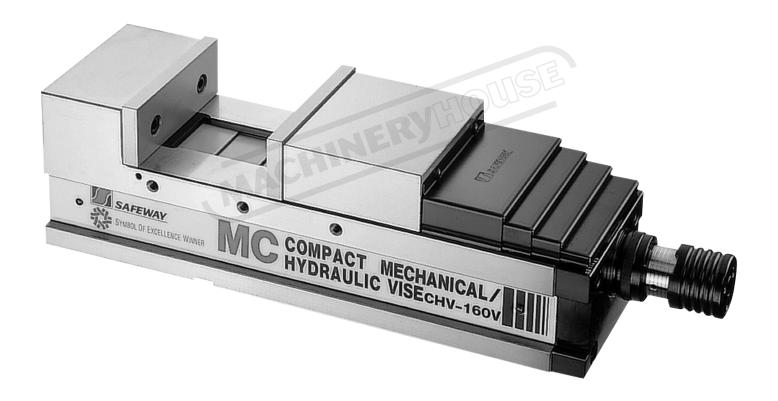
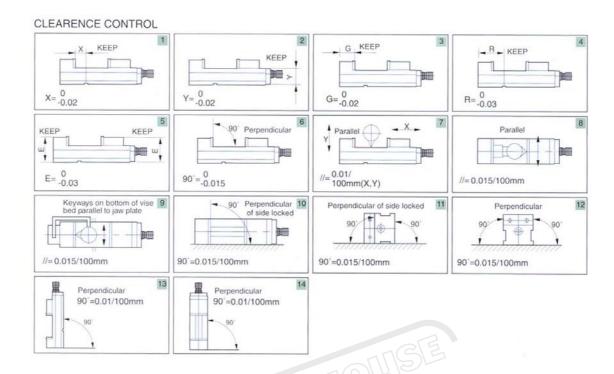
Page 1

# **INSTRUCTION MANUAL**

## CHV-160V Compact Hydraulic Vice 160mm



#### **Tolerances**

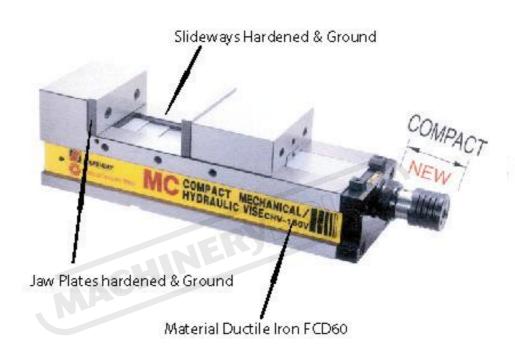


## Specifications are based on the "V" series only.



#### BEFORE OPERATION CHECK THE FOLLOWING

- 1. Check the accuracy sheet and attachment
- 2. Remove the protective layers of grease and rust preventive before moving the slides.
- 3. Lubricate all slide ways and lubrication points
- 4. Attaché the keys to the bottom of the vice for tee slot location. To insure accuracy with the axis of the machine check that the tee slot has been ground.
- 5. Insure that the vice is balanced before lifting



#### **FEATURES**

- 1. Mechanical/Hydraulic spindle.
- 2. Down thrust "Semi-sphere Segment" mechanism eliminates jaw lift and work tilting
- 3. All surfaces ground
- 4. Rigid vice body manufactured from ductile iron FCD 60JIS (equal to GGG60) with 60kgs/mm or 80888 psi tensile strength
- 5. Vice bed flame hardened to HRC 45 to minimise wear and maintain accuracy

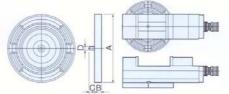
#### MC COMPACT MECHANICAL / HYDRAULIC VISE

#### SWIVEL BASE (STEEL)

MODEL • SBD-100 • SBD-160

SBD-130SBD-200







SBD	A	В	C	D	N.W.
100	248	27	25	16	
130	296	30	25	18	
160	312	34	25	18	
200	378	44	25	18	
	100 130 160	100 248 130 296 160 312	100 248 27 130 296 30 160 312 34	100 248 27 25 130 296 30 25 160 312 34 25	SBD A B C D 100 248 27 25 16 130 296 30 25 18 160 312 34 25 18 200 378 44 25 18

2 KGS of power in this direction
Produce 1KG of downward.
Down thrust "semi-sphere segment"

Mechanism-eliminates jaw lift and work-

THE WHOLE SWIVEL BASE BY MADE OF STEEL BY HARDNESS AND TAKE UP WEAR AND MAINTAIN ACCURACY FOR LONG

#### STANDARD ACCESSORIES OPTIONAL ACCESSORIES

1.Handle X 1 pc 2.Guide key X 2pcs M6 X 10L X 2pcs 3.Chip cover X 1 set

4. Vise locked block X 4 pcs

1.Special Application Jaw Plates (P.35.36)

