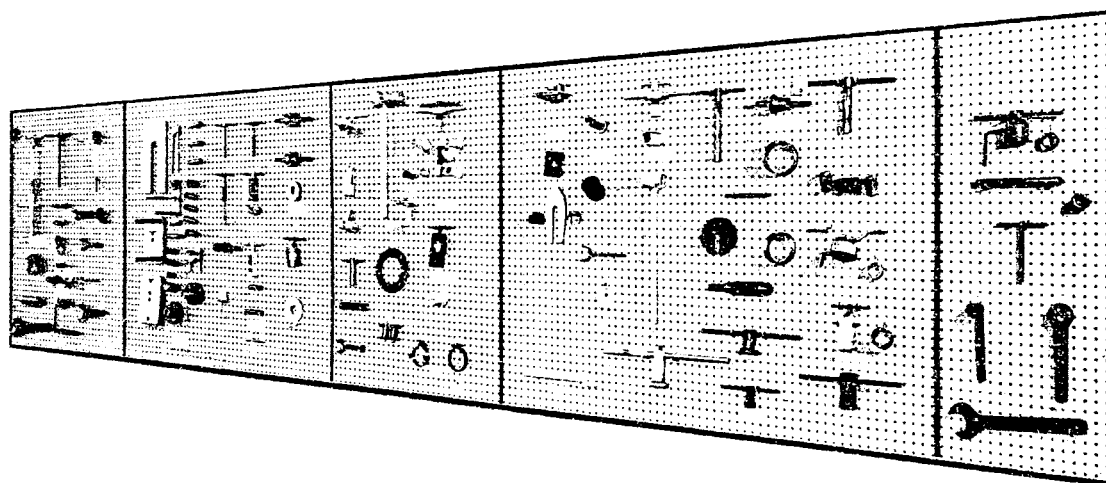


SPECIAL SERVICE TOOLS



This Service Bulletin lists all special tools used to service Harley-Davidson products. These are quality tools, specially designed and made for a specific job - either to save time, or because the service or repair operation cannot be done without special tools.

If your service shop performs any of the service operations as described for each tool in the following list, consider seriously obtaining the service tool listed, so that customer repairs can be made correctly to customer satisfaction, and quickly to increase service shop profits. Normally, the better equipment a shop has, the more profitably it operates.

The Harley-Davidson Service Manual refers to tools in this list by part number, and the manual also tells in detail how each tool is used to perform service operations.

For prices of tools listed in this bulletin supplied by Harley-Davidson, consult your latest Harley-Davidson price list.

NOTE

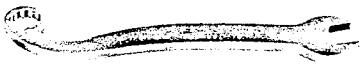



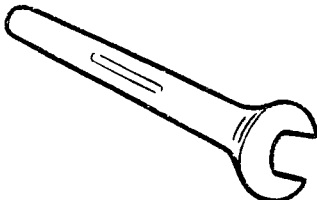




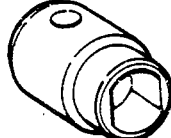
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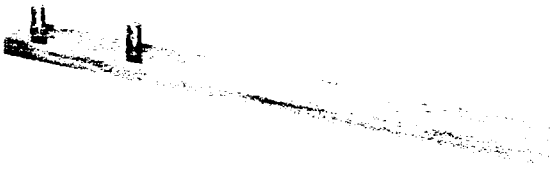
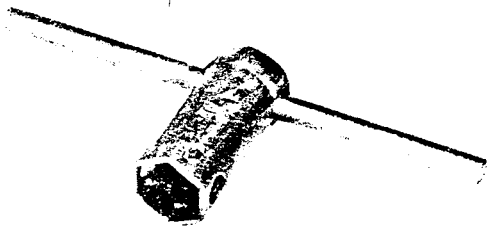



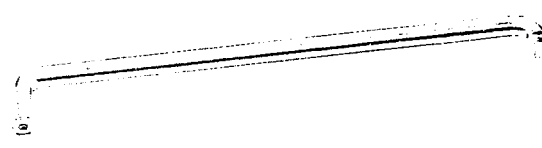
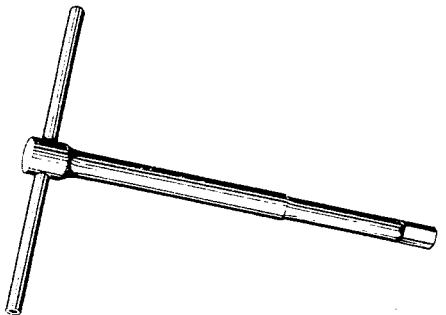
FL includes 74 OHV/FL, FLH, FLHB etc.
 XL includes 55 and 61 OHV/XL, XLH, XLCH, etc.
 G includes 45 SV/G, GA, GE, etc.
 K includes 45 SV/K, KR, etc.
 KH includes 55 SV/KH, KHRM etc.
 WL includes 45 SV/WL, WLA, etc.
 U includes 74 & 80 SV/U, UL, ULH.
 Y includes 398 and 440 Snowmobile
 SX applies to Sprint 350 cc only

All other model designations specifically apply to tools listed.

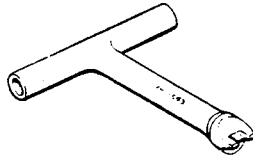
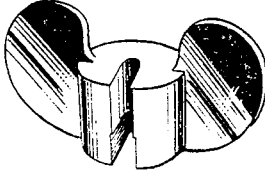
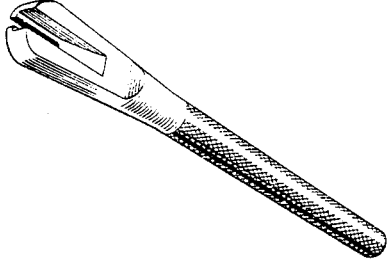
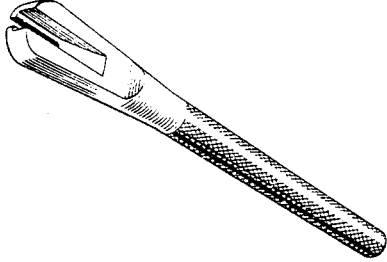
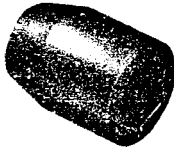
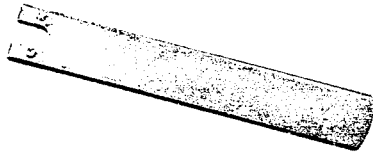
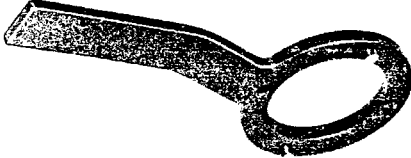
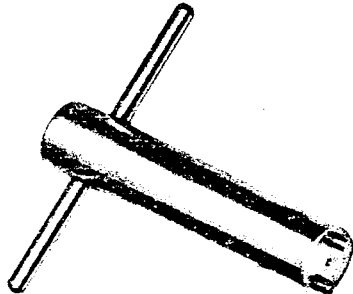
Tool "Part Number" is given for complete tool and includes individual parts listed under "Description".

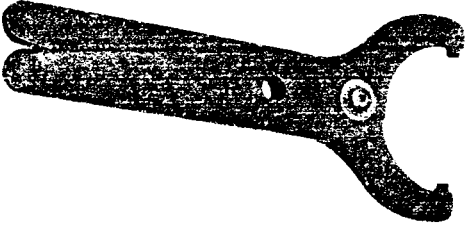
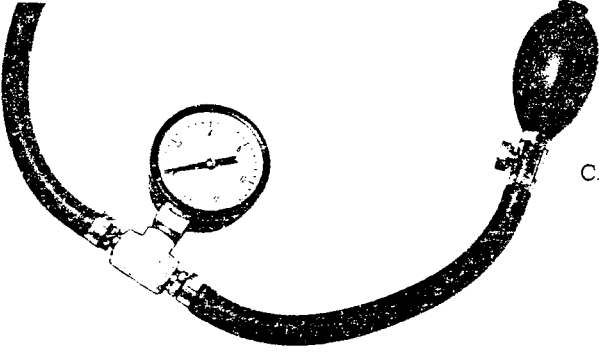
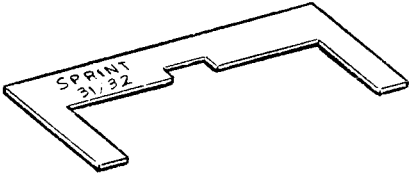

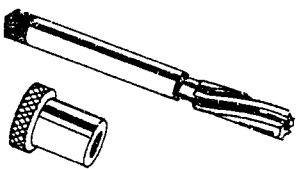


AMF HARLEY-DAVIDSON MOTOR CO., INC.

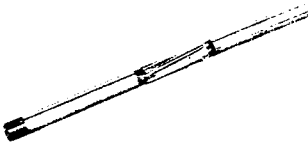
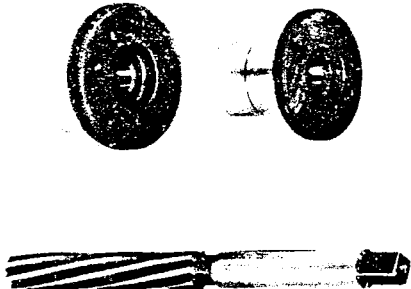
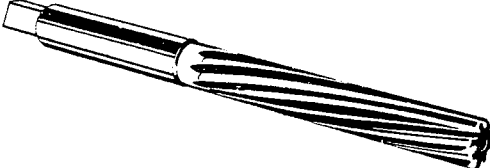
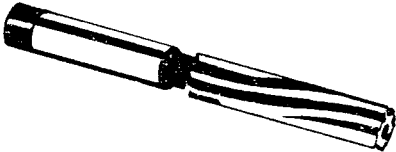

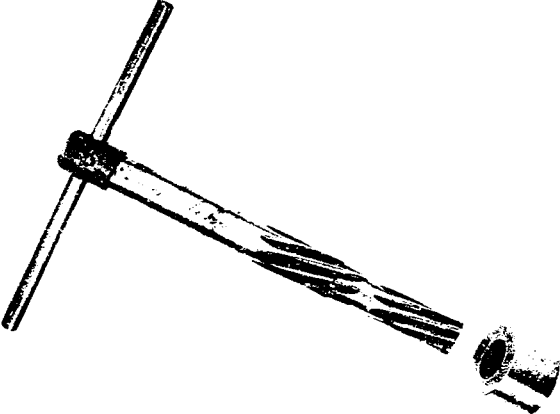
	Description	Part No.	Model
	CIRCUIT BREAKER WRENCH Used to tighten circuit breaker attaching bolts.	94501-56	FL (1965 & earlier)
	4MM SOCKET SCREW WRENCH 5MM SOCKET SCREW WRENCH 6MM SOCKET SCREW WRENCH 6MM SOCKET SCREW WRENCH For starter motor lower mounting bolt.	94510-73P 94511-64P 94512-64P 94512-71	TX, X, Z SS, SX SS, SX Y
	AXLE SLEEVE AND AXLE NUT WRENCH Fits axle sleeve nut and axle nut.	94519-30	FL, U
	VALVE COVER AND TAPPET WRENCH Large end fits valve cover - small end fits tappet.	94521-31	WL, G, KH
	SIDE CAR CONNECTION NUT WRENCH Fits 1-3/4 in. nuts.	94536-18	FL, U
	MANIFOLD NIPPLE WRENCH Fits 2 in. nuts.	94538-30	WL, G, FL, U
	MANIFOLD NIPPLE WRENCH Fits 2-1/8 in. nuts.	94538-40	FL, U, K
	FLYWHEEL SHAFT NUT WRENCH Fits 1-5/16 and 1-3/16 in. nuts.	94546-41	FL, XL, KH, U
	GEAR SHAFT NUT SOCKET WRENCH Fits pinion gear nut which secures pinion to gear shaft.	94555-55	FL (1955 & later)
	FORK DAMPER HOLDING SOCKET Used to keep ford damper tube from turning when removing socket screw.	94556-73	(1973 & later) XL, FX

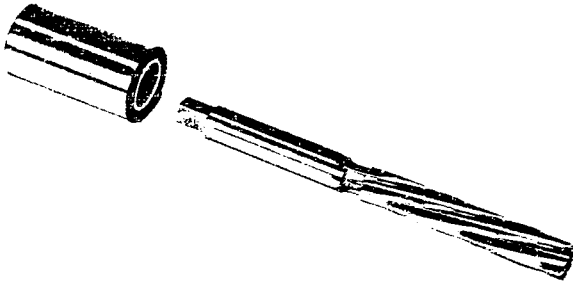
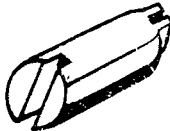




