

SERVICE PARTS

CRUSADER M MILL AND LATHE

PRICES SHOWN SUBJECT TO DEALER DISCOUNT UNLESS OTHERWISE SPECIFIED

PART NUMBER**DESCRIPTION**

**NOTE: CPU BOARDS REPAIRED IN SETS ONLY. PRICE WILL BE BASED
ON THE NUMBER OF BOARDS THAT ARE FOUND DEFECTIVE.**

318003R	3X MILL VERSION 3 BOARD SET		
31800990R	CPU - GREEN TAB - PCB 513 - 523		
31800051R	CPU -ORANGE TAB - PCB 503		
31800065R	CPU - WHITE TAB - PCB 500		

318002R	2X MILL VERSION 3 BOARD SET		
31800892R	CPU 2X MILL-GREEN TAB PCB 523		
31800989R	CPU 2X MILL-ORANGE TAB PCB 503		
31800988R	CPU 2X MILL-WHITE TAB PCB 500		

318001R	LATHE VERSION 3 BOARD SET		
31801020R	CPU - GREEN TAB PCB 513 - 523		
31801019R	CPU - ORANGE TAB - PCB 503		
31801018R	CPU - WHITE TAB - PCB 500		

PARTS COMMON TO ALL VERSIONS

31800039S	CRT ASSEMBLY		
90600306S	POWER SUPPLY		
31800012R	CASSETTE ASSEMBLY W/ BAD DECK		
31800012R	CASSETTE ASSEMBLY W/ GOOD DECK		
31800311R	LATHE CASSETTE W/ BAD DECK		
31800311R	LATHE CASSETTE W/ GOOD DECK		
31200011	CASSETTE TAPE		
31800054R	COUNTER BOARD - PCB 504		
31800053R	D/A & OPTO - PCB 502		
31800060R	LEVEL ONE AND TWO I/O - PCB 502		
31800322R	KEYBOARD INTERFACE - PCB 519		
31800057R	MOTHERBOARD - PCB 501		
90700006	BATTERY FOR PCB 503 VERSION BOARDS		
90400533	DALLAS RAM MEMORY		

FACEPLATES

31800006S	MILL FACEPLATE ASSEMBLY		
31800309S	LATHE FACEPLATE ASSEMBLY		
80600044	EMERGENCY STOP SWITCH		
80600045	EMERGENCY STOP SWITCH CONTACT BLOCK		

MISCELLANEOUS ITEMS

31800948M	3K MEMORY UPGRADE KIT		
31801249M	DNC KIT. USE WITH 1013-1B13 SOFTWARE		

**CARD CAGES MUST BE SHIPPED WITH THE CONSOLE HARNESS CONNECTED.
THIS CAN EASILY BE DONE BY REMOVING THE HARNESS FROM THE CONSOLE END.
CARD CAGES RECEIVED WITHOUT THE HARNESS CONNECTED WILL BE CHARGED
FOR THE ADDITIONAL LABOR. HARNESS PROBLEMS WILL NOT BE ABLE TO BE
DETECTED IF THIS PROCEDURE IS NOT FOLLOWED.**

RP MGCG	REPAIR M OR G CARD CAGE ASSEMBLY		
RP MGCNSL	REPAIR M OR G CONSOLE ASSEMBLY		

**THERE IS A 6 MONTHS WARRANTY ON THE
PARTS REPAIRED ON CARD CAGES AND
CONSOLES.**

SERVICE PARTS CRUSADER G MILL AND LATHE

PRICES SUBJECT TO DEALER DISCOUNT UNLESS OTHERWISE SPECIFIED

PART NUMBER**DESCRIPTION**

**NOTE: CPU BOARDS REPAIRED IN SETS ONLY. PRICE WILL BE BASED
ON THE NUMBER OF BOARDS THAT ARE FOUND DEFECTIVE.**

318005R	MILL VERSION 3 BOARD SET		
31800946R	CPU-GREEN TAB - PCB 523		
31800066R	CPU-ORANGE TAB - PCB 503		
31800574R	CPU-WHITE TAB -PCB 500		

