502-11-16W	QUICK CONNECT AIR FITTING, FEMALE
15	4	MF-180	FLAT WASHER 1/2"
16	15 FT	502-1-98	AIR HOSE, 1/4"
17	2	MF-234	HEX SOCKET PLUG 1/8" NPT
18	4	514-4-17E	ELBOW, 90 DEG MALE, 1/4" POLY X 1/8" NPT
19	4 FT	502-11-15	TUBING, BLACK POLYFLO, 1/4"
20	2	502-1-97	CLAMP, 1/4" HOSE
21	4	514-4-17V	FITTING, 90 DEG, 1/8 NPT X 1/4 POLY
22	1	502-11-16Y	CONNECTOR, MALE, AIR 1/4 NPT

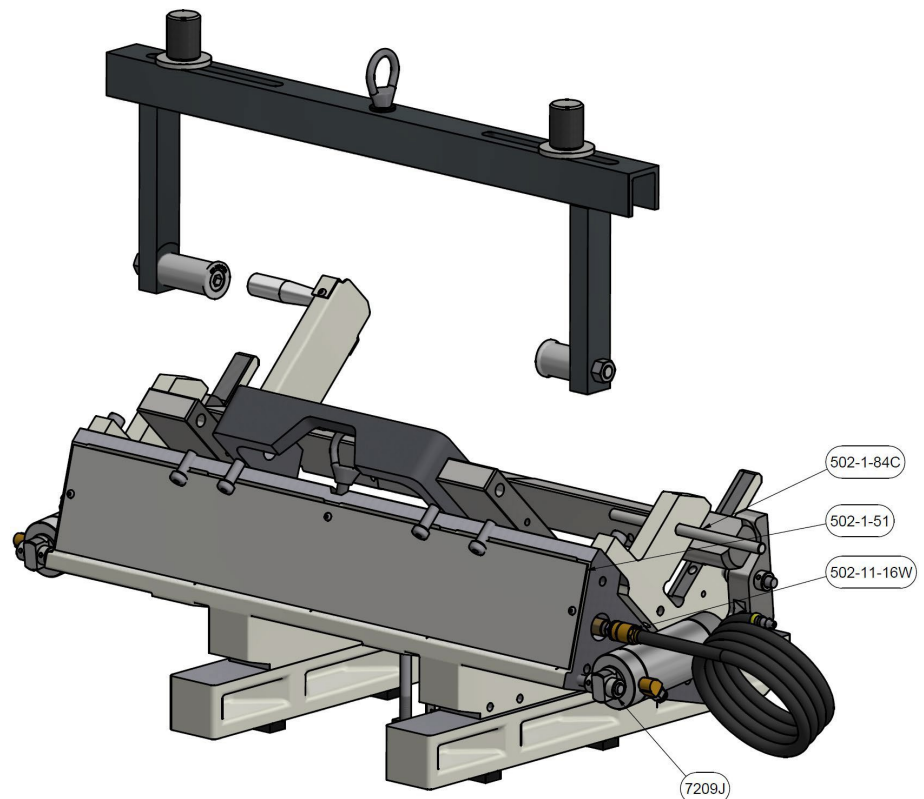
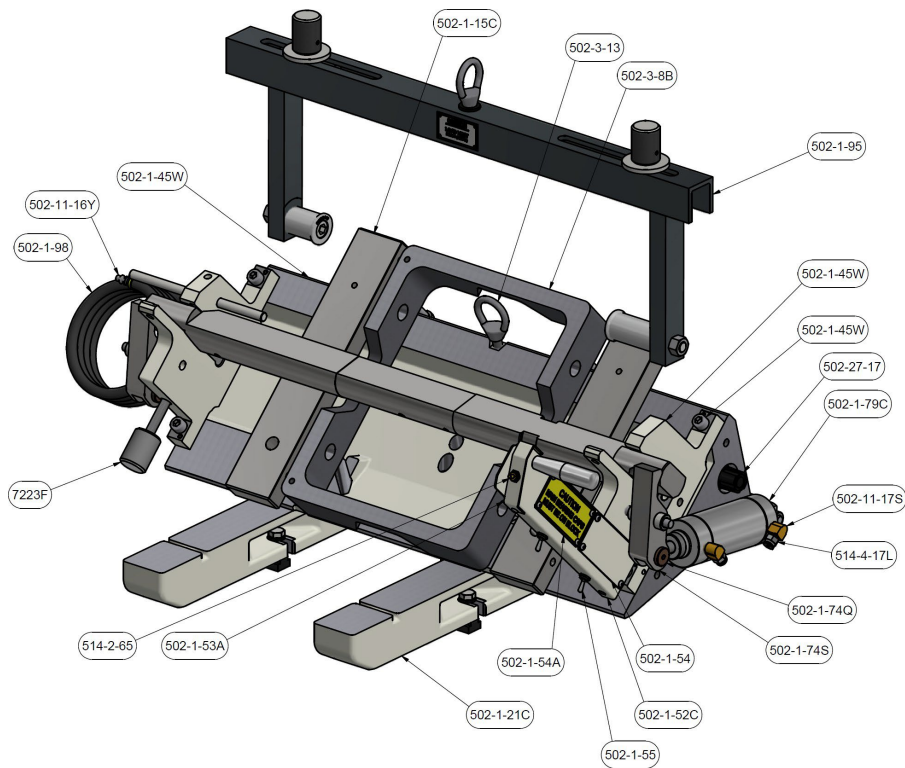
11115 2" (50mm) X 3" (75mm) Parallels

Sold as complete set.

