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SAFETY PRECAUTIONS

IN GENERAL

When using rotating head cutting equipment, basic safety precautions should always be followed to reduce the risk of personal injury.

Operate this tool only in accordance with specific operating instructions.

WARNING:

Do not override the deadman switch on the power unit. Locking down, obstructing, or in any way defeating the deadman switch on the power drive unit may result in serious injury.

DRESS CONSIDERATIONS

Use standard safety equipment. Hard hats, safety shoes, safety harnesses, protective clothes, and other safety devices should always be used when appropriate.

Use safety glasses. Do not operate cutting tools without eye protection.

Dress properly. Do not wear loose clothing or jewelry. They can be caught in rotating and moving parts. Avoid slippery floors or wear nonskid footwear. If you have long hair, wear protective hair covering to contain it.

WORK AREA

Keep the work area clean. Cluttered work areas and benches invite injuries.

Consider the work area environment. Keep the area well lit. Keep electrical cords, cables, rags, rigging straps, and etc. clear of rotating equipment. Do not use power-cutting tools in the presence of flammable liquids and gasses.

Keep visitors away. Do not let visitors or untrained personnel at or near operating tools. Enforce eye protection requirements for all observers.

Do not over reach. Keep proper footing at all times.

Stay alert. Watch what you are doing. Use common sense. Do not operate tools when you are tired.

TOOL CARE

Maintain tools with care. Keep tools in good operating condition. Sharp tool bits perform better and safer than dull tool bits. Well maintained tools function properly when needed.

Check for damaged parts. If a tool has malfunctioned, been dropped or hit, it must be checked for damage. Run no-load tests and feed function checks. Do a complete visual inspection.

Electric motors. Use only with proper AC voltage power sources and observe all normal electric shock hazard procedures.

Do not abuse power and control cords. Pulling or running over cords and cables can result in electrical shock hazards and malfunctions. Keep control and power cords out of all cutting fluids and water.

Hydraulic drives. Observe proper procedures for electrically driven power sources. Avoid damage to hydraulic lines. Keep quick-disconnects clean. Grit contamination causes malfunctions.

Air tools. Check the exhaust muffler. Broken or damaged mufflers can restrict air flow or cause excessive noise. Use air motors only with a filtered, lubricated and regulated air supply. Dirty air, low-pressure air or over pressure air will cause malfunctions, including delayed starting.

AREA EQUIPMENT

Secure work. Whenever possible use clamps, vises, chains and straps to secure pipe.

Make sure the tool is secured; it is safer to have both hands free to operate the tool.

TOOL USE

Use the right tool and tool bit for the job. Do not use a tool, which is incorrect for the job you are doing.

Keep the tool bits fully engaged in the tool bit holders. Loose bits are a safety hazard.

Model 204B, 208B and 214B EM Adjustable Pin Kits

Disconnect the power supply during setup and maintenance. Use all 'Stop' or 'Shut off' features available when changing or adjusting tool bits, maintaining the tool, or when the tool is not in use.

Remove adjusting keys and wrenches before applying power to the equipment. Develop a habit of checking the tool before turning it on to make sure that all keys and wrenches have been removed.

Do not force tools. Tools and tool bits function better and safer when used at the feed and speed rate for which they were designed.

Do not reach into rotating equipment. Do not reach into the rotating head stock to clear chips, to make adjustments, or to check surface finish. A machine designed to cut steel will not stop for a hand or an arm.

Handle chips with care. Chips have very sharp edges and are hot. Do not try to pull chips apart with your hands; they are very tough.

Avoid unintentional starts. Do not carry or handle tools with your hand on the operating switches or levers. Do not lay the tool down in a manner that will start the drive. Do not allow the tool to flip around or move when adjusting or changing tool bits.

Store idle tools properly. Disconnect tools from the power source and store in a safe place. Remove tool bits for safe handling of the tool.

GENERAL DESCRIPTION

The information contained in this manual should be used in conjunction with 'Operator's Manual' 92-0697, 92-1496, or 92-1502.

The Adjustable Centering Pin Kits are an accessory for the Model 204B, 208B and 214B EM (Elbow Mandrel).

The Adjustable Centering Pins adjust the Mandrel Assemblies centerline to the ID of the elbow.