318004R	LATHE VERSION 3 BOARD SET		
31801015R	CPU-GREEN TAB - PCB 523		
31801013R	CPU-ORANGE TAB - PCB 503		
31801011R	CPU-WHITE TAB - PCB 500		

PARTS COMMON TO ALL VERSIONS

31800039S	CRT ASSEMBLY		
90600306S	POWER SUPPLY		
31800067R	6X COUNTER - BLACK TAB - PCB 514		
31800068R	D/A & OPTO UWS AXIS - PCB 502		
31800012R	CASSETTE ASSEMBLY W/ BAD DECK		
31800012R	CASSETTE ASSEMBLY W/ GOOD DECK		
31800311R	LATHE CASSETTE W/ BAD DECK		
31800311R	LATHE CASSETTE W/ GOOD DECK		
31200011	CASSETTE TAPE		
31800057R	MOTHERBOARD - PCB 501		
31800053R	D/A & OPTO - PCB 502		
90700006	BATTERY FOR PCB 503 VERSION BOARDS		
90400533	DALLAS RAM MEMORY		

MANUAL PANELS AND FACEPLATES

31800539R	GKM FACEPLATE ASSEMBLY		
31800745R	GKL LATHE FACEPLATE ASSY		
80600044	EMERGENCY STOP SWITCH		
80600045	BLOCK		
31800568R	GKM ROTARY SWITCH BOARD		
31800322R	KEYBOARD INTERFACE-PCB 519		
31800029R	OEM FACEPLATE ASSEMBLY		
31800082R	OEM LATHE FACEPLATE ASSY		
31800522R	OEM KEYBOARD INTERFACE-PCB 522		
31800567R	OEM MANUAL PANEL BOARD		

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FOR THE ADDITIONAL LABOR. HARNESS PROBLEMS WILL NOT BE ABLE TO BE
DETECTED IF THIS PROCEDURE IS NOT FOLLOWED.**

RP MGCG	REPAIR M OR G CARD CAGE ASSEMBLY		
RP MGCNSL	REPAIR M OR G CONSOLE ASSEMBLY		

**THERE IS A 6 MONTHS WARRANTY ON
THE PARTS REPAIRED ON CARD CAGES
AND CONSOLES.**

SERVICE PARTS CR2-M-G SERVO

PRICES SHOWN SUBJECT TO DEALER DISCOUNT UNLESS OTHERWISE SPECIFIED

PART NUMBER**DESCRIPTION****COMMON TO ALL CR 2, 2L, M, ML, G, AND GL**

31500192R	M-FUNCTION BOARD FOR MILL SYSTEMS		
31500191R	M-FUNCTION BOARD LATHE SYSTEMS		
31500321S	PCB 801 SERVO INTERFACE BOARD		
31500328S	PCB 803 I/O INTERFACE BOARD		
31500190S	POWER SUPPLY +24VDC		
31500798S	POWER SUPPLY +/-15VDC SERVO DRIVE BOARD BIAS		
80600072M	RESET SWITCH		
31501009S	SERVO DRIVE BOARD (REPLACES ALL PREVIOUS VERSIONS EXCEPT ORIGINAL GLENTEK)		
31501005S	SERVO DRIVE BOARD. USED WHEN 1EA. 31501009S BOARDS ARE ALREADY IN THE SYSTEM. THERE IS A POSSIBILITY THAT A SECOND 31501009S WILL LOAD THE +/-15VDC SUPPLY IN THE SERVO CABINET.		
31500051S	SERVO DRIVE BOARD. REPLACES ORIGINAL GLENTEK USED PRIOR TO 1984		

MOTORS

37000116	3NM WITHOUT ENCODER		
37000202	4.5NM WITHOUT ENCODER		
37000111	BRUSHES FOR ORIGINAL SEM VERSION MOTORS		

Z AXIS DOWNFEED

60900202	ENCODER 127L M15		
66600331	BALLSCREW FOR PRESENT CAST TYPE HOUSING		
66600331M	BALLSCREW KIT FOR BOLT TOGETHER TYPE.		