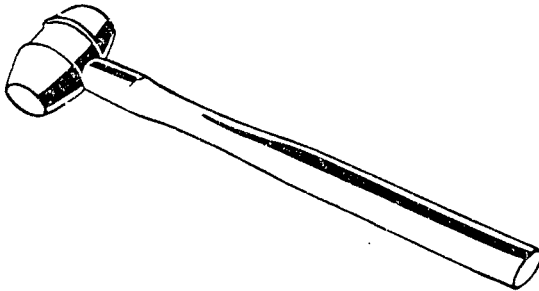
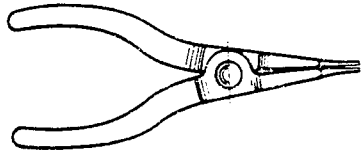
	Description	Part No.	Model
	<p>COMPENSATING SPROCKET SHAFT NUT WRENCH</p> <p>Pin spanner wrench for compensating sprocket shaft nut.</p>	<p>94557-55</p>	<p>FL (1955 & later), XL</p>
	<p>SPARK PLUG WRENCH</p> <p>Fits 14 mm. spark plugs.</p>	<p>94575-58A</p>	<p>All Models</p>
	<p>SOCKET WRENCH, 13/16</p> <p>For adjusting clutch.</p>	<p>94580-71</p>	<p>(1971 & later), XL</p>
	<p>CYLINDER BASE NUT WRENCH</p> <p>Fits 5/8 in. nuts.</p>	<p>94585-30</p>	<p>FL, U</p>
	<p>CYLINDER BASE NUT AND HEAD BOLT WRENCH</p> <p>Fits 9/16 in. nuts.</p>	<p>94589-29A</p>	<p>XL, WL, G, KH</p>
	<p>SOCKET HANDLE, CYLINDER HEAD BOLT</p> <p>3/8 square drive for use with standard socket.</p>	<p>94590-73</p>	<p>FL, XL, U, K, KH</p>
	<p>WHEEL LUG WRENCH</p> <p>For recessed head wheel lug screws.</p>	<p>94619-35</p>	<p>FL, G, U</p>


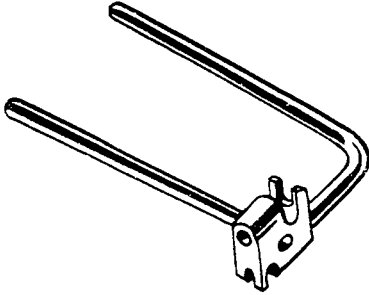
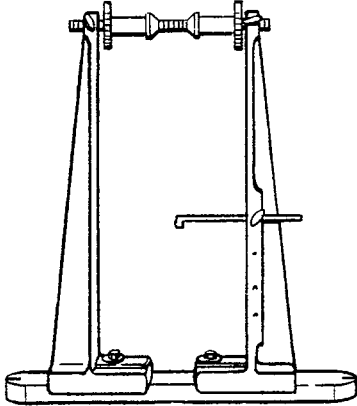
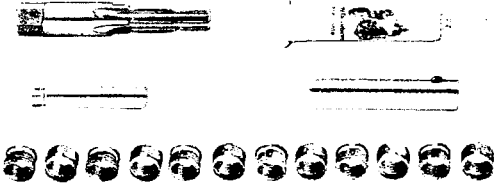
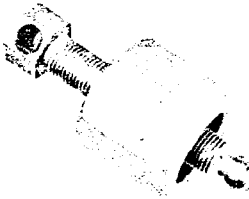
	Description	Part No.	Model
	<p>WHEEL BEARING LOCKNUT WRENCH</p> <p>Fits slotted wheel bearing locknut.</p>	94630-67	KH, XL, FL, G (1967 & later)
	<p>MAINSHAFT BALL BEARING LOCKNUT WRENCH</p> <p>Fits 1-13/32 in. hex.</p>	94635-41	FL, U (1940 & later)
	<p>FRONT CHAIN SHOE BOLT WRENCH</p> <p>For adjusting chain tension through chain cover access hole.</p>	94644-65	FL
	<p>CLUTCH HUB NUT WRENCH</p> <p>Fits clutch hub nut.</p>	94645-41	FL, WL, G, U
	<p>CLUTCH HUB NUT AND ENGINE SPROCKET LOCKNUT WRENCH</p> <p>Fits clutch hub nut and engine cushion sprocket locknut.</p>	94647-52	XL, K, KH
	<p>COUNTERSHAFT SPROCKET LOCKNUT WRENCH</p> <p>Fits countershaft sprocket locknut.</p>	94660-37	FL
	<p>STARTER CLUTCH TRIPPER BOLT NUT WRENCH</p> <p>Fits starter clutch tripper bolt nuts.</p>	94670-14	WL, G


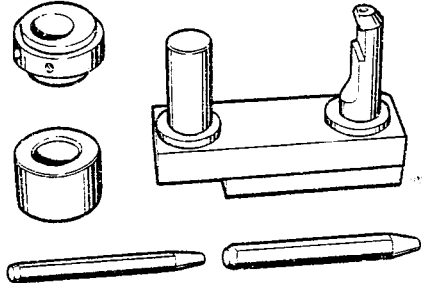
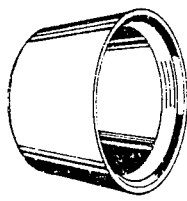
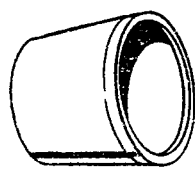
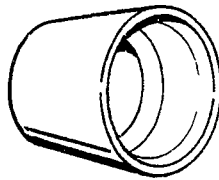
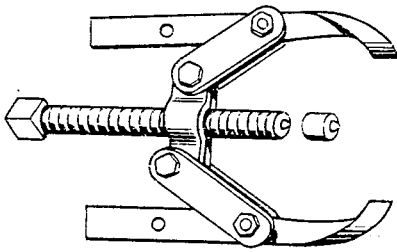
	Description	Part No.	Model
	CLUTCH SPRING NUT WRENCH	94670-66P	(1969 & later) SS, SX
	SPOKE NIPPLE WRENCH For small wheel spoke nipples (.205 in. across flats).	94678-18	XL, WL, K, KH, B, BT, S, ST
	SPOKE NIPPLE WRENCH For wheel spoke nipples (.234 and .165 in. across flats).	94681-39	FL, XL, G, U, K, KH, M, X, Z
	SPOKE NIPPLE WRENCH For wheel spoke nipples (.226 in. across flats).	94682-61	C, H, SS, SX, ML, TX
	TRANSMISSION MOUNTING NUT SOCKET Fits FL transmission mounting nut. Use with 7/16 in. hex wrench handle, part no. 94621-35.	94687-63	FL (1964)
	FORK PISTON ROD BUSHING SPANNER WRENCH Used to remove 1967 & earlier fork piston rod bushing from fork damper tube.	94691-52	XL, K, KH
	STARTER-GENERATOR ROTOR HOLDING TOOL Keeps crankshaft from turning while removing or installing nut, etc.	94692-63	D (1966 & earlier), DC
	FORK PISTON ROD RETAINER WRENCH Used to remove fork piston rod retainer from fork tube.	94694-52	XL, K, KH (1967 & earlier)

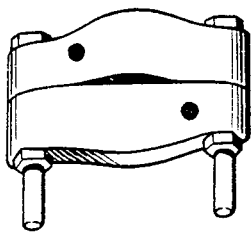
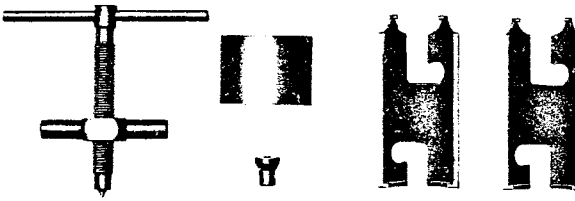
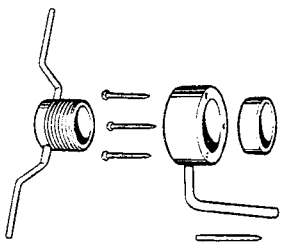
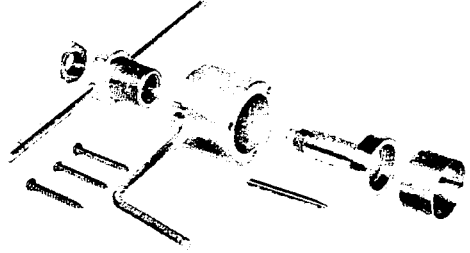
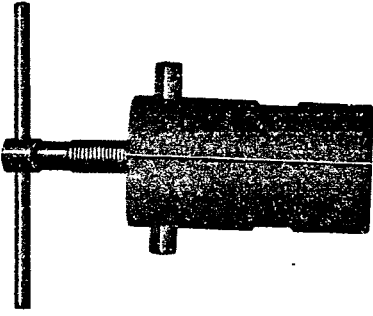
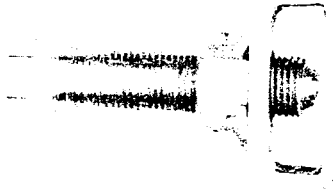
	Description	Part No.	Model
	<p>SHOCK ABSORBER SPANNER WRENCH</p> <p>Used to adjust shock absorbers for more or less spring compression.</p>	94700-52B	(1966 & earlier) FL, XL, K, KH
		94700-65	(1967 & later) FL, XL
	<p>CARBURETOR LEAKAGE TESTER</p> <p>Used to check inlet valve and internal leakage.</p>	94750-68	FL, XL, D
	<p>CARBURETOR FLOAT GAGE, 31/32</p> <p>Used to measure float gage setting, 350 cc SS/SX.</p>	94751-69	(1969 & later) SS, SX
	<p>EXPANSION REAMER</p> <p>Used for reaming pistons and upper connecting rod bushings.</p>	94800-26	FL, XL, G, U
	<p>PINION SHAFT BUSHING REAMER WITH PILOT</p> <p>Used to line ream replacement crankshaft end bushing in support housing.</p>	94801-64	C, H, SS, SX
	<p>CAM GEAR SHAFT BUSHING REAMER</p> <p>Used to fit cam gear shaft bushings.</p>	94802-36A	FL
	<p>REAR INTAKE CAMSHAFT COVER BUSHING REAMER (1.125 DIA.)</p> <p>For reaming timer shaft bushings in gear case cover.</p>	94803-67	XL, G

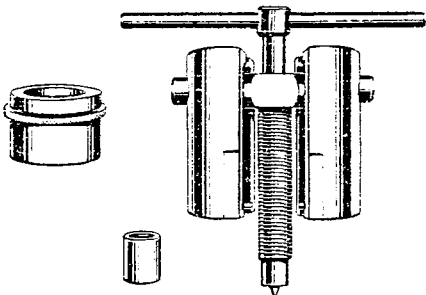
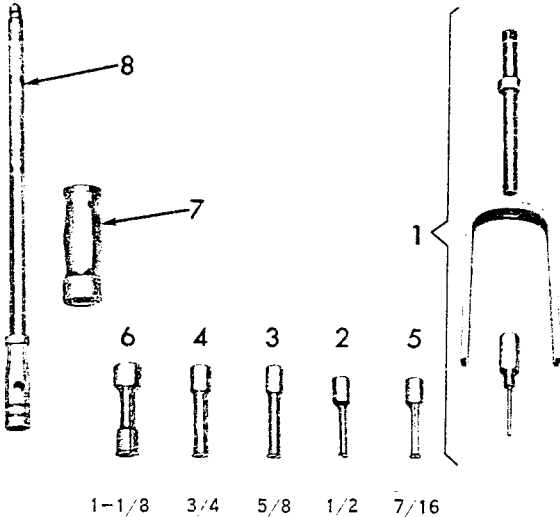
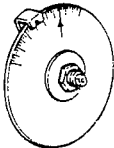

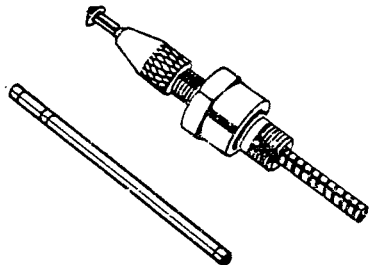
	Description	Part No.	Model
	ROCKER ARM BUSHING REAMER	94804-57	FL, XL
<p>Used to line ream replacement rocker arm bushings to size.</p>			
	PINION SHAFT BUSHING REAMER AND PILOTS	94805-57	FL (1964 & later), XL
<p>Used to size pinion shaft gear case cover bushing on FL and idler gear bushing on XL. 94806-57 9/16 in. reamer 94815-58 reamer pilot (1968 & later - FL)</p>			
	SPROCKET GEAR BUSHING REAMER	94806-63	C, H, SS, SX
<p>Used for reaming sprocket gear bushings.</p>			
	TRANSMISSION GEAR BUSHING REAMER	94806-64	C, H, SS, SX
<p>Used to size bushings in mainshaft 3rd gear and countershaft 1st and 2nd gears.</p>			
	PISTON PIN BUSHING EXPANSION REAMER	94810-65	C, H, SS, SX
<p>Used to ream connecting rod bushings (18 mm.).</p>			
	OILER AND PINION SHAFT BUSHING REAMER	94811-36	FL, WL, G, U
<p>Lower end used to ream pinion shaft bushings on FL. Upper half used to ream oiler shaft bushings on WL, G, U.</p>			