**7219W Universal 5.2" (132mm) Parallels**

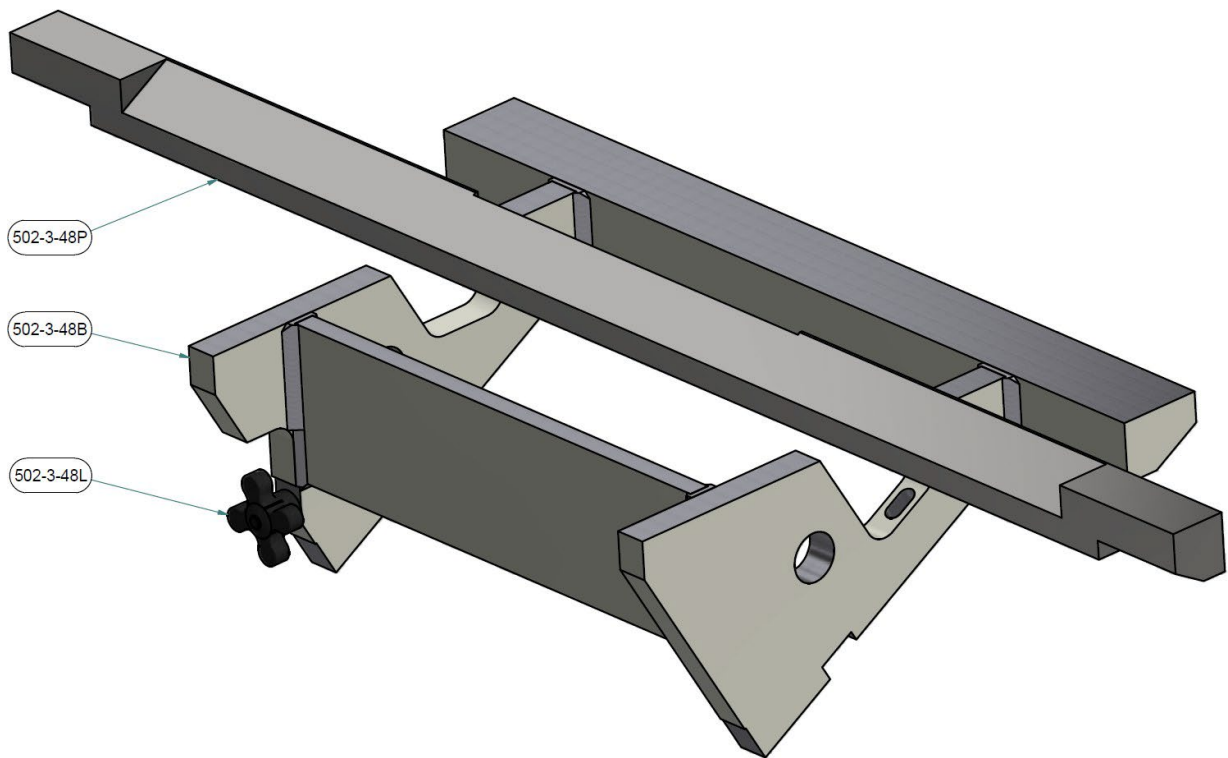
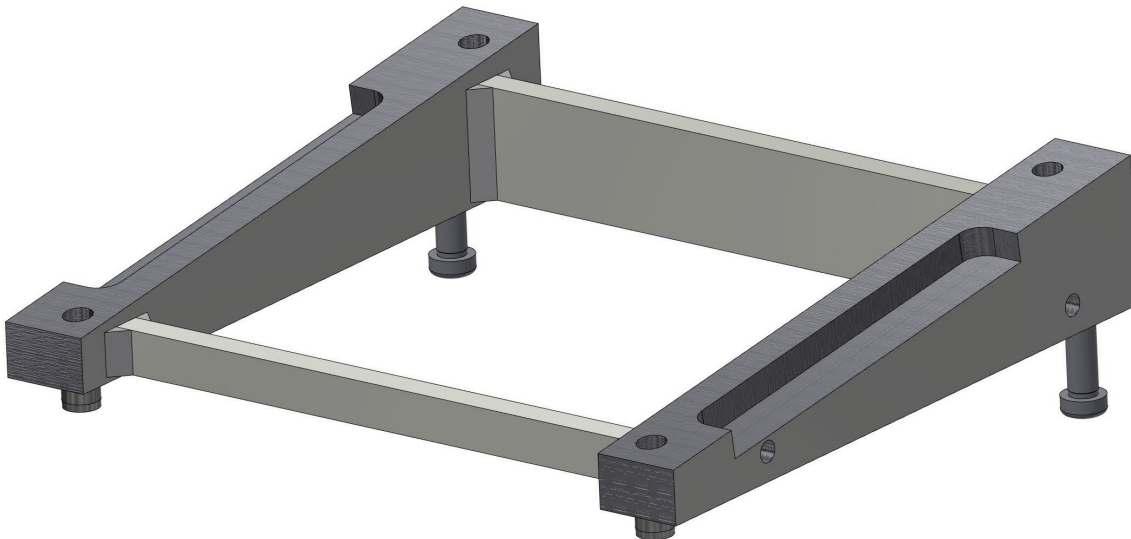
Block Locating Fixtures

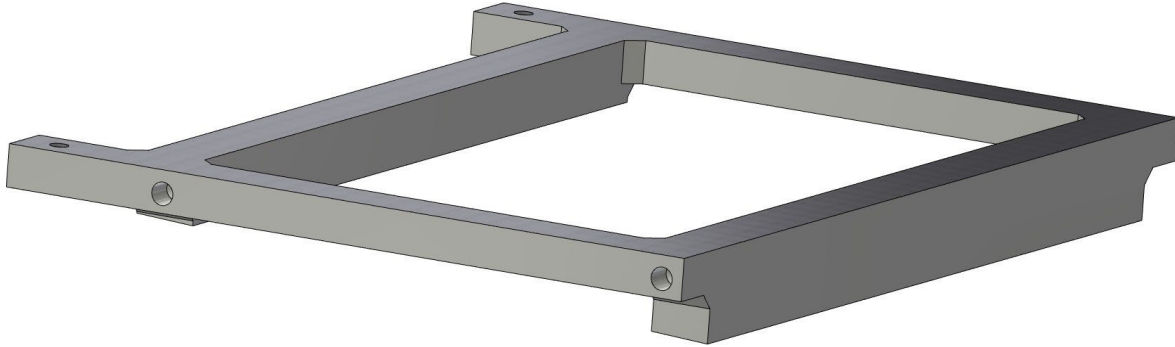
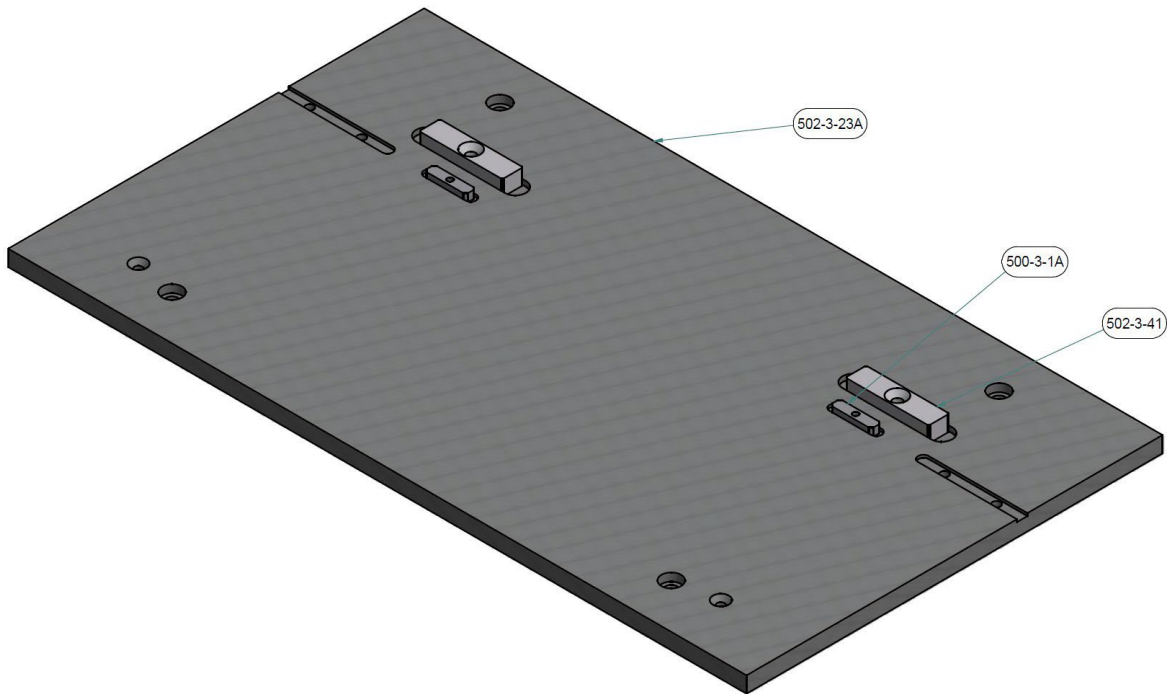
502-1-72F V-Block Fixtures