SETUP AND OPERATION

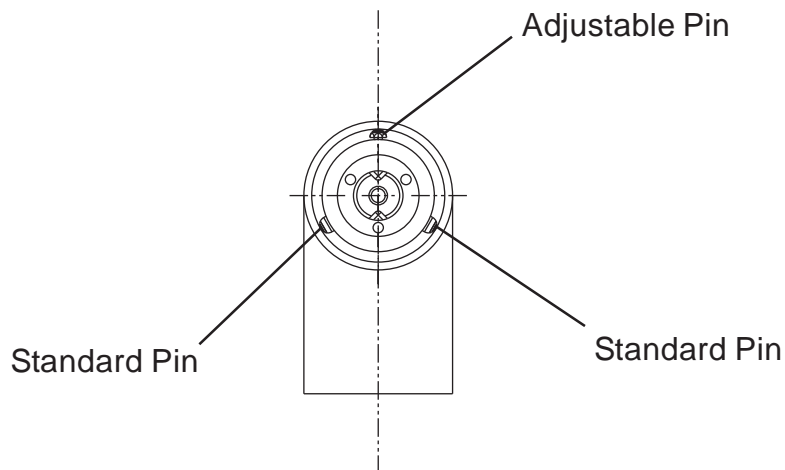
Always read the operating instructions carefully/completely before attempting to operate the Model 200 Series BEVELMASTER®.

SETUP

Remove the standard pin from the center head position and replace it with the correct adjustable pin for the job.

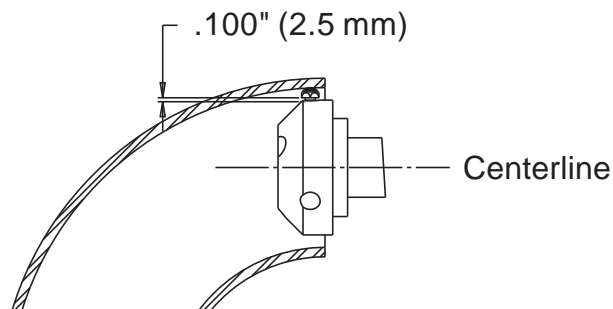
The two (2) bottom standard pins will stay the same.

Pin Locations to Centerline



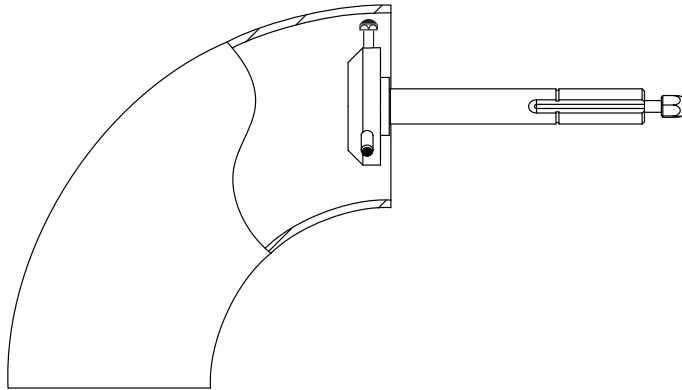
With the adjustable pin, the mandrel assemblies centerline can be adjusted up to .100" (2.5 mm).

Centerline Adjustment



Insert the Elbow Mandrel Assembly into the elbow of the pipe.