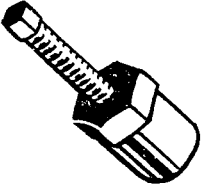
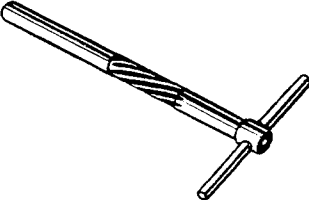
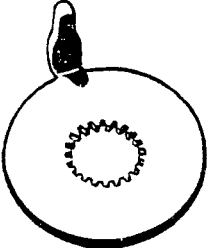
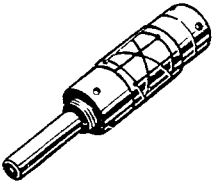
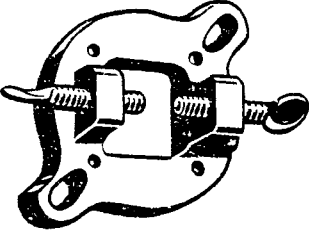
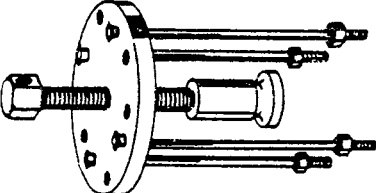
	Description	Part No.	Model
	<p>PINION SHAFT BUSHING REAMER</p> <p>Used to ream pinion shaft cover bushings.</p>	94812-37A	XL, KH, G, WL
	<p>CARBURETOR INLET SEAT TOOL</p> <p>Adapter used with screwdriver to remove carburetor inlet seat.</p>	94816-62	G, AH
	<p>CLUTCH GEAR REAMER</p> <p>Used to ream clutch gear bushing.</p>	94829-42	XL, WL, G
	<p>VALVE GUIDE REAMER</p>	94830-26	G
	<p>RAWHIDE MALLET</p>	95003-16	All Models
	<p>RAWHIDE ENDS (PAIR)</p>	95004-16	All Models
	<p>COPPER HAMMER</p> <p>For truing flywheels and for heavy blows without damage to steel surfaces.</p>	95007-16	All Models
	<p>EXTERNAL LOCK RING PLIERS</p> <p>Special pliers for replacing external type lock rings.</p>	95017-61	XL, C, H, SS, SX

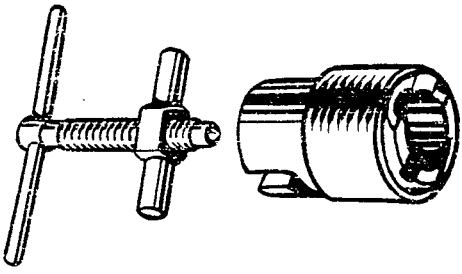
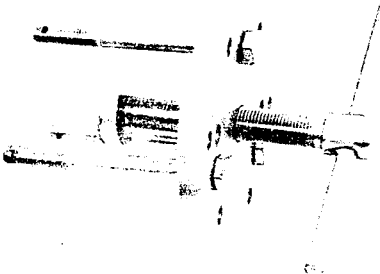
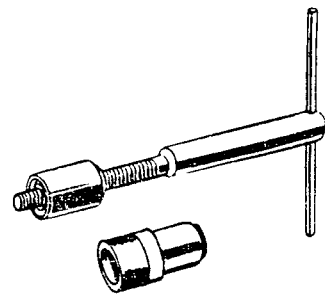
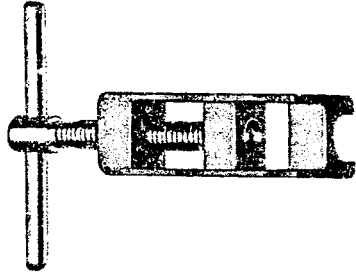
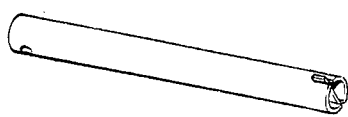
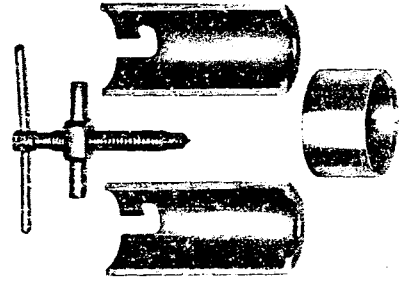
	Description	Part No.	Model
	<p>REAR CHAIN CONNECTING LINK PRESS TOOL</p>	95020-66	FL, XL, G
<p>Used to install press fit link side plate.</p>			
	CHAIN TOOL	95021-29	All Models
<p>Removes front and rear chain links from all chains. 95028-46 Chain tool screw</p>			
	WHEEL TRUING STAND	95500-29A	All Models
<p>Adjustable stand for truing spoked wheels. Includes arbor. 95515-30A Arbor for wheels of all models. (Can be used to convert old stand 95500-29).</p>			
<p>95522-68 Collar for 1968 and later FL/FLH, GE ball bearing type wheel hub.</p>			
	SPARK PLUG PORT REPAIR KIT	95540-71	All Models
<p>Kit is used to retap damaged spark plug threads and install new insert in cylinder head.</p>			
	TRANSMISSION ACCESS COVER PULLER	95560-57	XL
<p>Screws onto clutch gear end and pulls access cover which is press fit on two dowels.</p>			

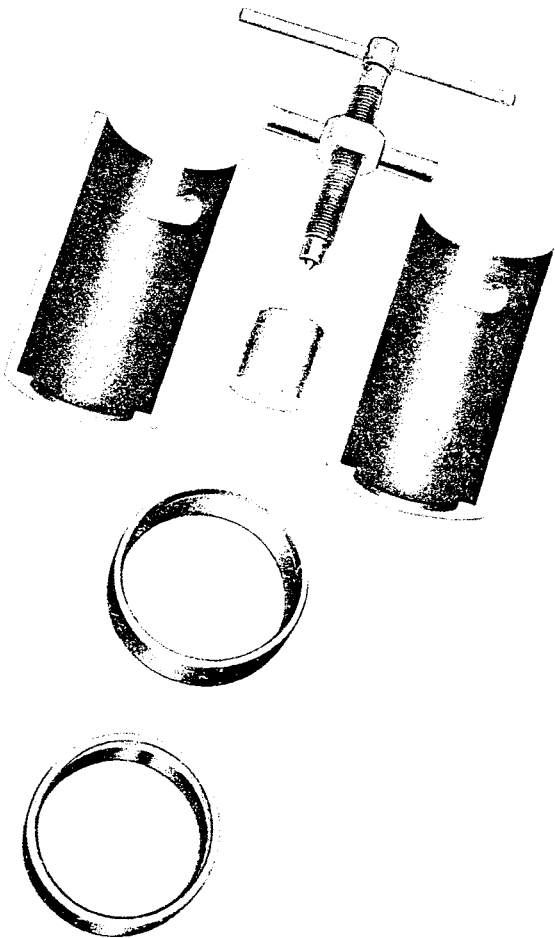
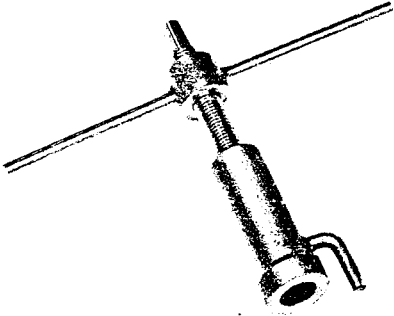
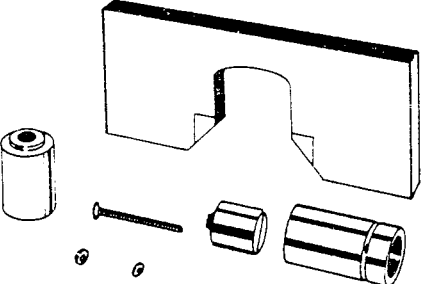
	Description	Part No.	Model
	<p>STARTER-GENERATOR ROTOR PULLER</p> <p>Used to pull rotor from crankshaft taper.</p>	95563-63	D (1966 & earlier), DC
	<p>SPROCKET RIVETING SET</p> <p>Used to rivet rear wheel sprocket to brake drum.</p> <p>95609-33A - Rivet anvil 95612-42 - Rivet set 95613-42 - Rivet punch 95619-58A - Support - fits late ball bearing wheels.</p>	95600-33B	FL, XL, K, SV
	<p>GENERATOR OIL SEAL SLEEVE</p> <p>Tapered tool leads lip of oil seal over sharp edge on crankshaft.</p>	95629-63	(1968 & earlier) C, H, SS
	<p>OIL SEAL INSTALLING SLEEVE</p> <p>Tapered tool leads lip of starter-generator oil seal over sharp edge on crankshaft.</p>	95630-63	D (1966 & earlier), DC
	<p>CAMSHAFT OIL SEAL INSTALLING SLEEVE</p> <p>Tapered tool leads lip of camshaft oil seal over sharp edge on crankshaft.</p>	95631-61	(1970 & earlier) C, H, SS, SX
	<p>ALL-PURPOSE CLAW PULLER</p> <p>For many uses, such as pulling FL mainshaft bearing, starter crank gears, clutch release cover, mainshaft gears, etc.</p> <p>95636-46 Shaft center</p>	95635-46	All Models

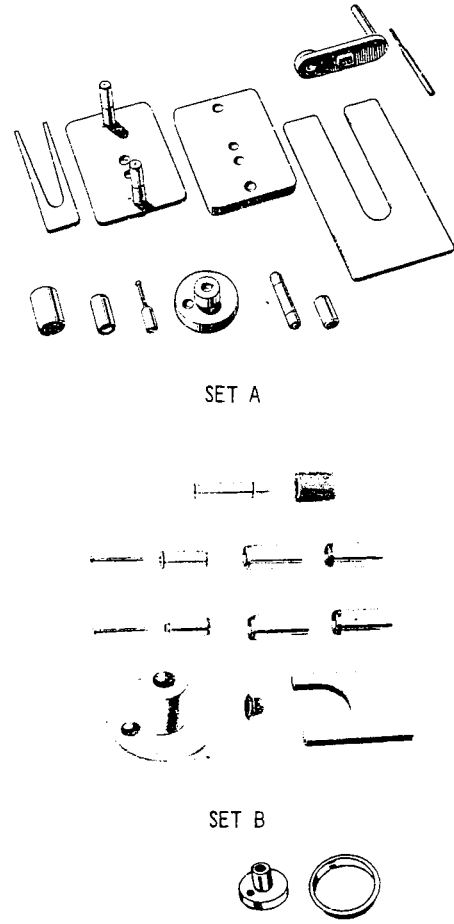

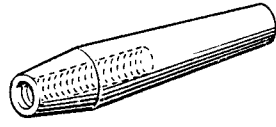
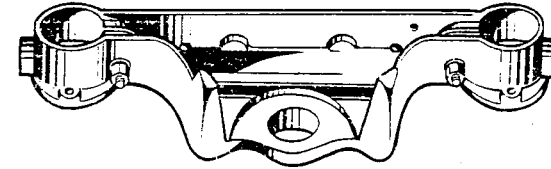
	Description	Part No.	Model
	<p>WEDGE ATTACHMENT FOR CLAW PULLER</p> <p>Used with claw puller for close fitting gears or bearings.</p>	<p>95637-46</p>	<p>All Models</p>
	<p>MAINSHAFT STARTER CLUTCH AND BEARING PULLER</p> <p>One end used to remove mainshaft starter clutch, other end for pulling mainshaft ball bearing. 95652-43A Cup center</p>	<p>95650-42</p>	<p>FL, U</p>
	<p>MAIN DRIVE GEAR OIL SEAL TOOL</p> <p>Used to remove and install main drive gear oil seal. 95671-42 - Screw 95666-42A - Sleeve Sleeve is used with tool to remove and install clutch gear oil seal on electra glide mainshaft.</p>	<p>95660-42</p>	<p>FL, U</p>
	<p>CLUTCH GEAR OIL SEAL TOOL</p> <p>Used to remove and install clutch gear oil seal. 95671-42 Screw</p>	<p>95685-42</p>	<p>G, WL</p>
	<p>GEAR PULLER</p> <p>Removes generator drive gears.</p>	<p>95715-19A</p>	<p>FL, XL, G</p>
	<p>TAPPET GUIDE PULLER</p> <p>Removes tappet guides from crankcase after tappet body adjusting screw is removed.</p>	<p>95724-57</p>	<p>XL</p>