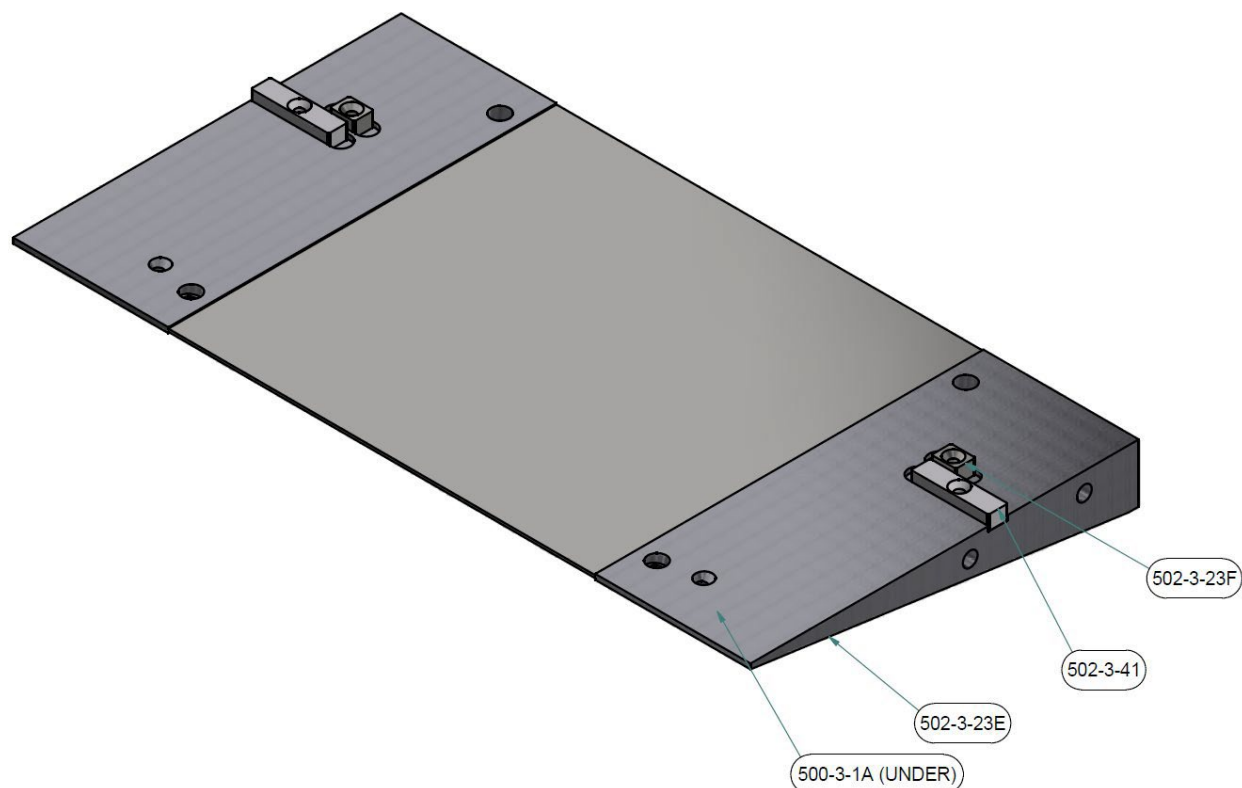
502-3-48 Q In-Line Block Frame

Mounts onto 502-1-72F V-Block Frame

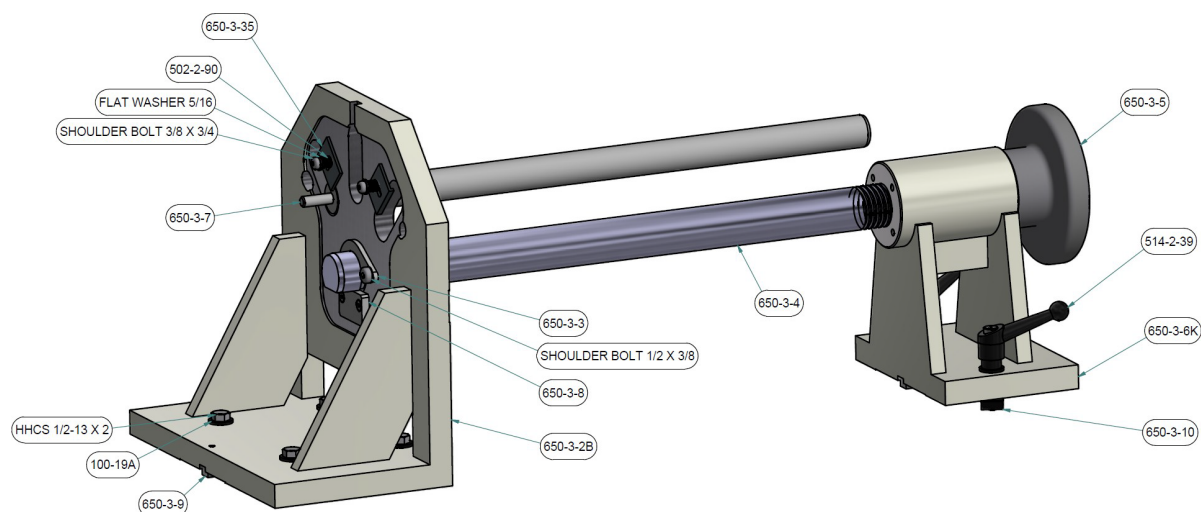
**502-3-49 VW 15° / Ford, Mazda, Isuzu 75° V-Block Fixture**