Mounting the ID of the Elbow



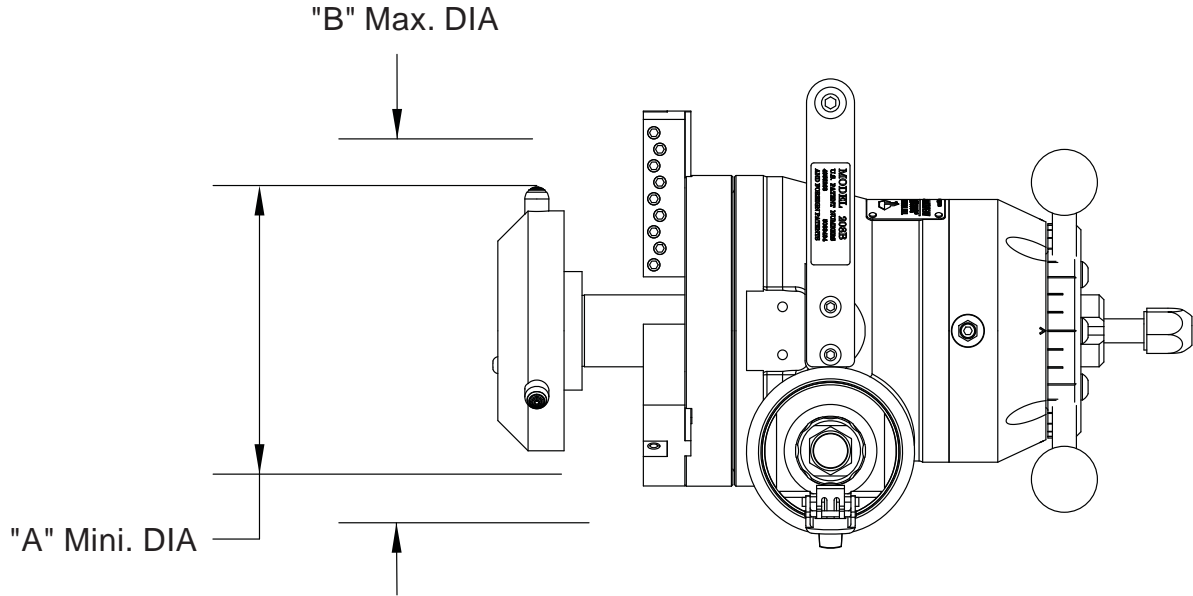
Adjust accordingly.

OPERATION

For the Model 200 Series operating instructions refer to the Models 204B, 208B and 214B EM (Elbow Mandrel) "Operator's Manual".

ID MOUNTING RANGE

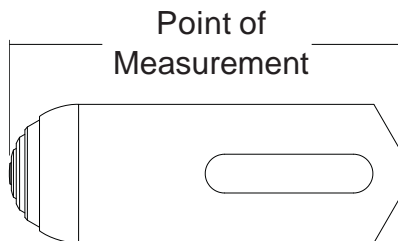
Minimum and Maximum ID Mounting Range



NOTE:

Correct Pin Length is important for rigidity. Use only the correct Contact Pins specified for each head size.

Pin Length



MODEL 204B				
Head Assy P/N	Contact Pin P/N	ID Mounting Range		Pin Length
		"A" DIA Minimum	"B" DIA Maximum	
21-0332	32-0372	1.55" (39.4 mm)	1.85" (47.0 mm)	.743" (18.9 mm)
	32-0373	1.84" (46.7 mm)	2.13" (54.1 mm)	.885" (22.5 mm)
	32-0374	2.12" (53.8 mm)	2.42" (61.5 mm)	1.028" (26.1 mm)
	32-0375	2.41" (61.2 mm)	2.70" (68.6 mm)	1.170" (29.7 mm)
21-0479	32-0376	2.69" (68.3 mm)	2.99" (75.9 mm)	1.313" (33.4 mm)
	32-0377	2.98" (75.7 mm)	3.27" (83.1 mm)	1.455" (37.0 mm)
	32-0378	3.26" (82.8 mm)	3.56" (90.4 mm)	1.598" (40.6 mm)
	32-0379	3.55" (90.2 mm)	3.87" (98.3 mm)	1.740" (44.2 mm)
	32-0498	3.88" (98.6 mm)	4.18" (106.2 mm)	1.893" (48.1 mm)
	32-0499	4.19" (106.4 mm)	4.50" (114.3 mm)	2.045" (51.9 mm)