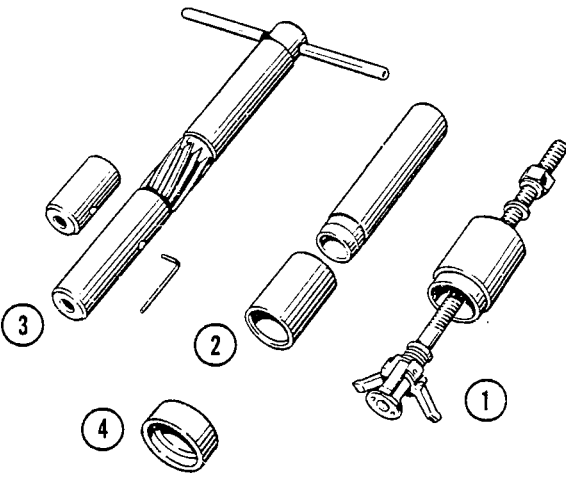
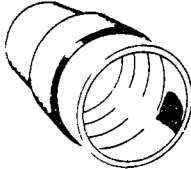
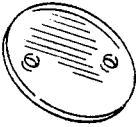
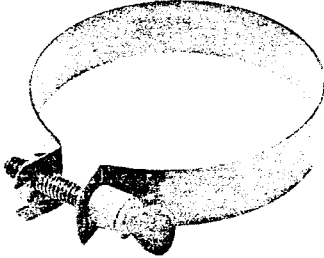
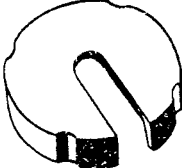
	Description	Part No.	Model
	<p>TAPPET GUIDE PULLER</p> <p>Removes tappet guides.</p>	95727-38	WL, K, KH
 <p>1-1/8 3/4 5/8 1/2 7/16</p>	<p>BUSHING & BEARING PULLER</p> <p>For removing bushings and bearings.</p> <p>Puller Tool Set (Includes items 1, 2, 3, and 4). Items 5 (95768-69), 6 (95769-69), 7 (95770-69) and 8 (95771-69) are optional extras.</p>	95760-69	All Models
	<p>CRANKSHAFT DEGREE INDICATOR PLATE</p> <p>Used for timing ignition with strobe timing light when engine is running. Plate attaches to generator shaft.</p>	95860-67P	(1972 & earlier) H, SS
	<p>BRAKE PEDAL LOCKING TOOL</p> <p>Locks hydraulic rear brake pedal in depressed position while removing wheel.</p>	95875-58	FL
	<p>IGNITION TIMING GAGES</p> <p>Gage indicates correct piston position for setting ignition timing.</p> <p>95886-61 - Rod only (FL) 95886-62 - Rod only (AH) 95886-63 - Rod only (C, H) 95886-67 - Rod only (H, SS) 95888-63 - Rod only (BT)</p> <p>Note: All rods are interchangeable in gage assembly.</p>	95882-63 95883-63 95883-67 95885-61 95885-62	BT C, H H, SS FL AH

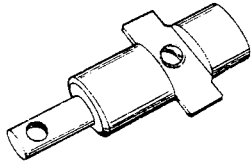
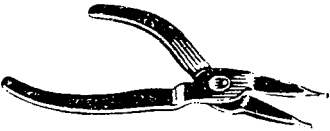
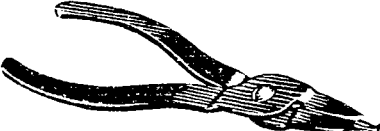
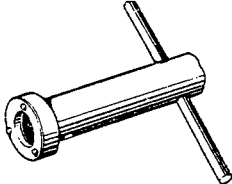


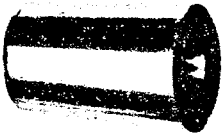
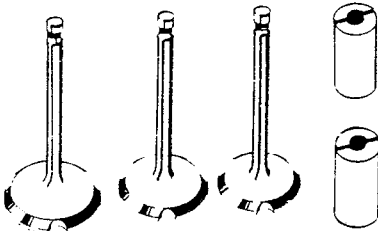
	Description	Part No.	Model
	ENGINE SPROCKET PULLER Used to pull threaded engine sprocket.	95910-48	S, ST, B
	MAIN DRIVE AND COUNTERSHAFT GEAR BUSHING REAMER Used on main drive gear bushing and for line reaming countershaft bushing.	95924-48	S, ST, B
	CLUTCH LOCK PLATE Holds clutch shell from turning while removing engine sprocket, clutch hub and rear chain front sprocket nut.	95930-48	S, ST B, BT
	CONNECTING ROD LAP Used to lap races when standard or oversize rollers are fitted to new or worn connecting rod crank-pin bearing races. 95944-48 - Lap only	95935-48	S, ST B, BT
	CONNECTING ROD CLAMPING TOOL Holds connecting rod when fitting piston pin bushing.	95952-33	FL, XL, G
	CLUTCH HUB AND CHAIN HOUSING PULLER Pulls clutch hub. With studs pulls Electra-Glide inner chain housing from mainshaft.	95960-41A	FL

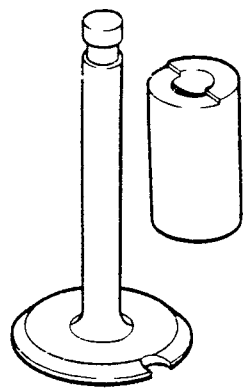
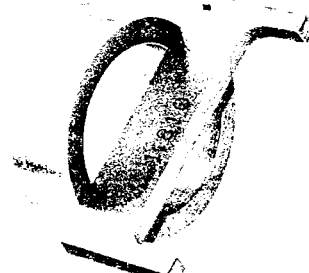
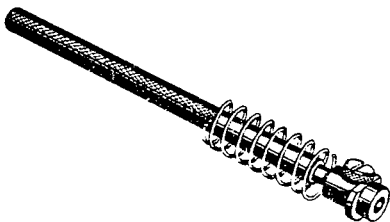
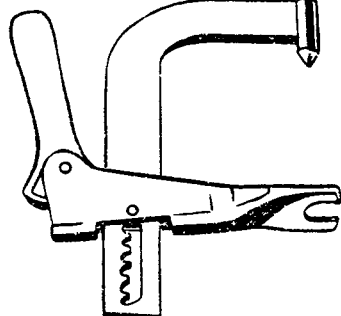
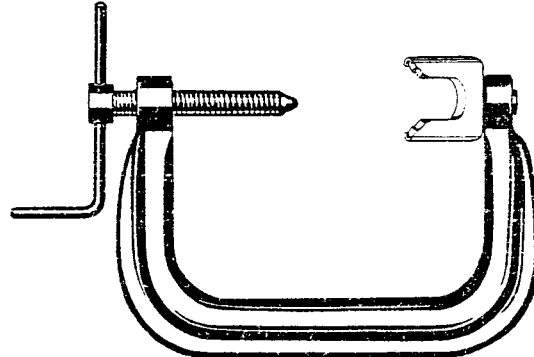
	Description	Part No.	Model
	<p>CLUTCH HUB PULLER</p> <p>Used to pull clutch hub from mainshaft.</p>	95960-48	S, ST B, BT
	<p>CLUTCH HUB AND ALTERNATOR PULLER</p> <p>Used to pull clutch hub from clutch gear spline on Sportster and Alternator Rotor on 1970 & later Electra Glide</p>	95960-52A	XL, K, KH FL, FLH (1970 & later)
	<p>PISTON PIN BUSHING TOOL</p> <p>Used to remove and replace piston pin bushings without removing connecting rod from crankcase.</p> <p>95986-32A Knurled nut (for thin bushings) 95987-61 Nut (C, H, SS)</p>	95970-32A	FL, XL, KH, G, C, H, SS, SX
	<p>PISTON PIN NEEDLE ROLLER BEARING TOOL</p> <p>Used to press piston pin needle roller bearing in or out of connecting rod.</p>	95971-52	S, ST B, BT
	<p>FORK DAMPER HOLDING TOOL</p> <p>Used to keep fork damper tube from turning when removing nut.</p>	95991-69	(1968-72) XLH- XLCH
	<p>SPROCKET SHAFT TIMKEN BEARING INNER RACE PULLER</p> <p>Fits between sprocket shaft inner race and flywheel.</p>	96015-52	XL, K, KH

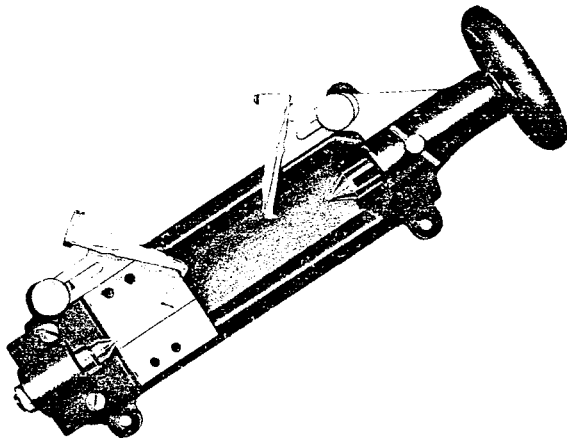
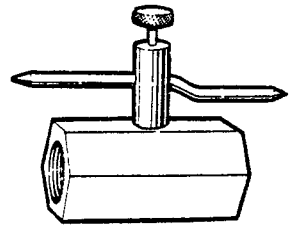
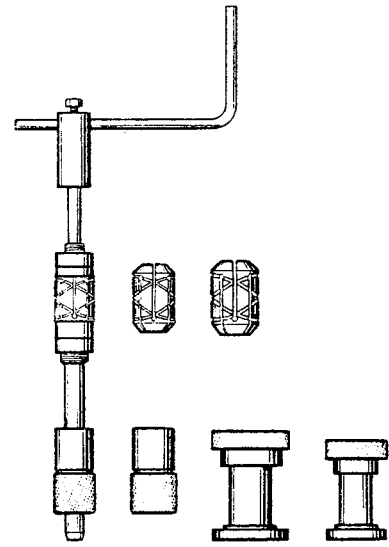
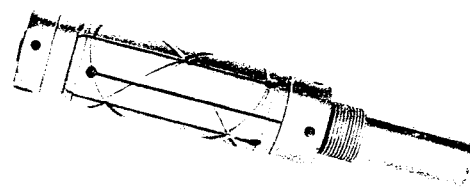
Description	Part No.	Model
	<p>SPROCKET SHAFT EXTENSION AND BEARING PULLER</p>	<p>96015-56 FL, XL, B, BT</p>
<p>Used to remove sprocket shaft extension (FL, XL) and sprocket shaft Timken bearing inner race (FL). Also pulls front wheel speedometer drive gear (B, BT).</p>		
	<p>CRANKSHAFT INSTALLING TOOL</p>	<p>96110-68P ML, TX</p>
<p>Used to pull crankshaft into right crankcase.</p>		
	<p>CRANKSHAFT TOOL SET</p>	<p>96122-63 D, DC</p>
<p>For disassembling and assembling connecting rod, bearing & crankpin. 96142-64 Adapter Washer (2). For adapting tool for use on crankpins with large diameter hole.</p>		

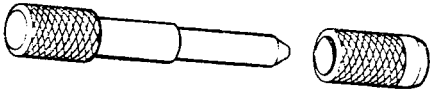
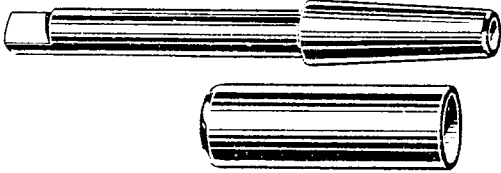
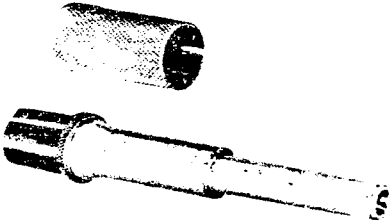
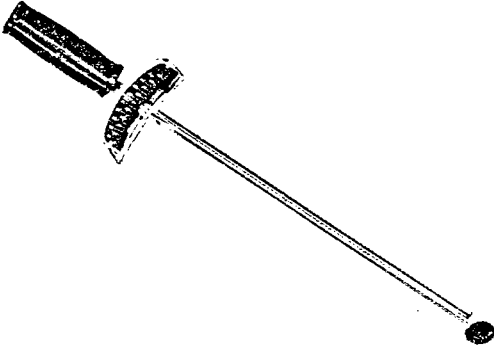
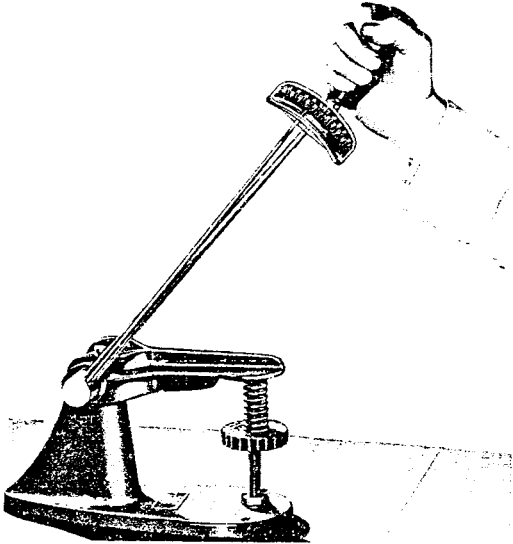
	Description	Part No.	Model
 <p>SET A</p> <p>SET B</p>	<p>CRANKSHAFT AND CONNECTING ROD ASSEMBLY TOOLS</p> <p>For crankshaft assembly and disassembly. Sets sprocket and armature shafts to correct depth and locates armature shaft so that circuit breaker cam is in correct position for ignition timing. Holds flywheels in alignment when pressed together on crankpin. Cutter is used for removing staked metal securing plates to flywheels. Complete set.</p> <p>96123-60 - Flywheel Adapter Kit (AH)</p> <p>96124-62 - Flywheel Adapter Kit (175 c.c. with increased stroke).</p> <p>96124-55 - Flywheel Adapter Kit (165 c.c. and B)</p> <p>(Above adapter kits used with original tool set 96125-49).</p>	<p>96125-49A</p>	<p>B, BT, AH</p>
	<p>CRANKSHAFT SUPPORT PLATE</p> <p>Used with arbor press to separate flywheels (K, KH, C, H, SS) and to press Timken bearing onto sprocket shaft (FL, XL, K, KH).</p>	<p>96137-52A</p>	<p>FL, XL, K, KH, C, H, SS, SX</p>
	<p>ARMATURE COMMUTATOR TURNING ARBOR</p> <p>Fits taper on armature, enabling commutator to be turned and undercut on lathe with No. 2 Morse taper.</p>	<p>96170-50</p>	<p>S, ST</p>
	<p>FORK STEM AND CROSS-MEMBER ALIGNMENT GAGE</p> <p>Used with fork tube straightening blocks for aligning fork stem.</p>	<p>96245-51</p>	<p>FL, G</p>