502-3-52 Cadillac Catera V6 Fixture**502-3-23 Marine Outboard Fixture**

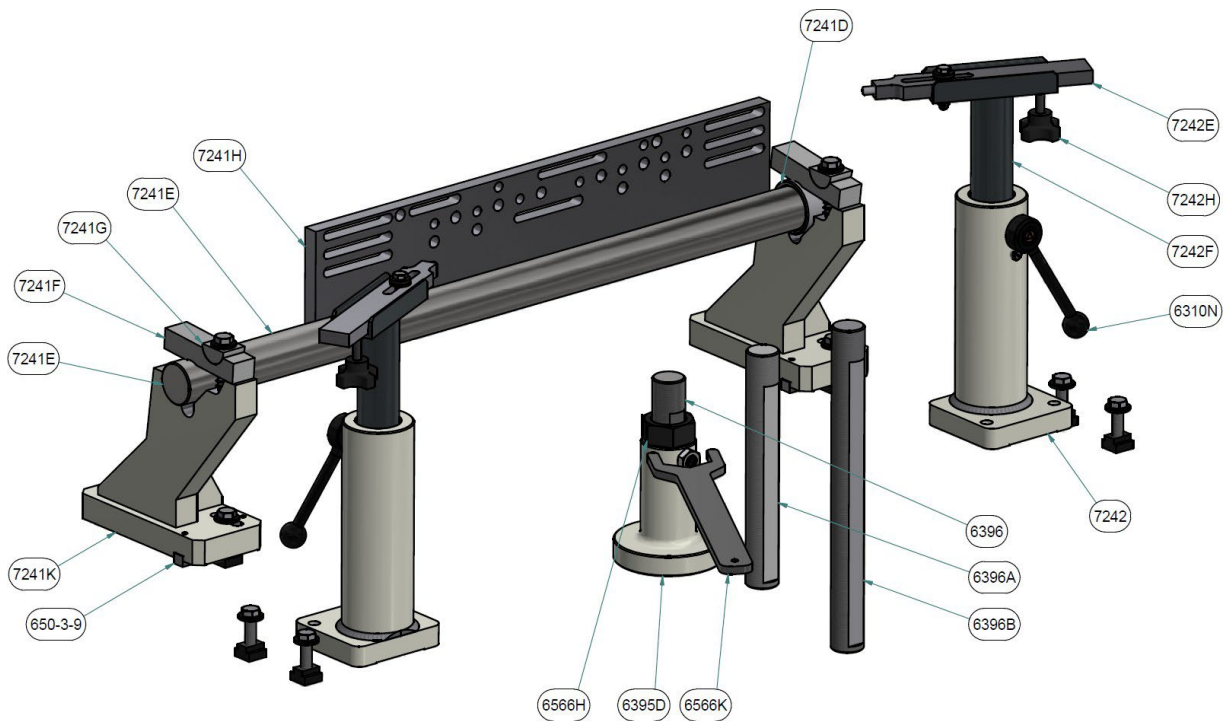
502-3-23C Marine Outboard Fixture

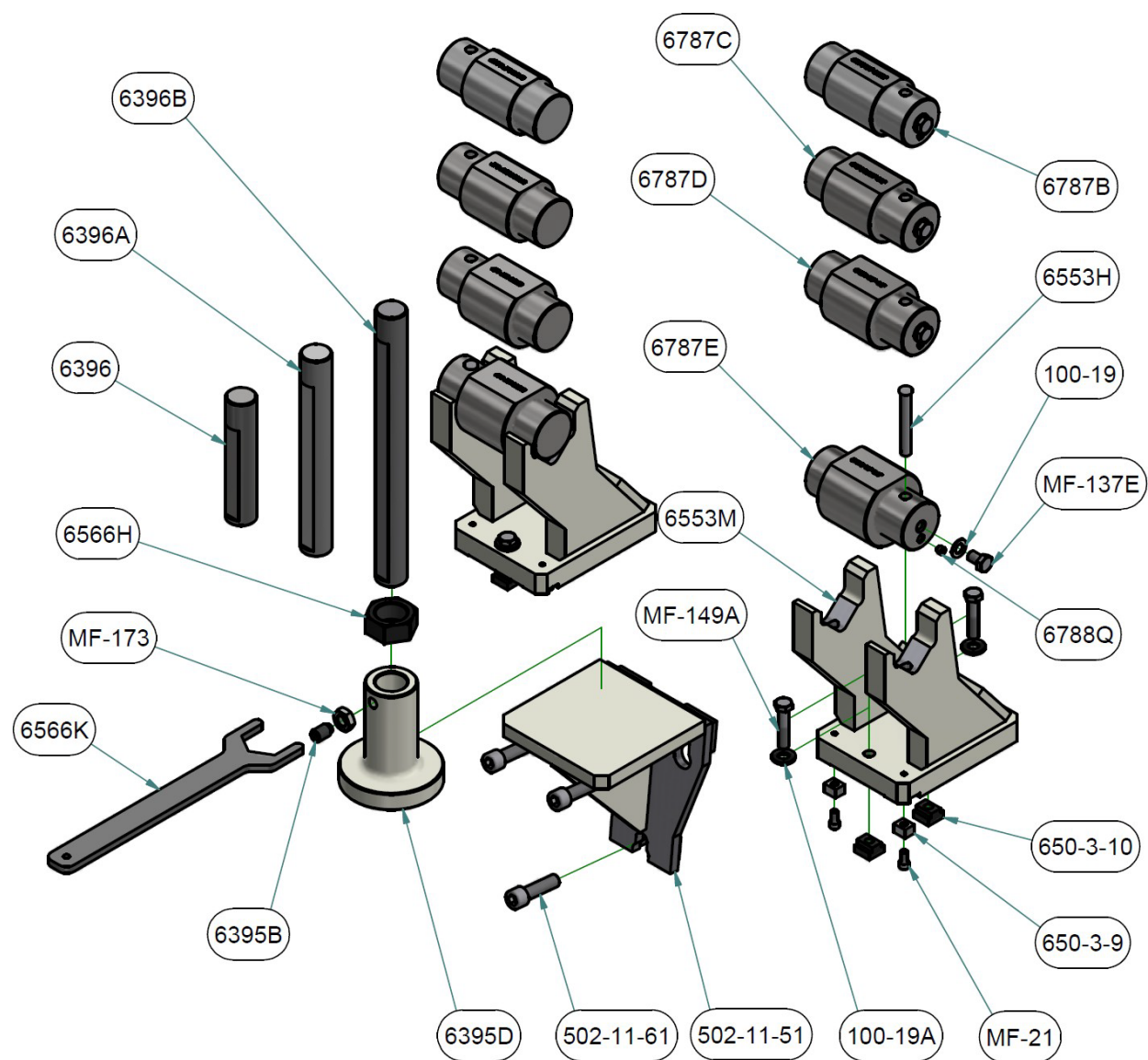


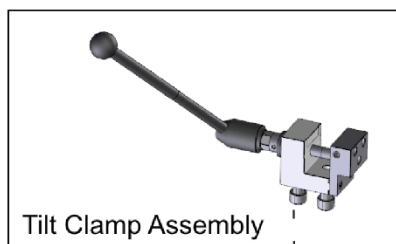
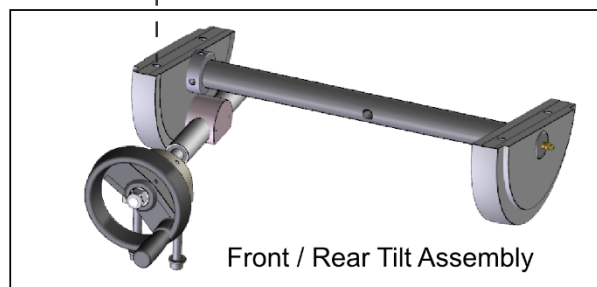
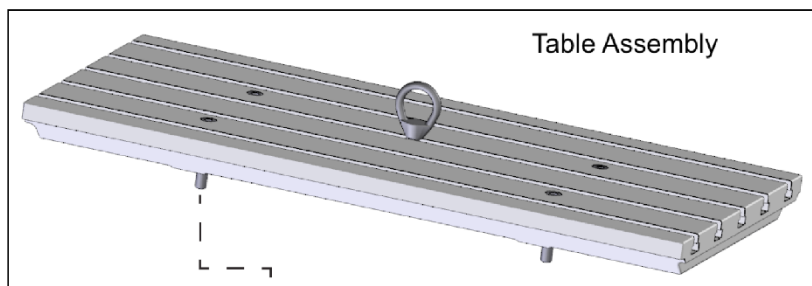
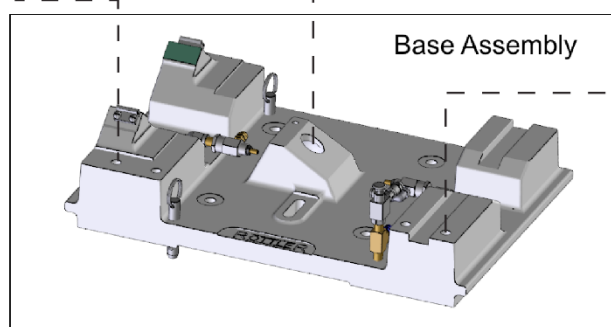
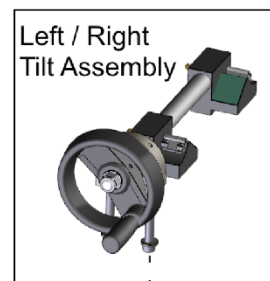
650-3-1 Performance Fixture