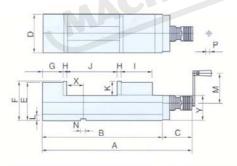
2.Work-piece Stopper

3.Swivel Base - SBD (Steel) 4.Swivel Base-SB (Cast Iron)

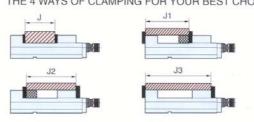


piece tilt.

MAX.OPENING CAPACITY



#### THE 4 WAYS OF CLAMPING FOR YOUR BEST CHOICE



- 1	1	ni	t-	m	n

ORDER NO.	MODEL	Α	В	C	D	E	F	G	Н	1	J	J1	J2	J3
07120100	CHV-100V	470	340	130	101	130	133	65	15	105	0-125	125-190	125-230	125-320
07120130	CHV-130V	535	405	130	131	147	150	70	15	115	0-180	180-240	180-290	180-380
07120160	CHV-160V	625	495	130	161	160	163	85	15	130	0-240	240-320	240-360	240-470
07120200	CHV-200V	700	570	130	201	170	173	90	18	150	0-280	280-360	280-420	280-540

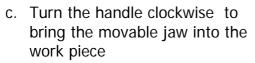
ORDER NO.	MODEL	K	L	M	N	P	X	X=-8.02	Y	Y=.0.02	MAX.PRESSURE	LIMIT.PRESSURE	N.W.	G.W.	SHIPMENT SIZE
07120100	CHV-100V	48	22	125	16	14	45	Yes	85	Yes	3500kgf	4000kgf	27kg	34kg	680x170x230
07120130	CHV-130V	55	22	125	18	14	65	Yes	95	Yes	4500kgf	5000kgf	40kg	48kg	780x200x240
07120160	CHV-160V	58	22	125	18	14	65	Yes	105	Yes	5500kgf	6500kgf	58kg	65kg	800x240x260
07120200	CHV-200V	63	22	125	18	14	82	Yes	110	Yes	7000kgf	8000kgf	87kg	99kg	860x280x270

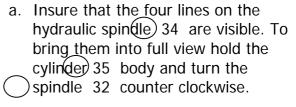
## **OPERATING INSTRUCTIONS**

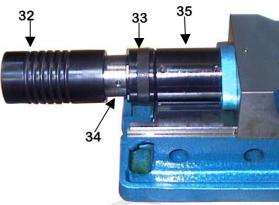
#### 1. CLAMPING WITH HYDRAULIC POWER



b. Slide the collar 33 to the non en-gauge position.







d. The vice will lock up as a mechanical vice. When the handle starts to tighten bump the handle sharply clock wise with your hand and the hydraulic mechanism will commence. The spindle 34 will remain stationary and the outer handle



will turn.

e. The lines engraved on spindle 34 can be used as a guide to indicate the amount of pressure applied to the job. Maximum pressure is obtained when all the lines have been covered.

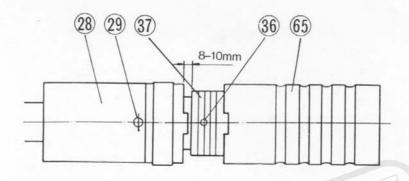


f. To undo the vice wind the handle anti clock wise. The outer spindle 32 will rotate with 34 remaining stationary until the hydraulic system has reached its home position the spindle 34 will rotate to undo the mechanical side of the system.

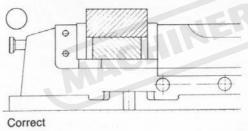


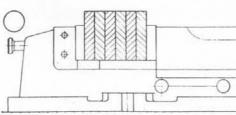
### HOW TO PUT OIL INTO BOSTER AS FOLLOWING: (PAT. 45716)

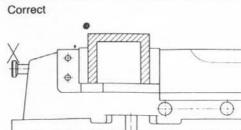
- 1. Hold the cylinder (28), knock handle clockwise until the clutch (38) 39 non-engagement.
- 2. Loosen oil hole plug @, and continue turn handle clockwise, until the air from boster by pressed.
- 3. Drop oil (R-68) into the boster hole , simultaneous turn handle counter clockwise. Untile the boster oil full. (Maybe twice)
- 4. Tightly the boster plug @ and try clamping.
- 5. Loosen set screw 39 and boster plug 29 again.
- 6. Hold the cylinder (28), use handle turn collar (69) counter clockwise simultaneous drop oil into boster again. Until the cylinder 30 loosen 8-10m/m, then tightly boster plug 29 and turn collar 65 clockwise tightly set screw 3 . You can finished pre-pressure.
- 7. Check clamping force whether OK!