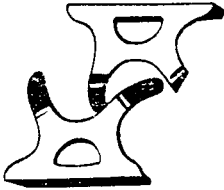
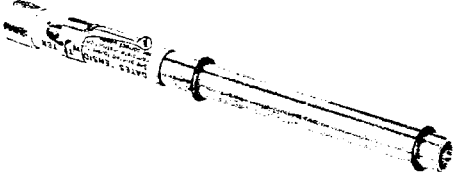

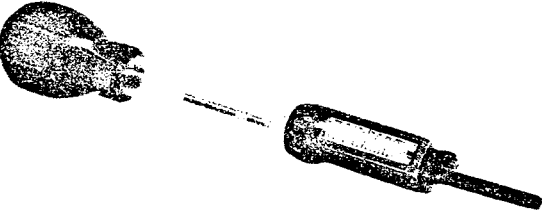

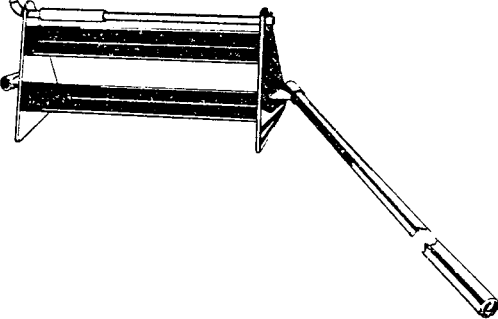
	Description	Part No.	Model
	<p>FORK TUBE STRAIGHTENING BLOCK</p> <p>Three required to support fork tubes while straightening on arbor press.</p>	<p>96246-50 96247-54 96247-62</p>	<p>FL, G XL, K, KH C, H, SS, SX</p>
	<p>FORK SLIDER BUSHING TOOLS</p> <p>Set consists of slider bushing puller (1), bushing driver (2), bushing reamer (3) with long and short pilots and puller adapter (4) for late sportster. Used to remove slider bushings, install new ones and ream to size.</p> <p>96299-54 - Reamer (XL, K, KH) 96300-50 - Reamer (FL, G) 96256-69 - Puller Adapter for 1969-72 Sportster Models</p>	<p>96254-50 96254-54</p>	<p>FL, G XL, K, KH</p>
	<p>TIMING MARK VIEW PLUG</p> <p>Clear plastic plug threads into crankcase timing hole for accurate ignition timing with strobe light timing gun.</p>	<p>96295-65</p>	<p>FL, XL, G</p>
	<p>TIMING MARK VIEW COVER</p> <p>Transparent cover so that flywheel timing mark can be seen.</p>	<p>96297-71</p>	<p>(1971-72) SS, SX</p>
	<p>PISTON INSERTER RING TOOL</p> <p>To insert pistons with rings into cylinders. Compresses rings to bore size.</p>	<p>96331-57 96333-51A</p>	<p>XL FL</p>
	<p>PISTON SQUARING PLATE</p> <p>For truing connecting rod.</p>	<p>96177-49 96179-18 96181-26</p>	<p>S, ST B, BT FL G, XL</p>

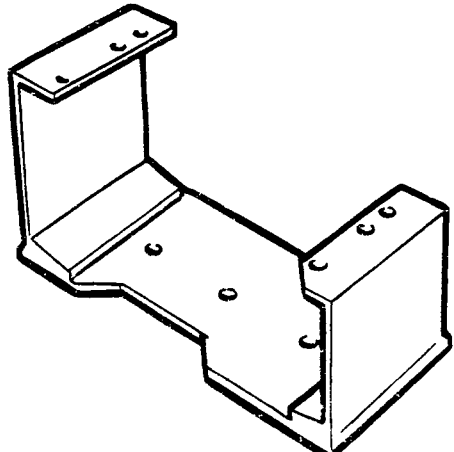
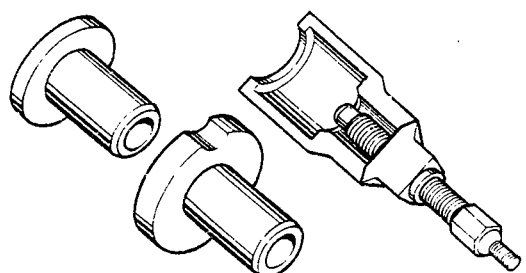
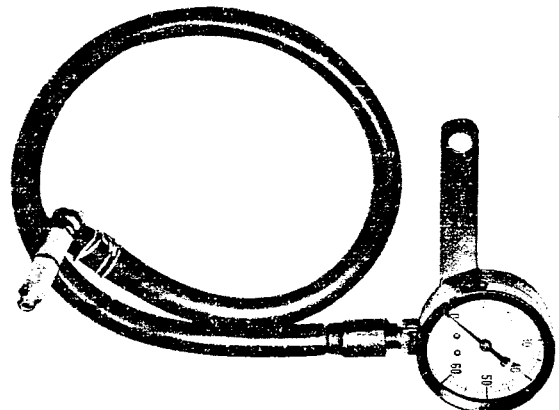
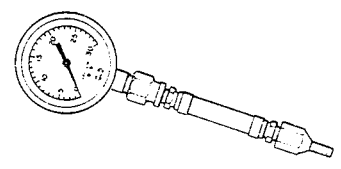

	Description	Part No.	Model
	<p>FLYWHEEL CHAMFERING CUTTER</p> <p>For cutting chamfer in flywheel crankpin hole to fit crankpins having large corner radius. (175 c.c.)</p>	96208-63	BT
	<p>INTERNAL LOCK RING PLIERS</p> <p>For retaining rings, such as piston pin lock rings, etc. Small size.</p>	96215-49	All Models
	<p>INTERNAL LOCK RING PLIERS</p> <p>For retaining rings, such as on Hydra Glide Fork, etc. Large size.</p>	96216-49	All Models
	<p>FRAME HEAD BEARING ADJUSTING CONE AND LOCKNUT WRENCH</p> <p>Fits frame head cone locknut and head bearing adjusting cone.</p>	96219-50	FL, G
	<p>HEX SOCKET WRENCH</p> <p>9/64 in. Allen wrench for circuit breaker point (socket type) adjusting screws used on 1964 Duo-Glide.</p>	96225-63	FL (1964)
	<p>FORK SHIFTER GAGE</p> <p>Used to set and align transmission shifter forks.</p>	96384-39	FL, U
	<p>MAINSHAFT THIRD GEAR RETAINING RING SLEEVE</p> <p>For installing mainshaft third gear retaining ring. To insure ring is not spread too far.</p>	96396-52	XL, K, KH
	<p>VALVE SEATING GAGE SET</p> <p>For checking valve seat location. Set has 2 intake and 1 exhaust valve and separate gages having step to show limits to which seat should be ground.</p>	96489-63	XL

	Description	Part No.	Model
	<p>VALVE SEATING GAGE SET</p> <p>For checking valve seat location. Set has valve and gage having step to show limits to which seat should be ground. 96492-66 - Intake Valve Gage (1966 & later).</p>	<p>96490-59A</p>	<p>FL</p>
	<p>REVERSING UNIT GEAR SPACING GAGE</p> <p>Used to determine correct shimming for forward and reverse pinions. 2.05 ratio only.</p>	<p>96544-63</p>	<p>D (1966 & earlier), DC</p>
	<p>VALVE LAPPING TOOL</p> <p>Used to rotate valve when grinding or lapping seat surfaces.</p>	<p>96550-36</p>	<p>FL, XL, C, H, SS, SX</p>
	<p>VALVE SPRING COMPRESSOR</p> <p>Used to compress valve springs while removing or installing valves.</p>	<p>96580-30</p>	<p>G, WL, U</p>
	<p>VALVE SPRING COMPRESSOR</p> <p>Used to compress valve springs while removing or installing valves. 96605-36A - End only</p>	<p>96600-36</p>	<p>FL, XL</p>

	Description	Part No.	Model
	<p>CRANKSHAFT TRUING STAND</p> <p>Used to true crankshaft alignment. Measures and indicates to .002 in. 96652-19 - Stationary center 96660-41 - Moveable center 96630-19 - Set of indicators</p>	<p>96650-30</p>	<p>All Models</p>
	<p>END PLAY GAGE</p> <p>Screws onto sprocket shaft to measure flywheel end play (FL, G, SV). Also used for checking end play of mainshaft (G, WL).</p>	<p>96700-38</p>	<p>FL, G, WL, U</p>
	<p>CRANKCASE MAIN BEARING LAP</p> <p>For aligning right and left main bearing races and lapping. Also used to lap pinion shaft bearing race on engines with Timken bearings.</p> <p>96717-40 - Lap (FL, U) (1954 & earlier) 96718-40 - Lap (XL, K, KH, G, WL) (also 1955-57 FL) 96718-58 - Lap (FL) (1958 & later) 96727-56 - Guide Sleeve, for fitting pinion shaft bearings (FL) 96728-56 - Guide Sleeve for fitting pinion shaft bearings (XL, K, KH)</p>	<p>96710-40</p>	<p>FL, XL, K, KH, G, WL, U</p>
	<p>CONNECTING ROD LAPPING ARBOR</p> <p>For lapping connecting rod bearing races when fitting new rollers.</p> <p>96742-17 - 1-1/2 in. lap (WL, G) only 96746-36 - 1-5/8 in. lap (FL, XL, K, KH, U) only</p>	<p>96740-17 96740-36</p>	<p>G, WL FL, XL, K, KH, U</p>

	Description	Part No.	Model
	<p>PISTON PIN LOCK RING TOOL</p> <p>For removing and installing piston pin lock rings.</p>	96777-72	D, DC
	<p>PISTON PIN LOCK RING TOOL</p> <p>For removing and installing piston pin lock rings.</p> <p>96783-66 - Plug, for late 1966 models with thick wall piston pin.</p>	96780-32A	FL, U
	<p>PISTON PIN LOCK RING TOOL</p> <p>For removing and installing spiral piston pin lock rings.</p> <p>96781-66 - Plug, for late 1966 models with thick wall piston pin.</p> <p>96782-58 - Lock Ring tool sleeve only.</p> <p>96781-72 - Plug for 1972 model with larger dia. piston.</p>	96780-58A	XL, K, KH, G
	<p>TORQUE WRENCH</p> <p>Range 0 to 100 ft. lbs. (1200 in. lbs.). Used to tighten nuts and bolts where definite tightness is required. Also used with valve spring tester fixture 96796-47.</p>	96795-47	All Models
	<p>VALVE SPRING TEST FIXTURE</p> <p>Has adjustable platform for various length springs. A tone device indicates when to read scale. Used with torque wrench 96795-47 (extra).</p>	96796-47	FL, XL, C, H, SS, SX

	Description	Part No.	Model
	<p>WISE COPPER JAWS</p> <p>Placed in vise jaws to prevent damage to hardened and ground surfaces.</p>	<p>96798-43</p>	<p>All Models</p>
	<p>DRIVE BELT TENSION TEST GAGE</p> <p>For obtaining accurate V-belt tension on cars with electric motor belt drive.</p>	<p>96800-63</p>	<p>DE, DEC (1963-65)</p>
	<p>LOW PRESSURE TIRE GAGE (0-20 LB.)</p> <p>For checking inflation pressure of large Terra-type tires.</p>	<p>96801-63</p>	<p>D, DE</p>
	<p>BATTERY HYDROMETER</p> <p>With temperature correction feature. For testing state of charge of batteries. Reading can be corrected for temperature extremes by means of built-in thermometer.</p>	<p>96802-63</p>	<p>FL, XL, G, D, DE</p>
	<p>BENDING BAR</p> <p>For straightening handlebars, forks, frames and golf car bumpers. Hooks onto tubes to apply bending leverage.</p>	<p>96806-40</p>	<p>All Models</p>
	<p>MOTORCYCLE SHOP STAND</p> <p>Provides sturdy support for motorcycle on shop or showroom floor. Operating bar fits into socket on either side to raise or lower motorcycle rear end.</p>	<p>96810-63</p>	<p>FL</p>