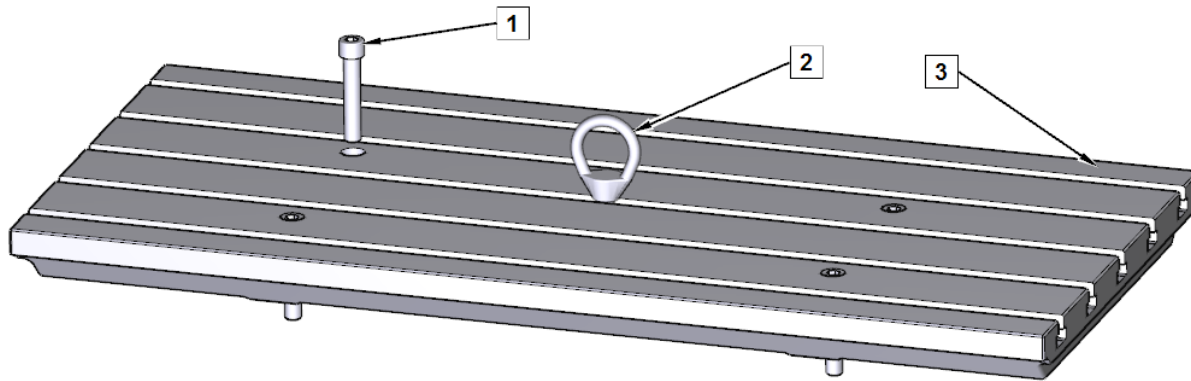


7241 Universal Economy Automotive Block Fixture

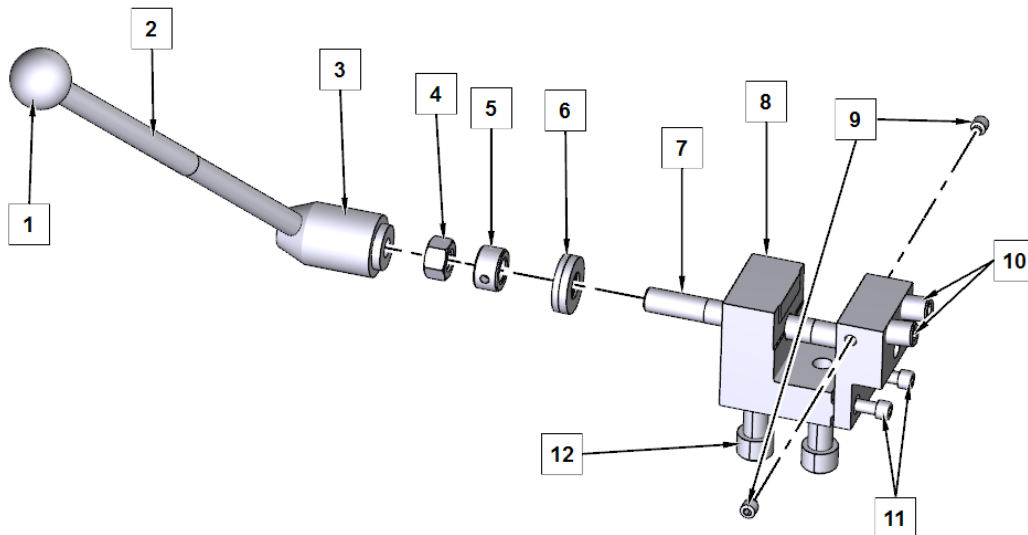


7243 Mid-size Diesel Block Fixture

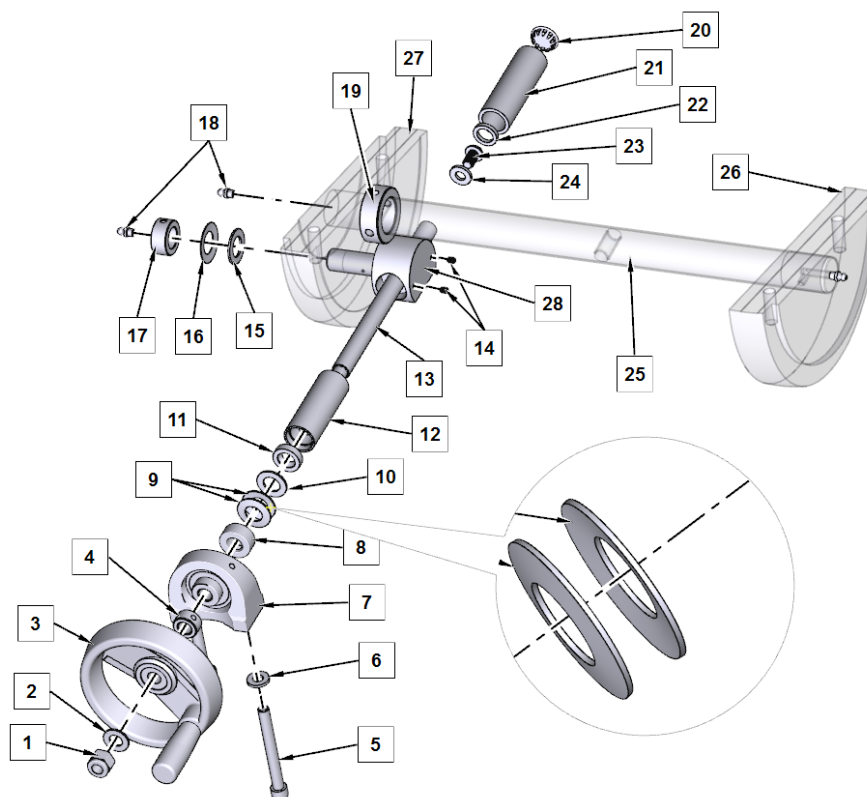
7209M Dual Axis Leveling Table**7209M Leveling Table Sections****Tensioner Assembly**



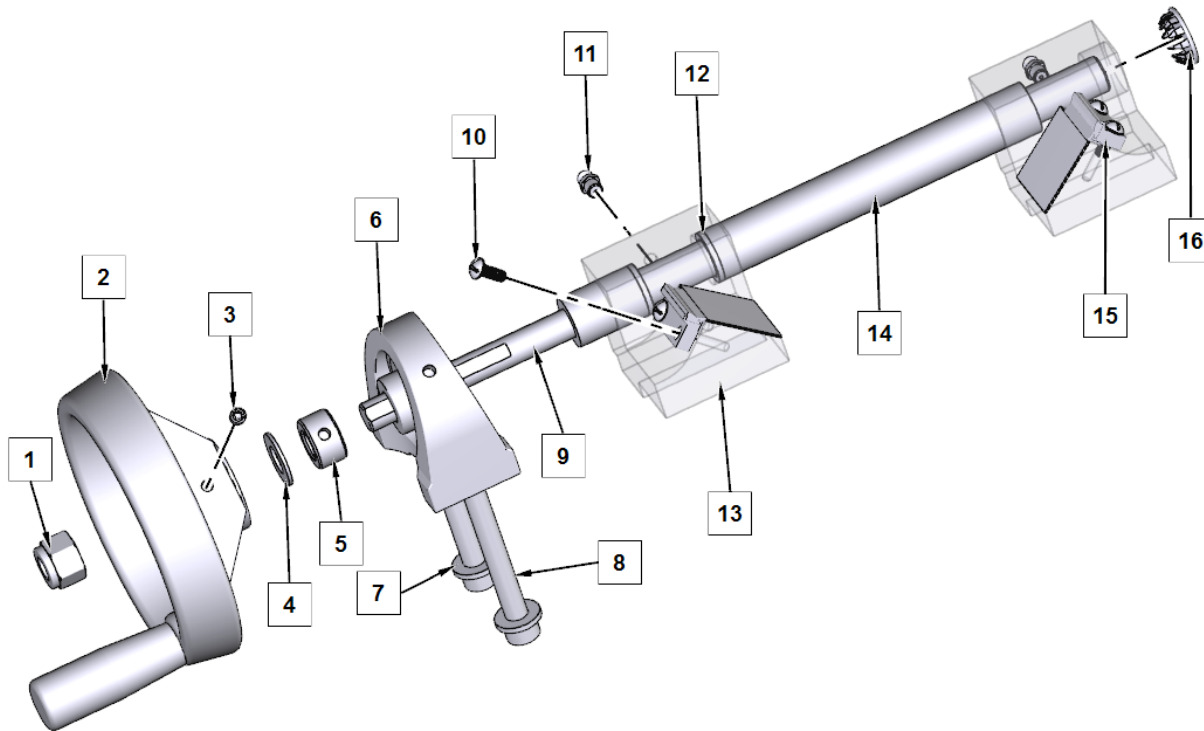
ITEM	QTY	PART NUMBER	DESCRIPTION
1	4	MF-45	SOCKET HEAD CAPSCREW, 1/2-13 X 2"
2	1	502-3-13	EYE, LIFTING
3	1	7207C	TABLE, DUAL AXIS HEAD FIXTURE