Model 204B, 208B and 214B EM Adjustable Pin Kits

MODEL 208B				
Head Assy P/N	Contact Pin P/N	ID Mounting Range		Pin Length
		"A" DIA Minimum	"B" DIA Maximum	
06-0531	32-0294	1.63" (41.4 mm)	2.11" (53.6 mm)	.748" (19.0 mm)
	32-0295	2.11" (53.6 mm)	2.56" (65.0 mm)	.985" (25.0 mm)
21-0212*	32-0296	2.51" (63.8 mm)	2.98" (75.7 mm)	1.191" (30.3 mm)
	32-0297	2.98" (75.7 mm)	3.45" (87.6 mm)	1.427" (36.2 mm)
21-0213*	32-0298	3.40" (86.4 mm)	3.87" (98.3 mm)	1.634" (41.5 mm)
	32-0299	3.87" (98.3 mm)	4.34" (110.2 mm)	1.870" (47.5 mm)
21-0214*	32-0300	4.29" (109.0 mm)	4.76" (120.9 mm)	2.077" (52.8 mm)
	32-0301	4.76" (120.9 mm)	5.23" (132.8 mm)	2.313" (58.8 mm)
21-0215*	32-0302	5.17" (131.3 mm)	5.65" (143.5 mm)	2.520" (64.0 mm)
	32-0303	5.65" (143.5 mm)	6.12" (155.4 mm)	2.756" (70.0 mm)
21-0738*	32-0780	6.04" (153.4 mm)	6.53" (165.8 mm)	2.963" (75.3 mm)
	32-0781	6.51" (165.4 mm)	7.00" (177.8 mm)	3.200" (81.2 mm)
	32-0782	6.99" (177.5 mm)	7.48" (189.9 mm)	3.440" (87.4 mm)
	32-0783	7.47" (189.7 mm)	7.96" (202.1mm)	3.680" (93.5 mm)
	32-0784	7.91" (200.9 mm)	8.40" (213.3 mm)	3.900" (99.1 mm)

*These mandrel assemblies make up the Elbow Mandrel Kit (P/N 05-0605)

MODEL 214B				
Head Assy P/N	Contact Pin P/N	ID Mounting Range		Pin Length
		"A" DIA Minimum	"B" DIA Maximum	
21-0245	32-0318	3.31" (84.1 mm)	4.16" (105.7 mm)	1.575" (40.0 mm)
	32-0319	4.15" (105.4 mm)	5.06" (128.5 mm)	2.028" (51.5 mm)
	32-0320	5.06" (128.5 mm)	5.97" (151.6 mm)	2.481" (63.0 mm)
21-0246	32-0321	5.19" (131.8 mm)	6.82" (173.2 mm)	2.909" (73.9 mm)
	32-0322	6.82" (173.2 mm)	7.73" (196.3 mm)	3.362" (85.4 mm)
	32-0323	7.73" (196.3 mm)	8.64" (219.5 mm)	3.815" (96.9 mm)
	32-0324	8.64" (219.5 mm)	9.54" (242.3 mm)	4.268" (108.4 mm)
21-0247	32-0325	9.49" (241.0 mm)	10.39" (263.9 mm)	4.696" (119.3 mm)
	32-0326	10.40" (264.2 mm)	11.39" (289.3 mm)	5.149" (130.8 mm)
	32-0327	11.30" (287.0 mm)	12.21" (310.1 mm)	5.602" (142.3 mm)
	32-0328	12.21" (310.0 mm)	13.12" (333.2 mm)	6.055" (153.8 mm)