	Description	Part No.	Model
	<p>ENGINE REPAIR STAND</p> <p>Bench stand which simplifies overhaul work.</p>	<p>96815-46</p>	<p>FL, G, WL, U</p>
	<p>PINION GEAR PULLER AND COLLARS</p> <p>Used to remove and install pinion gear. 96831-51 - Screw Assembly 96836-57 - Collar (G, XL, K, KH)</p>	<p>96830-51</p>	<p>FL, G, XL, K, KH</p>
	<p>OIL PRESSURE GAGE</p> <p>Checks oil pump pressure under operating conditions. Graduated 0-60 lbs. 96925-58 - Adapter Nipple to attach base to 1/8 NPT pump outlet on 1958 & later pumps.</p>	<p>96921-52</p>	<p>FL, XL, G</p>
	<p>VACUUM GAGE</p> <p>Measure front chain case vacuum to detect air leaks (30 in. water, 1.05 P.S.I.)</p>	<p>96950-68</p>	<p>FL (1965 & later)</p>
	<p>CARBURETOR CHECK VALVE TEST TOOL</p> <p>For Tillotsen diaphragm carburetor.</p>	<p>96960-68</p>	<p>FL, XL, D</p>

	Description	Part No.	Model
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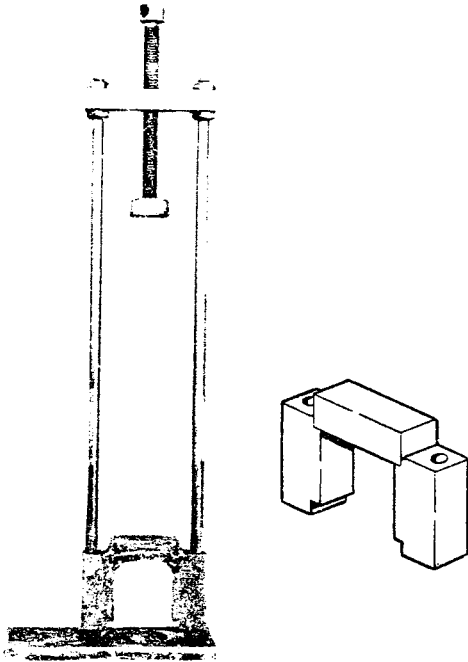


CARBURETOR MAIN NOZZLE
PUNCH

96962-68

FL, XL

For Tillotsen diaphragm carburetor.

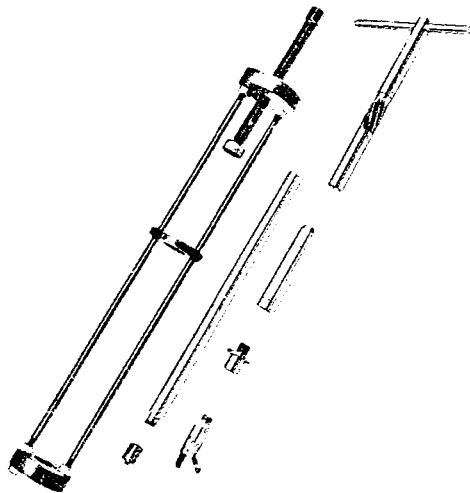


SHOCK ABSORBER TOOL

97010-52A FL, XL, K,
KH

Simplifies shock absorber disassembly or assembly. Holds spring in compression while disassembling parts.

97019-52A - Block only for 1967 & later, FL, XL.



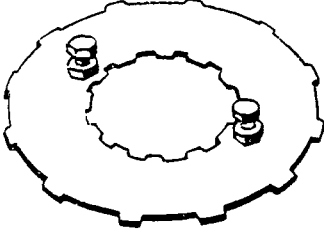

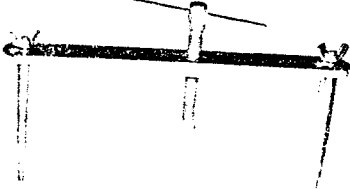
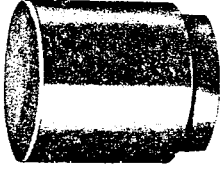
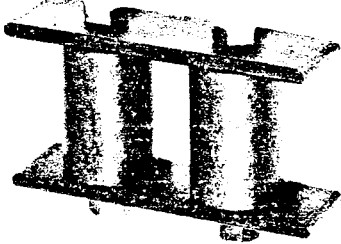
FORK BUSHING TOOLS AND
REAMER

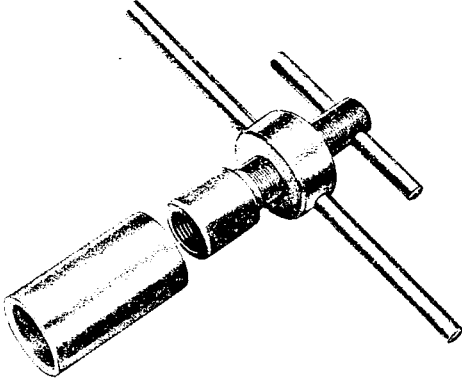
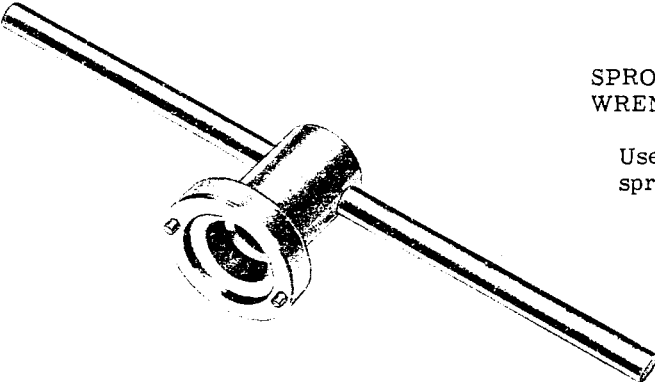
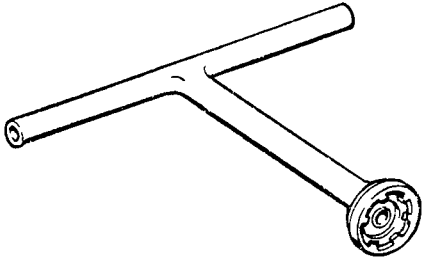
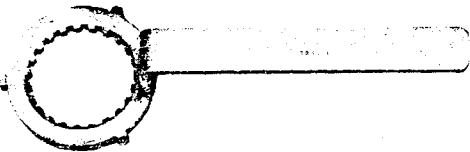
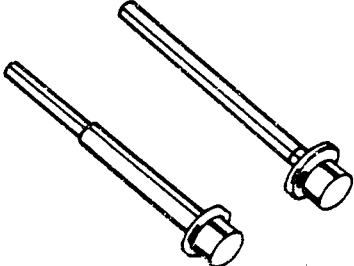
97030-54
B, BT

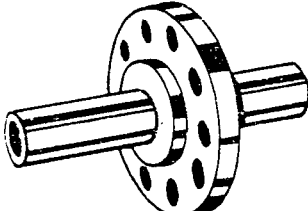
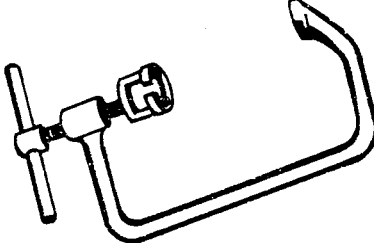
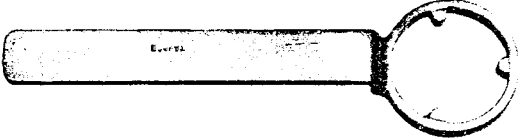
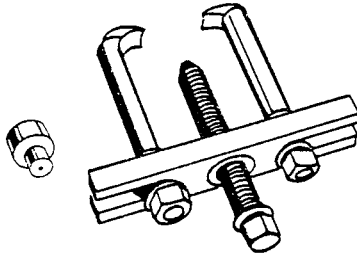
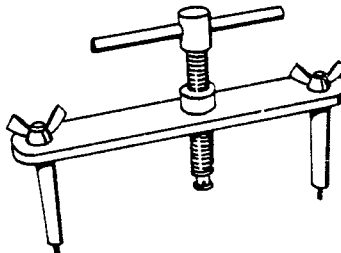

S, ST

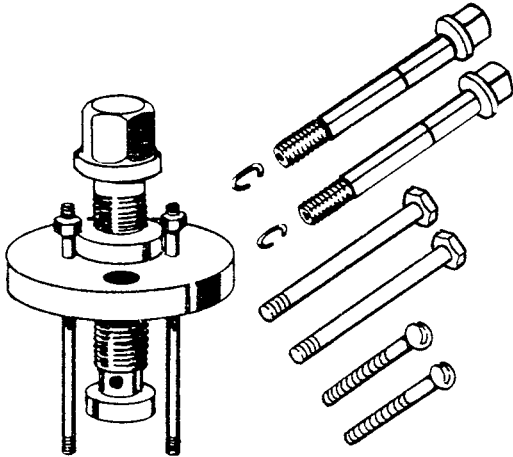
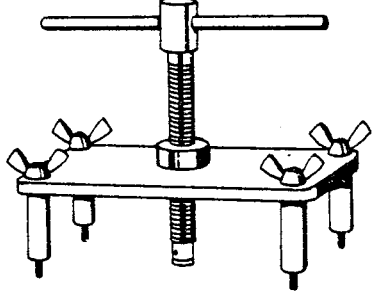
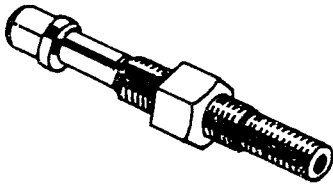
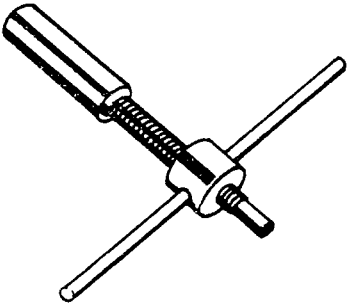
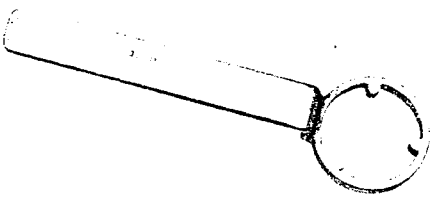
Used to install and remove Tele-glide fork bushings. Reamer included finishes both side bushings.

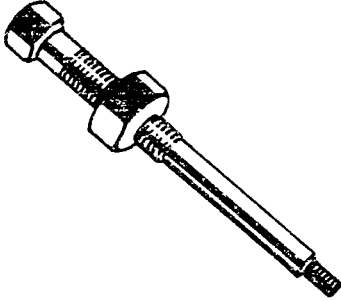
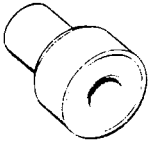
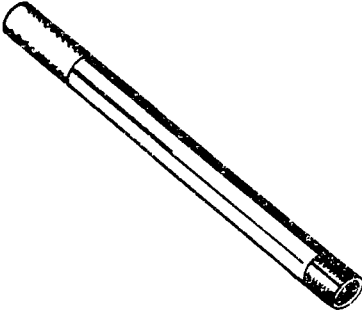

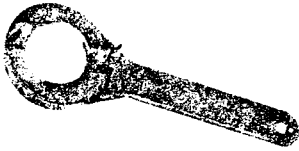
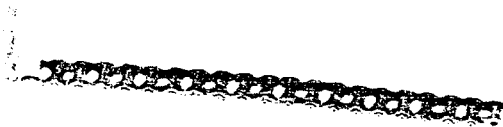
	Description	Part No.	Model
	<p>SPROCKET SHAFT BEARING TOOL</p> <p>Used to install crankshaft assembly into crankcase Timken bearing. 97090-57 - Screw (XL)</p>	97081-54	XL, K, KH
	<p>HOSE CLAMP PLIERS</p> <p>For tightening band type metal clamps on gas and oil lines.</p>	97087-65A	FL, XL
	<p>CLUTCH HUB INSTALLING TOOL</p> <p>Used to install clutch hub, clutch gear extension and mainshaft sprocket (XL, K, KH). Also used for transmission disassembly (AH, D). 97173-55A - Screw only</p>	97170-55A	XL, K, KH, AH, D, DC
	<p>CLUTCH LOCK PLATE</p> <p>Used to hold clutch shell from turning when engine sprocket, clutch hub and rear chain front sprocket nuts are removed.</p>	97173-71	(1971 & later) XL
	<p>CLUTCH LOCK PLATE</p> <p>Used to hold clutch shell from turning when engine sprocket, clutch hub and rear chain front sprocket nuts are removed.</p>	97175-55	XL, K, KH