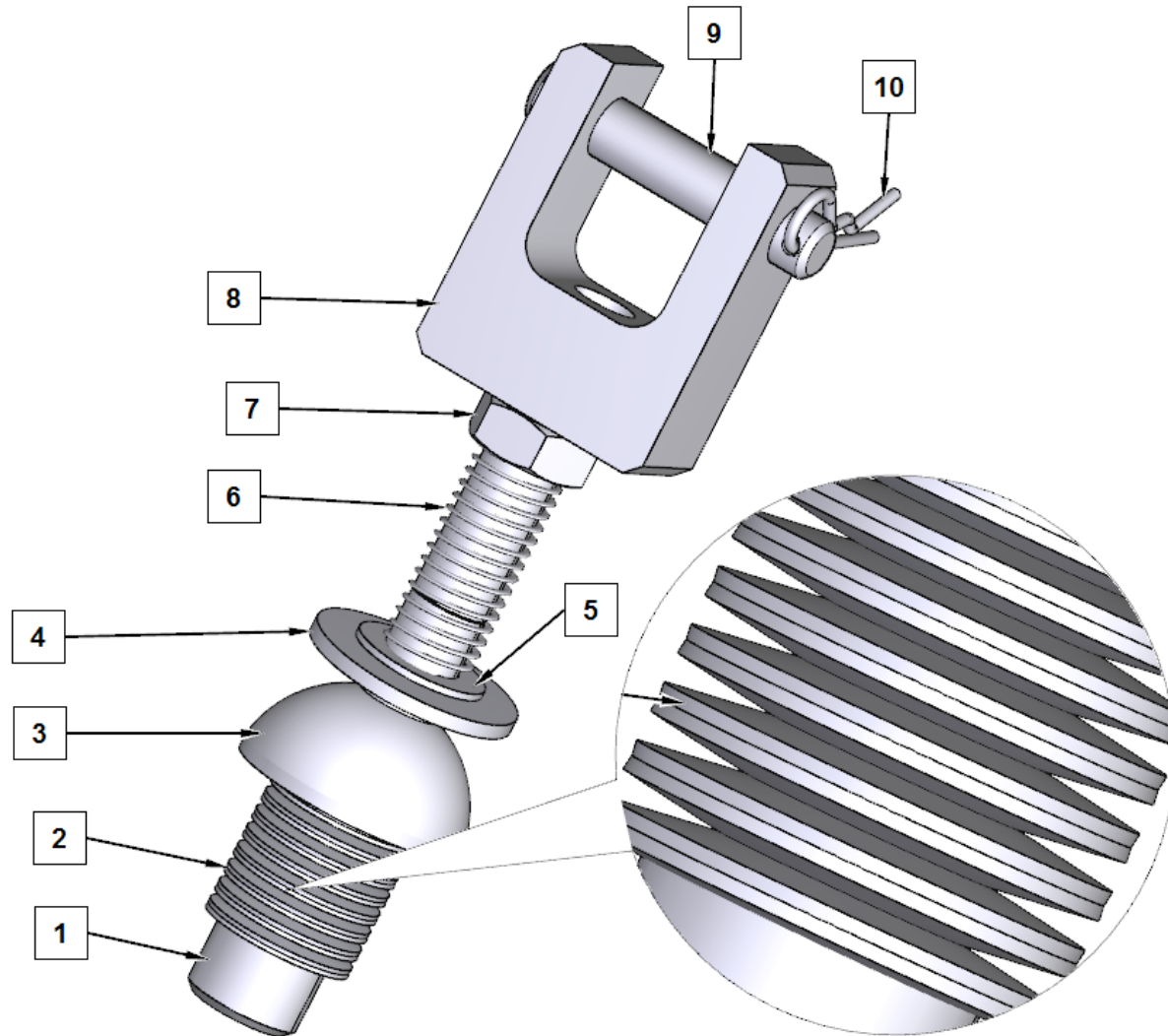
ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	514-2-39E	KNOB, ADJUSTABLE HANDLE
2	1	514-2-39B	EXTENDER, ADJUSTABLE HANDLE
3	1	514-2-39D	HANDLE, ADJUSTABLE – CLAMP STOP
4	1	MF-165	HEX NUT, 1/2-13
5	1	7209J	COLLAR, 1/2" SHAFT
6	1	7209E	WASHER, SPHERICAL
7	1	7207Z	SHAFT, JOURNAL CLAMP
8	1	7210J	CLAMP BLOCK, JOURNAL CLAMP
9	2	504-29-36	SCREW, SET – BRASS TIPPED 5/16-18 X 5/16"
10	2	7209B	SCREW, SET – BRASS TIPPED 1/2-20 X 3/4"
11	2	MF-12	SOCKET HEAD CAP SCREW, 1/4-20 X 1/2"
12	2	MF-45	SOCKET HEAD CAP SCREW, 1/2-13 X 2"



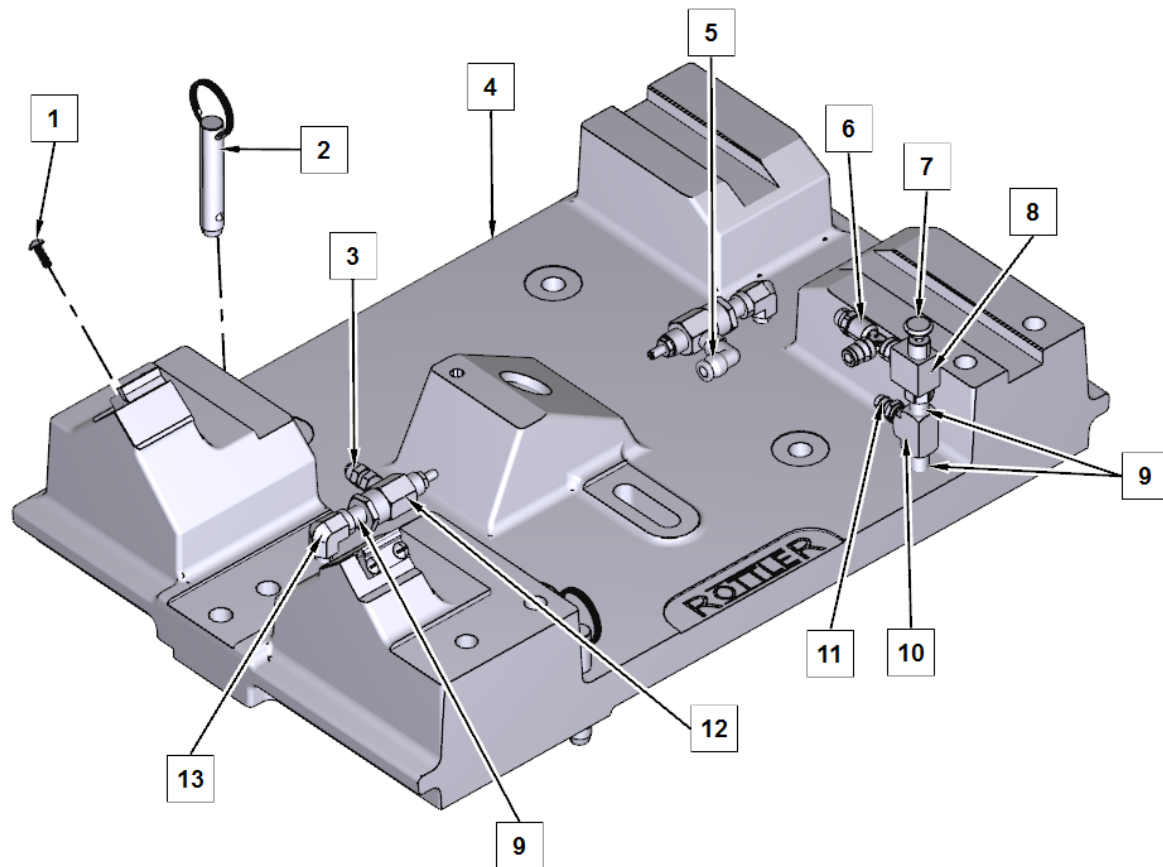
ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	MF-186	NYLOCK NUT, 1/2-13
2	1	100-19	WASHER, THRUST
3	1	7201M	HANDWHEEL
4	1	7209J	COLLAR, 1/2" SHAFT
5	2	MF-36A	SOCKET HEAD CAPSCREW, 3/8-16 X 3 1/2"