MAINTENANCE

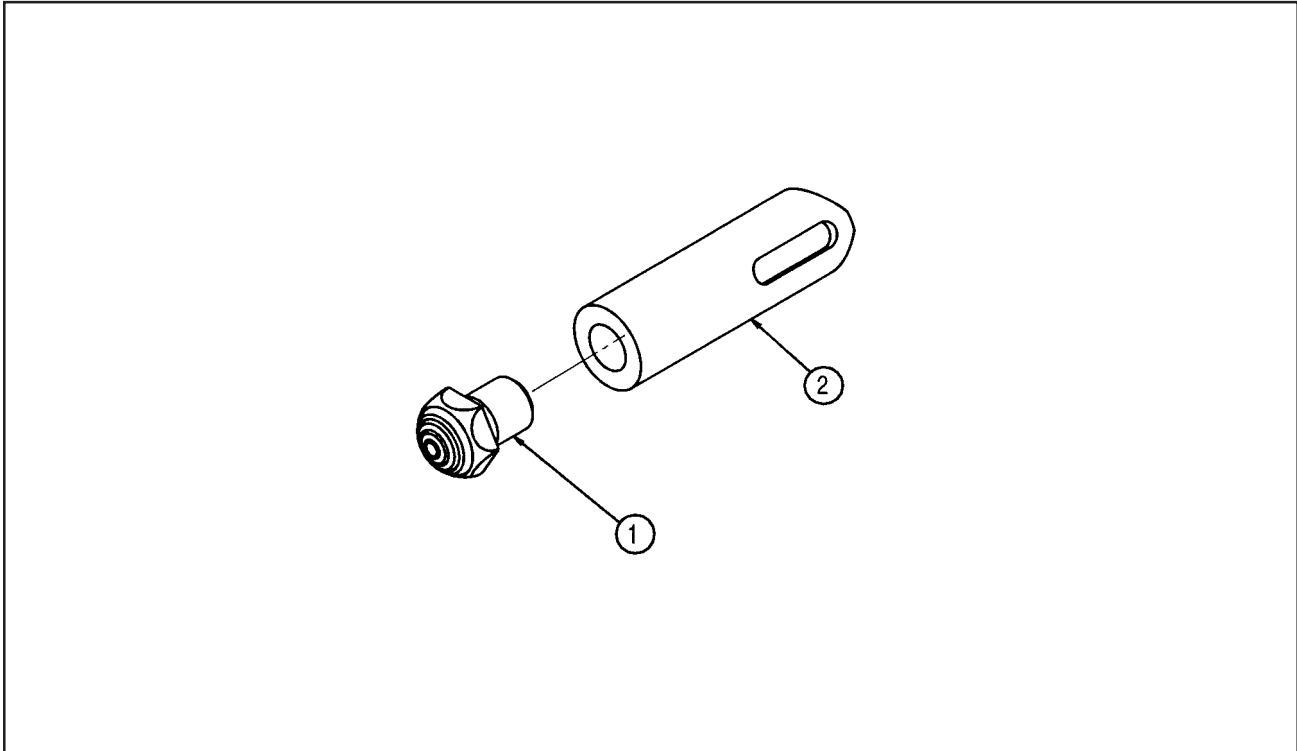
RECOMMENDED MAINTENANCE

Daily Before/After Operation

Clean and inspect for damage.

ILLUSTRATED PARTS BREAKDOWN

ADJUSTABLE CENTER PIN



Model 204B, 208B and 214B EM Adjustable Pin Kits

Parts List, Model 204B EM (P/N 05-0355)

Item No.	Part No.	Description	Qty
1.	21-0555	HEAD, CTR. PIN, 204B-EM	2
2.	32-0569	PIN, CTR., 3/8 DIA X .443" LG (11.3MM) <i>STANDARD PIN REF.: P/N 32-0372</i>	1
	32-0570	PIN, CTR., 3/8 DIA X .585" LG (14.9MM) <i>STANDARD PIN REF.: P/N 32-0373</i>	1
	32-0571	PIN, CTR., 3/8 DIA X .728" LG (19.9MM) <i>STANDARD PIN REF.: P/N 32-0374</i>	1
	32-0572	PIN, CTR., 3/8 DIA X .870" LG (22.1MM) <i>STANDARD PIN REF.: P/N 32-0375</i>	1
	32-0573	PIN, CTR., 3/8 DIA X 1.013" LG (25.7MM) <i>STANDARD PIN REF.: P/N 32-0376</i>	1
	32-0574	PIN, CTR., 3/8 DIA X 1.155" LG (29.3MM) <i>STANDARD PIN REF.: P/N 32-0377</i>	1
	32-0575	PIN, CTR., 3/8 DIA X 1.298" LG (33.0MM) <i>STANDARD PIN REF.: P/N 32-0378</i>	1
	32-0576	PIN, CTR., 3/8 DIA X 1.440" LG (36.2MM) <i>STANDARD PIN REF.: P/N 32-0379</i>	1
	32-0577	PIN, CTR., 3/8 DIA X 1.593" LG (40.5MM) <i>STANDARD PIN REF.: P/N 32-0498</i>	1
	32-0578	PIN, CTR., 3/8 DIA X 1.745" LG (44.3MM) <i>STANDARD PIN REF.: P/N 32-0499</i>	1
NOT SHOWN			
	36-0001	WRENCH,L, 1/16 HEX	1
	36-0189	WRENCH, COMBINATION, 5/16, STD	1

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Parts List, Model 208B EM (P/N 05-0609)