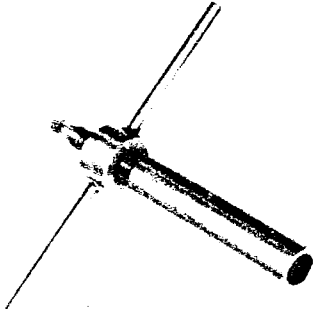
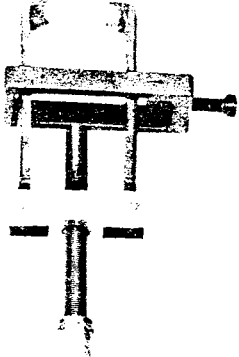
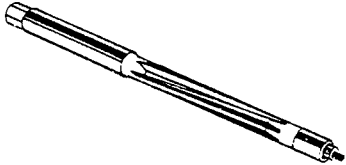
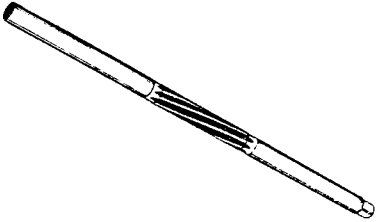
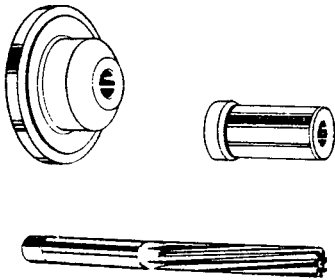
	Description	Part No.	Model
	<p>CLUTCH LOCK TOOL</p> <p>Locks clutch hub & shell together to prevent crankshaft turning when removing or installing pinion shaft nut & clutch drive gear. Used with clutch hub wrench 97291-61PA and pinion puller 97294-61B.</p>	97175-61P	(1968 & earlier) C, H, SS
	<p>CLUTCH LOCK TOOL</p> <p>Locks clutch hub & shell together to prevent crankshaft turning when removing or installing pinion shaft nut & clutch drive gear.</p>	97177-69P	(1969 - early 1973) M SS, SX
	<p>CLUTCH SPRING COMPRESSOR</p> <p>Used to disassemble clutch.</p>	97178-71	(1971 & later) XL
	<p>TIMKEN BEARING OUTER RACE PRESS PLUG</p> <p>Used to remove sprocket shaft Timken bearing outer race.</p>	97194-57	FL (1955 & later)
	<p>SPROCKET LOCKING LINK</p> <p>Locks engine sprocket and clutch sprocket teeth to prevent rotation when nuts are removed or installed.</p>	97200-55	XL, K, KH

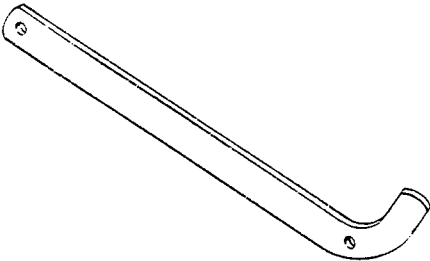
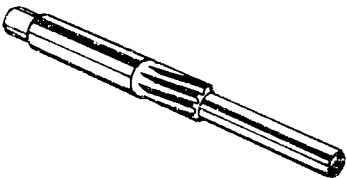

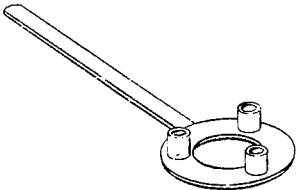
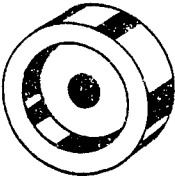
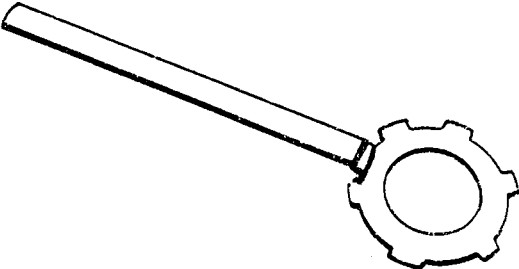
Description	Part No.	Model
	97225-55	FL (1955 & later)
<p>SPROCKET SHAFT BEARING INSTALLING TOOL</p> <p>For installing crankshaft into crankcase Timken bearing.</p>		
	97235-55B	FL (1955-68)
<p>SPROCKET SHAFT BEARING NUT WRENCH</p> <p>Used with 97225-55 to install sprocket shaft bearing nut.</p>		
	97235-66P	(1969 & later) SS, SX
<p>CLUTCH SHELL NUT WRENCH</p> <p>Used to remove special nut from clutch shaft.</p>		
	97237-68P	ML, TX (1973 & later) X, Z, SR
<p>CLUTCH SHELL AND HUB HOLDING TOOL</p> <p>Used to hold clutch shell when removing drive pinion gear and to hold hub when removing hub nut.</p>		
	97272-60	FL
<p>CAMSHAFT NEEDLE BEARING INSTALLING ROD</p> <p>Used to install camshaft needle bearings.</p>	97273-60	XL

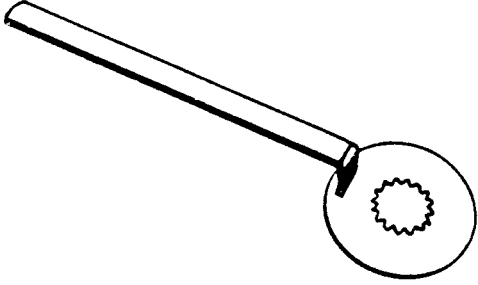
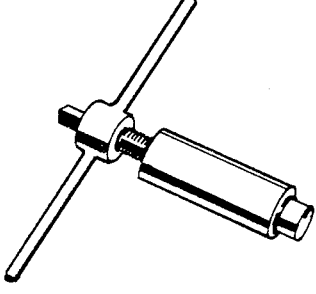
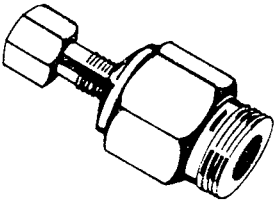
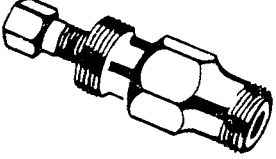
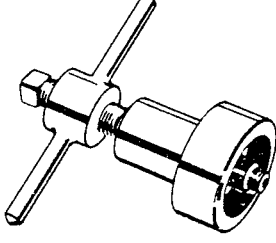
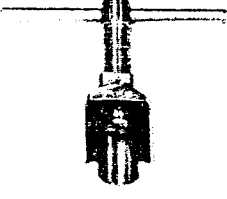
	Description	Part No.	Model
	<p>BRAKE DRUM TURNING ARBOR</p> <p>Used to refinish brake friction surface when relining brakes. Drum mounts on arbor with wheel drum bolts.</p>	97280-60A	FL, G
	<p>VALVE SPRING COMPRESSOR</p> <p>Used to compress springs when removing or installing valves.</p>	97290-61P	C, H, SS, SX
	<p>TRANSMISSION HOLDING TOOL</p> <p>Used to hold clutch hub while removing or installing sprocket or clutch hub nut (YA-1732).</p>	97291-61PA	C, H, SS
	<p>TWO JAW PULLER</p> <p>Used to pull oil pump gear, mainshaft sprocket, bearings, etc. Center cap is for oil pump drive gear. Used to pull transmission sprocket (M Models). Used with 2 - Part No. 52081-63P bolts to pull 1973 & later SS/SX alternator rotor. 95652-43A - Center Cap only.</p>	97292-61	C, H, SS, SX, M
	<p>CLUTCH SPRING COMPRESSOR</p> <p>Compresses spring so that clutch can be disassembled. Also used to press mainshaft from crankcase ball bearings.</p>	97293-61P	1961-68 C, H, SS, SX
	<p>FAN ROTOR PULLER</p> <p>Used to remove rotor from crankshaft taper.</p>	97293-71	Y

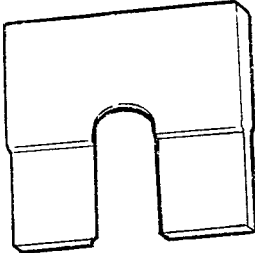
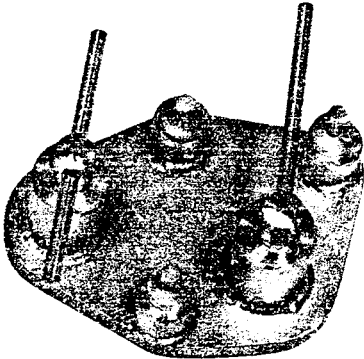
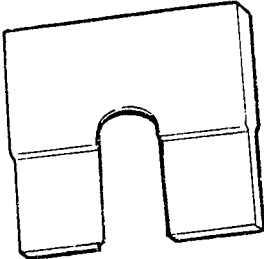
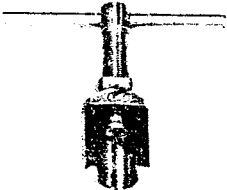
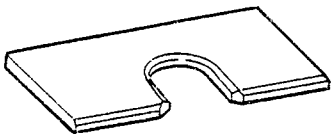
	Description	Part No.	Model
	<p>PULLER</p> <p>Pulls pinion gear, clutch drive gear, and clutch hub (C, H, SS). Pulls commutator end cover from SIBA starter generator (D). Includes: 52081-63P - Bolt for 1973 & later clutch drive gear (2 used). 2797B - Screw for SIBA starter-generator end cover (D) (2 used). 24805-61P - Stud for pulling 250 cc clutch hub (2 used). 97285-61P - Set screw for live center.</p>	<p>97294-61B</p>	<p>C, H, SS, SX, D</p>
	<p>CRANKSHAFT REMOVING TOOL</p> <p>Presses crankshaft assembly from ball bearing. Also used to separate crankcases.</p>	<p>97295-61PA</p>	<p>C, H, SS, SX</p>
	<p>GENERATOR ARMATURE PULLER</p> <p>Pulls armature from crankshaft.</p>	<p>97296-61P</p>	<p>(1972 & earlier) C, H, SS</p>
	<p>CRANKSHAFT INSTALLING TOOL</p> <p>Used to install crankshaft assembly in gear side ball bearing.</p>	<p>97297-61PA</p>	<p>C, H, SS, SX</p>
	<p>SPROCKET HOLDING TOOL</p> <p>Used to hold sprocket when removing or installing shaft nut.</p> <p>For 14 tooth sprocket (YA-1711) For 15 tooth sprocket (YA-1507) For 16 tooth sprocket (YA-1508) For 17 tooth sprocket (YA-1509)</p>	<p>97304-69P 97297-66P 97298-66P 97299-66P</p>	<p>C, H, SS</p>

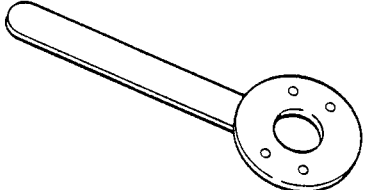
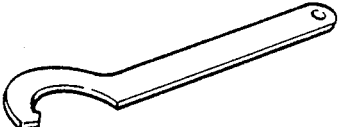
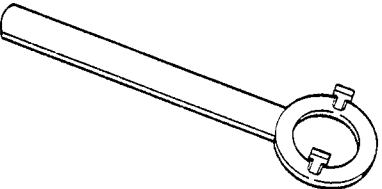
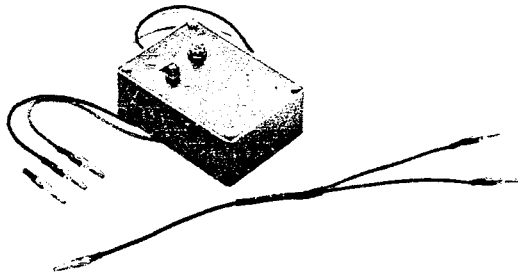
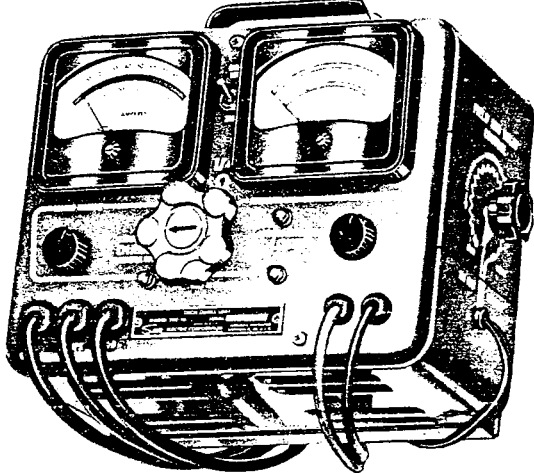
	Description	Part No.	Model
	<p>CRANKCASE ASSEMBLING SCREW</p> <p>Used with plate from tool Part No. 97295-61P to pull crankcases together.</p>	<p>97300-61</p>	<p>(1972 & earlier) C, H, SS, SX</p>
	<p>POLE SHOE ARBOR</p> <p>Used for fitting generator field coils and pole shoes.</p>	<p>97302-61</p>	<p>(1972 & earlier) C, H, SS, SX</p>
	<p>FORK TUBE TOOL</p> <p>Used to remove and install front fork tubes. Also serves as a guide to pull fork sides into place when assembling.</p>	<p>97305-61</p>	<p>C, H, SS</p>
	<p>SPROCKET HOLDING TOOL</p> <p>Used to hold sprocket when removing or installing shaft nut. For 14 tooth sprocket (YA-1650)</p>	<p>97305-68P</p>	<p>ML</p>
	<p>ALTERNATOR ROTOR HOLDING TOOL</p> <p>Used to hold alternator rotor when removing crankshaft nut.</p>	<p>97306-73P</p>	<p>(1973 & later) SS, SX</p>
	<p>DRIVE SPROCKET HOLDING TOOL</p> <p>Used to lock drive sprocket to remove shaft nut.</p>	<p>97307-73P</p>	<p>(1973 & later) SS, SX</p>