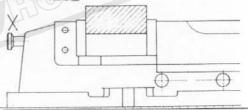
#### HOW TO CORRECT CLAMPING YOUR WORKPIECE



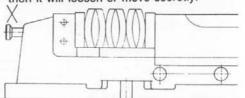




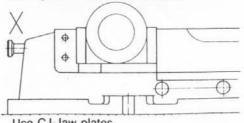
The workpiece itself will become bendable after clamping.



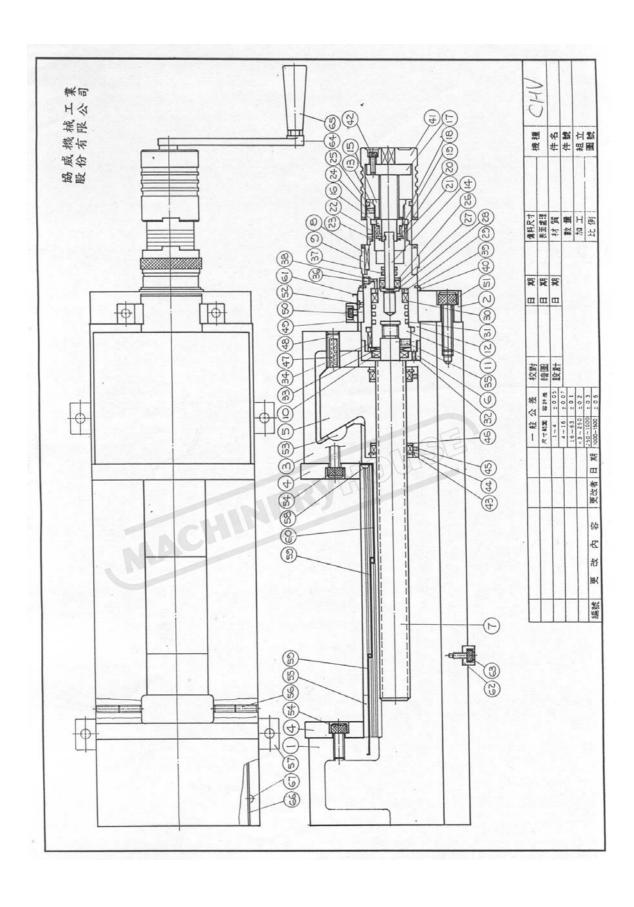
The bottom of workpiece is suspensible and it is not easy to take the resistance of cutting, then it will loosen or move secretly.



The workpiece itself is difficult to clamp and easing deformed after clamping.



Use CJ-Jaw plates



**PART LISTS** 

MODEL:CHV-100V MECH./HYDR. MC COMPACT VISE.

NO.	Computer No.	Part No.	Part Name	Q'ty	Specification	Remark
1	07120100-001	CHV-100-001	MAIN BODY	1		
2	07120100-002	CHV-100-002	MAIN SCREW SUPPORT	1		
3	07120100-003	CHV-100-003	MOVABLE	1		
4	07120100-004	CHV-100-004	JAW PLATES	2		100
5	07120100-005	CHV-100-005	LOCK DOWN BODY	1		E.
6	07120160-006	CHV-160-006	SEAL COVER	1		
7	07120100-007	CHV-100-007	MAIN SCREW	1		
8	07800160-029	PHV-160-029	KEY	1	12X25X5	
9	07120160-008	CHV-160-008	COLLAR	1		
10	OS352007	OS352007	CHIP SEAL	1	35X20X7	
11	07120160-009	CHV-160-009	PISTON	1		
12	07120160-010	CHV-160-010	CYLINDER BODY	1	•	
13	07120160-011	CHV-160-011	SLEEVE	1		
14	07120160-012	CHV-160-012	POWER PUSH ROD	1	YL E-1	
15	07800160-034	PHV-160-034	CLUTCH([山])	1		
16	07800160-033	PHV-160-033	CLUTCH(LT)	1		
17	07800160-035	PHV-160-035	MINOR SCREW ROD	1		
18	R04X4	RO4X4	ROLLER	4	4X4M/M	
19	07800160-037	PHV-160-037	CLUTCH SPRING	1		
20	07800160-036	PHV-160-036	CLUTCH WASHER	1		
21	SR-S-14	SR-S-14	SNAP RING	1	S-14	
22	SB03	SB03	STEEL BALL	1	3M/M	
23	SSM06X08L	SSM06X08L	SET SCREW	1	M6X8L	
24	SSM06X08L	SSM06X08L	SET SCREW	2	M6X8L	
25	SB04	SB04	STEEL BALL	26	4M/M	
26	07800160-027	PHV-160-027	BACKUP RING	1		
27	OS201006	OS201006	OIL-SEAL	1	20X10X06	
28	07800160-021	PHV-160-021	PACKING RING	1		
29	07800160-026	PHV-160-026	BOSTER RING	1		
30	OS352508	OS352508	OIL-SEAL	1		
31	OR-P-28	OR-P-28	O-RING	1	P-28	
32	SSM06X10L	SSM06X10L	SET SCREW	1	M6X10L	
33	DS204015	DS204015	DISC SPRING	1	20X40X1.5	
34	07120160-013	07120160-013	KEY	1		
35	SSM06X08L	SSM06X08L	SET SCREW	1	M6X8L	
36	07800160-024	PHV-160-024	OIL PLUG	1		
37	OR-P-10	OR-P-10	O-RING	2	P-10	
38	07800160-025	PHV-160-025	OIL PLUG SEAL	1		
39	WS212	WS212	SNAP RING	1		
40	07120160-015	CHV-160-015	SNAP RING WASHER	1		