Item No.	Part No.	Description	Qty
1.	21-0556	HEAD, STR. PIN, 208B-EM	2
2.	32-0556	PIN, CTR., 1/2 DIA X .625" LG (15.9MM) <i>STANDARD PIN REF.: P/N 32-0295</i>	1
	32-0560	PIN, CTR., 1/2 DIA X .831" LG (21.1MM) <i>STANDARD PIN REF.: P/N 32-0296</i>	1
	32-0561	PIN, CTR., 1/2 DIA X 1.067" LG (27.1MM) <i>STANDARD PIN REF.: P/N 32- 0297</i>	1
	32-0562	PIN, CTR., 1/2 DIA X 1.274" LG (32.4MM) <i>STANDARD PIN REF.: P/N 32- 0298</i>	1
	32-0563	PIN, CTR., 1/2 DIA X 1.510" LG (38.4MM) <i>STANDARD PIN REF.: P/N 32- 0299</i>	1
	32-0564	PIN, CTR., 1/2 DIA X 1.717" LG (43.6MM) <i>STANDARD PIN REF.: P/N 32- 0300</i>	1
	32-0565	PIN, CTR., 1/2 DIA X 1.953" LG (49.7MM) <i>STANDARD PIN REF.: P/N 32- 0301</i>	1
	32-0566	PIN, CTR., 1/2 DIA X 2.160" LG (54.9MM) <i>STANDARD PIN REF.: P/N 32- 0302</i>	1
	32-0567	PIN, CTR., 1/2 DIA X 2.396" LG (60.9MM) <i>STANDARD PIN REF.: P/N 32- 0303</i>	1
	32-0878	PIN, CTR., 1/2 DIA X 2.603" LG (66.1MM) <i>STANDARD PIN REF.: P/N 32- 0780</i>	1
	32-0879	PIN, CTR., 1/2 DIA X 2.840" LG (72.1MM) <i>STANDARD PIN REF.: P/N 32- 0781</i>	1
	32-0880	PIN, CTR., 1/2 DIA X 3.080" LG (78.2MM) <i>STANDARD PIN REF.: P/N 32- 0782</i>	1
	32-0881	PIN, CTR., 1/2 DIA X 3.320" LG (84.3MM) <i>STANDARD PIN REF.: P/N 32- 0783</i>	1
	32-0882	PIN, CTR., 1/2 DIA X 3.540" LG (89.9MM) <i>STANDARD PIN REF.: P/N 32- 0784</i>	1
NOT SHOWN			
	36-0002	WRENCH,L, 5/64 HEX	1
	36-0003	WRENCH,L, 3/32 HEX	1
	36-0098	WRENCH,COMBINATION, 7/16	1

Model 204B, 208B and 214B EM Adjustable Pin Kits

Parts List, Model 214B EM (P/N 05-0357)

Item No.	Part No.	Description	Qty
1.	21-0557	HEAD, CTR. PIN, 214B-EM	2
2.	32-0580	PIN, CTR., 3/4 DIA X 1.090" LG (27.7MM) <i>STANDARD PIN REF.: P/N 32- 0318</i>	1
	32-0581	PIN, CTR., 3/4 DIA X 1.543" LG (39.2MM) <i>STANDARD PIN REF.: P/N 32- 0319</i>	1
	32-0582	PIN, CTR., 3/4 DIA X 1.996" LG (50.7MM) <i>STANDARD PIN REF.: P/N 32- 0320</i>	1
	32-0583	PIN, CTR., 3/4 DIA X 2.424" LG (61.6MM) <i>STANDARD PIN REF.: P/N 32- 0321</i>	1
	32-0584	PIN, CTR., 3/4 DIA X 2.877" LG (73.1MM) <i>STANDARD PIN REF.: P/N 32- 0322</i>	1
	32-0585	PIN, CTR., 3/4 DIA X 3.330" LG (84.6MM) <i>STANDARD PIN REF.: P/N 32- 0323</i>	1
	32-0586	PIN, CTR., 3/4 DIA X 3.783" LG (96.1MM) <i>STANDARD PIN REF.: P/N 32- 0324</i>	1
	32-0587	PIN, CTR., 3/4 DIA X 4.211" LG (107.0MM) <i>STANDARD PIN REF.: P/N 32- 0325</i>	1
	32-0588	PIN, CTR., 3/4 DIA X 4.664" LG (118.5MM) <i>STANDARD PIN REF.: P/N 32- 0326</i>	1
	32-0589	PIN, CTR., 3/4 DIA X 5.117" LG (130.0MM) <i>STANDARD PIN REF.: P/N 32- 0327</i>	1
	32-0590	PIN, CTR., 3/4 DIA X 5.570" LG (141.5MM) <i>STANDARD PIN REF.: P/N 32- 0328</i>	1
NOT SHOWN			
	36-0005	WRENCH,L,1/8 HEX	1
	36-0230	WRENCH,COMBINATION,5/8,STD	1