	Description	Part No.	Model
	<p>ELECTRIC STARTER DRIVE CLUTCH AND CRANKSHAFT INSTALLING TOOL</p> <p>Used to press starter clutch on shaft and to pull crankshaft into case.</p>	97308-73P	(1973 & later) SS, SX
	<p>ELECTRIC STARTER DRIVE PULLER</p> <p>Used to pull starter clutch.</p>	97309-73P	(1973 & later) SS, SX
	<p>VALVE GUIDE REAMER</p> <p>Used for sizing replacement valve guides to obtain correct clearance with valve stem.</p>	97310-61	C, H, SS, SX
	<p>ROCKER ARM SHAFT BUSHING REAMER</p> <p>Used to size new rocker arm shaft bushings for correct fit.</p>	97314-61P	C, H, SS, SX
	<p>CAMSHAFT AND SHIFTER CAM BUSHING REAMER SET</p> <p>Reamer and large pilot used to line ream replacement camshaft bushing. Reamer and small pilot used to line ream smaller shifter cam bushing.</p>	97318-61P	C, H, SS, SX, ML, TX

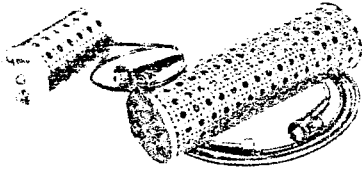
Description	Part No.	Model	
	BELT TENSIONER	97320-67	D
<p>Used with 25 lb. spring scale to set 1967 and later starter-generator belt tension.</p>			
	SHIFTER CAM BUSHING REAMER	97322-61P	C, H, SS, SX, ML
<p>Used to line ream replacement large shifter cam bushing.</p>			
	CRANKCASE DISASSEMBLING TOOL	97326-65	M
<p>Mounts to magneto-generator pad and screw pushes crankshaft to force crankcases apart.</p>			
	TRANSMISSION HOLDING TOOL	97330-62	AH, D, Y
<p>Used to hold transmission shaft from turning when installing or removing transmission parts. Fits on drive pin bosses.</p>			
	SPARK ADVANCE TIMING WASHER	97334-62	(1968 & earlier) C, H, SS
<p>Used to hold spark advance governor in advanced position for timing ignition.</p>			
	CLUTCH SHELL GEAR HOLDING TOOL	97340-65P	M
<p>Used to hold clutch shell when removing pinion drive gear, etc.</p>			

	Description	Part No.	Model
	<p>CLUTCH HUB HOLDING TOOL</p> <p>Used to hold clutch hub when removing hub nut, etc.</p>	97341-65P	M
	<p>CRANKSHAFT INSTALLING TOOL</p> <p>Used to pull crankshaft into left and right ball bearings. Also used to pull crankshaft assembly into crankcase. (ML Model)</p>	97342-65P	M, ML, TX, Z, X, SR
	<p>CLUTCH HUB PULLER</p> <p>Screws into clutch hub to remove hub from shaft spline.</p>	97343-65P	M
	<p>MAGNETO ROTOR PULLER</p> <p>Screws into magneto rotor to remove it from shaft taper.</p>	97344-65P	M, ML, TX, X, Z
	<p>CLUTCH SPRING COMPRESSOR</p> <p>Screws into clutch pressure plate threads and compresses spring plate so lock ring can be removed for clutch disassembly.</p>	97345-65P	M
	<p>PRIMARY DRIVE PINION PULLER</p> <p>Used to pull primary drive pinion from crankshaft taper.</p>	97346-65PA	M

	Description	Part No.	Model
	<p>CRANKSHAFT PRESS PLATE</p> <p>Plate is placed between crankshaft throws so crankpin can be pressed out when replacing connecting rod bearing. (50 cc)</p>	<p>97347-65</p>	<p>M</p>
	<p>CRANKCASE DISASSEMBLING TOOL</p> <p>Mounts to left crankcase and screws push equally against crankshaft and countershaft to force crankcases apart evenly.</p>	<p>97347-68PA</p>	<p>ML, MSR 1973 X, Z, TX</p>
	<p>CRANKSHAFT PRESS PLATE</p> <p>Plate is placed between crankshaft throws to press out crankpin with arbor press. (65 c.c.)</p>	<p>97348-67</p>	<p>M</p>
	<p>PRIMARY DRIVE PINION PULLER</p> <p>Used to pull primary drive pinion from crankshaft taper.</p>	<p>97348-68P</p> <p>97348-73P</p>	<p>(1972 & earlier) ML, MSR 1972 ML</p> <p>(1973 & later) X, Z, TX</p>
	<p>CRANKSHAFT PRESS PLATE</p> <p>Plate is placed between crankshaft throws to press out crankpin with arbor press.</p>	<p>97349-68</p>	<p>ML, MSR TX, X, Z</p>

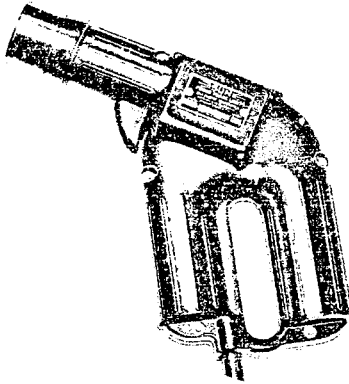
	Description	Part No.	Model
	<p>ROTOR HOLDING TOOL</p>	<p>97350-71P</p>	<p>1968-72 ML 1965-72 M (1973 & later) X</p>
	<p>EXHAUST PIPE PORT NUT WRENCH</p>	<p>97351-71P</p>	<p>1968-71 ML 1967-72 M</p>
	<p>ROTOR HOLDING TOOL</p>	<p>97352-71M</p>	<p>MSR 1973 TX, Z</p>
	<p>TESTER</p> <p>For trouble shooting and testing the electrical system and components.</p>	<p>97360-71</p>	<p>Y</p>
	<p>SUN VOLT-AMPERE TESTER NO. VAT-26*</p> <p>With the Sun Model VAT-26 you can test the following in minutes:</p> <ul style="list-style-type: none"> ● Generator Output ● Current Control Setting ● Cutout Relay ● Voltage Control Setting ● Circuits ● Battery Capacity ● Battery Voltage <p>Two easy to operate controls are used to select all factory recommended test conditions and provide an accurate and convenient means of controlling field current for various charging circuit tests.</p>		

Description



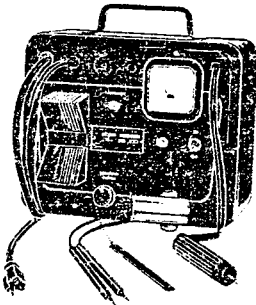
FIXED RESISTORS*

Fixed value resistors for precision tests and adjustment of voltage regulator units when used with a volt-ampere tester. This equipment included in VAT-26 Tester.



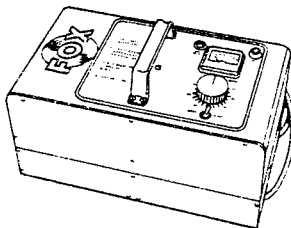
SUN POWER TIMING LIGHT NO. PTL-45*

To precision-time the ignition system under actual running conditions, direct the flash of the light at the timing mark. Fine adjustment of timing at the circuit breaker can be made while the engine is operating. This method of spark timing provides pinpoint accuracy.



SUN ARMATURE-TESTER NO. AT-76*

The AT-76 was specifically designed to completely test Harley-Davidson armatures for grounds, shorts, and continuity.



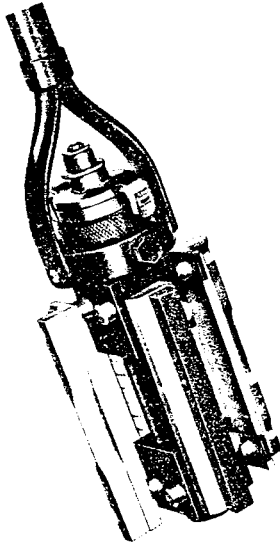
FOX BATTERY TESTER NO. 450

For checking Electric Car battery bank (36 V.) capacity, according to service manual procedure, to determine if batteries are in good condition.

Order from Fox Products Co.,
Philadelphia, Pennsylvania.

* For information contact your nearest distributor - or write to:
Sun Electric Company
Chicago, Illinois 60631

Description



CYLINDER HONES

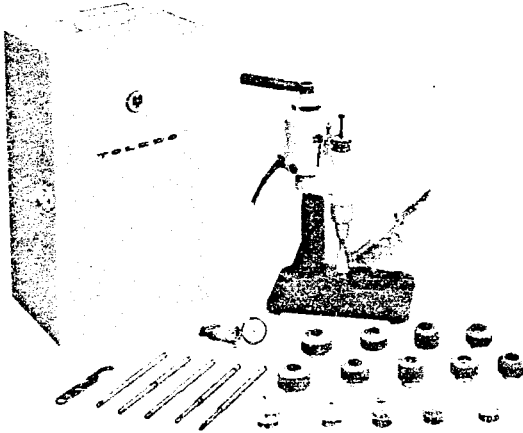
With simple, easy to use Sunnen cylinder hones, you quickly refinish the cylinder walls, leaving them straight and round to within a guaranteed half-thousandth. Original alignment is maintained; surface finish is ideal for new rings.

Sunnen cylinder hones and stones needed to cover the complete range of cylinder diameters in Harley-Davidson engines are shown in table below. A portable drill furnishes operating power. You need no special training to produce a first class job.

Harley-Davidson Model Description	Engine Designation Letter	Bore (inches)	Sunnen Cylinder Hone Set	Additional Stone Set Needed
M-50 3.0 cu. in. T.C.	M, MS	1.528	PLP-1500	NONE
M-65 3.9 cu. in. T.C.	M, MS	1.7323	PLP-1625	NONE
M-90 5.5 cu. in. T.C.	Z, X	1.890		
M-100 6.0 cu. in. T.C.	MSR, SR	1.968		
125, Hummer 7.5 cu. in. T.C.	S, B	2.0625	JN-89	JN-300
M-125 7.5 cu. in. T.C.	ML, MLS, TX	2.2047		JN-101 JN-301
165, Super-10, Pacer, Topper, Scat 10 cu. in. T.C.	ST, BT, BTH, A, AH	2.375		JN-101 JN-301
Pacer, Scat 10.7 cu. in. T.C.	BT, BTH	2.375		JN-101 JN-301
Snowmobile	Y-398 Y-440	2.567 2.677	AN-111	NONE
Sprint 15 cu.in.O.H.V. 21 cu.in.O.H.V.	C, H SS, SX	2.598 2.913		
Golf Car, Utilicar 15 cu. in. T.C.	D, DF, DC	2.745		
45 cu. in. Side Valve	W, WL, G, K	2.745		
55 cu. in. Side Valve	KH	2.745		
55 cu.in.O.H.V.	XL, XLH	3.000		
61 cu.in.O.H.V.	XL, XLH, XLCH	3.188		
61 cu.in.O.H.V.	E, EL	3.3125		
74 cu.in. Side Valve	U, UL	3.3125		
74 cu.in.O.H.V.	F, FL, FLH	3.4375		

For information contact your nearest distributor or write to: Sunnen Products Co. St. Louis, Mo. 63143

Description



HALL-TOLEDO
ECCENTRIC VALVE SEAT
GRINDER WITH ECCENTRIC POINT
CONTACT GRINDING

Eccentric valve seat grinding is the application of two rotary motions to a grinding wheel at the same time. While the grinding wheel is traveling with the high speed spindle at a rate of 10000 RPM on ball bearings, the inner or eccentric shaft is being driven at a low speed of 20 RPM. The entire grinding assembly travels in a planetary eccentric motion about the valve seat. It is this point contact, precision valve seat grinding principle that Hall-Toledo utilizes in its Harley-Davidson set.

For information contact your nearest distributor -
or write to: Hall - Toledo, Inc.
2931 South Ave.
Toledo, Ohio 43609