6	2	100-28-32	WASHER, 3/32" THICK
7	1	7201D	BLOCK, PILLOW, LEVEL ADJUST
8	1	7199E	COLLAR, SUPPORT BLOCK (5/8" DIA)
9	2	514-7-21	WASHER, BELLEVILLE
10	1	514-7-20	WASHER, THRUST
11	1	7209F	SEAL, PIVOT NUT TUBE
12	1	7201Y	TUBE, SEALED – PIVOT NUT
13	1	7209Q	SHAFT, FRONT/REAR TABLE TILT
14	2	MF-52	SOCKET SET SCREW, CUP POINT, #10-24 X 1/4"
15	1	514-2-90	WASHER, THRUST
16	1	7209K	WASHER, BELLEVILLE – PIVOT NUT
17	1	7201X	COLLAR, PIVOT NUT
18	2	MF-189	1/4-28 STRAIGHT LUBE GREASE FITTING
19	1	7207X	COLLAR, CLAMP BAR – 1 1/4"
20	1	506-3-1	PLUG, SNAP-IN HOLE – 7/8"
21	1	7201T	TUBE, CAPPED – PIVOT NUT
22	1	514-7-35	O-RING, LEVELING TABLE
23	1	MF-97	SOCKET BUTTON HEAD SCREW 3/8-16 X 5/8"
24	1	100-28-32	WASHER, 3/32"
25	1	7207V	BAR, CLAMP
26	1	7207J	JOURNAL, RIGHT
27	1	7207H	JOURNAL, LEFT



ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	MF-186	NYLOCK NUT, 1/2-13
2	1	7201M	HANDWHEEL
3	1	MF-60	SOCKET SET SCREW, CUP POINT, 1/4-20 X 1/4"
4	1	100-19	WASHER, THRUST
5	1	7209J	COLLAR, 1/2" SHAFT
6	1	7201D	BLOCK, PILLOW, LEVEL ADJUST
7	2	100-28-32	WASHER, 3/32" THICK
8	2	MF-36A	SOCKET HEAD CAPSCREW, 3/8-16 X 3 1/2"
9	1	7207M	SHAFT, LEFT/RIGHT TILT
10	1	MF-111	ROUND HEAD MACHINE SCREW, #10-24 X 1/2"
11	1	MF-189	1/4-28 STRAIGHT LUBE GREASE FITTING
12	1	7209H	BUMPER, LEFT/RIGHT PIVOT
13	1	7222	BLOCK, FRONT BEARING
14	1	7207N	COVER, LEFT/RIGHT TILT SHAFT
15	1	7198Y	WIPER, JOURNAL
16	1	506-3-1	PLUG, SNAP-IN HOLE - 7/8"



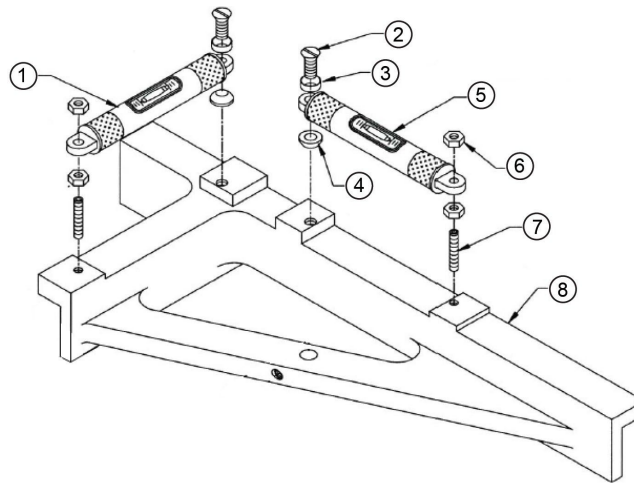
ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	7209W	SCREW, CLAMP BAR
2	16	514-7-21	WASHER, BELLEVILLE
3	1	7209U	WASHER, SPHERICAL – HOLD DOWN
4	1	MF-181	FLAT WASHER, 5/8"
5	1	514-7-20	WASHER, THRUST
6	1	100-28-20C	SPRING, HOLD DOWN
7	1	MF-173	HEX JAM NUT, 5/8-11
8	1	7209S	ROD END, CLAMP BAR
9	1	7210B	PIN, CLEVIS
10	1	7232K	HITCH PIN CLIP



ITEM	QTY	PART NUMBER	DESCRIPTION
1	4	MF-11	ROUND HEAD MACHINE SCREW, #10-24 X 1/2"
2	1	7201C	PIN, GUIDE, ROTTLER LEVELING TABLE
3	1	502-11-16E	CONNECTOR, MALE, 1/4 X 1/8" NPT
4	1	7233	FRAME, TABLE
5	1	514-4-17E	ELBOW, 90 DEGREE MALE – 1/4 X 1/8 NPT
6	1	514-4-17X	TEE, RUNNING 1/8 NPT X 1/4
7	1	502-1-56	PUSHBUTTON
8	1	514-2-65	VALVE, AIR – LIMIT & STOP
9	2	502-11-17J	NIPPLE, CLOSE 1/8" NPT
10	1	502-11-17C	TEE, 1/8 X 1/8
11	1	502-1-96A	INSERT, BARBED – HOSE
12	2	502-11-35A	VALVE, CONTROL – RFC FLOW
13	2	502-11-17R	ELBOW, ST, 1/8 NPTF X 1/8 NPTM

Auxiliary Equipment

7152Q Dual Axis Level



ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	7152	VIAL ONLY, LEVEL SF
2	2	7153G	SCREW, FLAT HEAD, #12-24, SURFACING LEVEL
3	2	7153Z	WASHER, LEVEL MOUNTING (COUNTERSUNK HEAD)
4	2	7153V	WASHER, LEVEL MOUNTING (RADIUS HEAD)
5	1	7152C	COMPLETED VIAL, LONGITUDINAL SF LEVEL ASS'Y
6	4	7153H	NUT, #12-24, HEAD SURFACING LEVEL
7	2	7153J	SCREW, SOCKET SET #12-24 X 1" SURFACING LEVEL
8	1	7153S	BASE, HEAD SURFACE LEVEL

201 Mitutoyo Surface Tester



502-9-9A Mechanical Run-out Indicator

503-14-11A Depth Indicator (Inch)

7038Y Flatness Probe Dial Indicator for Level Assembly

503-14-12A Depth Indicator (Metric)

502-12-4 General Purpose Magnetic Indicator Holder