MODEL:CHV-100V MECH./HYDR. MC COMPACT VISE.

### PART LISTS

41	07120160-016	CHV-160-016	COLLAR	1	MESS SEE N
42	SCM05X16	SCM05X16	SOCKET CAP SCREW	3	M5X16L
43	SR-R-42	SR-R-42	SNAP RING	2	R42
44	07120160-020	CHV-160-020	CHIP SEAL	2	
45	SSM06X08L	SSM06X08L	SET SCREW	2	M6X8L
46	WS6203	WS6203	SPRING WASHER	4	6203
47	07120160-021	CHV-160-021	SPRING WASHER	1	
48	07120130-022	CHV-130-022	ADJUSTING SCREW	1	
49	07120160-023	CMV-160-023	CHIP COVER BLOCK	2	
50	SCM06X10L	SCM06X10L	SOCKET CAP SCREW	2	M6X10L
51	SCM12X40L	SCM12X40L	SOCKET CAP SCREW	4	M12X40L
52	OC-1/4"	OC-1/4"	OIL CAP	1	1/4"
53	07800160-006	PHV-160-006	SEMI-SPHERE SEGMENT	1	
54	SCM10X20L	SCM10X20L	SOCKET CAP SCREW	4	M10X20L
55	07120100-024	CHV-100-024	CHIP COVER GUIDE	9	
56	SSM06X08L	SSM06X08L	SET SCREW	4	M6X8L
57	07120160-025	CHV-160-025	VISE CLAMP BLOCK	4	
58	SDM04X08L	SDM04X08L	ROUND SOCKET CAP SCREW	2	M04X08L
59	07120160-026	CHV-100-026	CHIP COVER (FORWARD 1)	1	
60	07120160-027	CMV-100-027	CHIP COVER (FORWARD 2)	1	
61	07120160-028-1	CHV-100-028-1	CHIP COVER	1	50m/m
	07120160-028-2	CHV-100-028-2	CHIP COVER	1	100m/m
	07120160-028-3	CHV-100-028-3	CHIP COVER	1	150m/m
62	07800200-058	PHV-160-058	GUIDE KEY	2	16m/m
63	SCM06X10L	SCM06X10L	SOCKET CAP SCREW	2	M6X10L
64	07800160-054	PHV-160-054	HANDLE	1	
65	GR-001	GR-001	HANDLE GRIP	1	10m/m
66	07120160-029	CHV-160-029	NAME PLATES	2	CHV-100V
67	SDM04X08L	SDM04X08L	ROUND SET SCREW	4	M4X8L

PART LISTS

MODEL:CHV-130V MECH./HYDR. MC COMPACT VISE.

NO.	Computer No.	Part No.	Part Name	Q'ty	Specification	Remark
1	07120130-001	CHV-130-001	MAIN BODY	1		
2	07120130-002	CHV-130-002	MAIN SCREW SUPPORT	1		
3	07120130-003	CHV-130-003	MOVABLE	1		
4	07120130-004	CHV-130-004	JAW PLATES	2		Programme and the second
5	07120130-005	CHV-130-005	LOCK DOWN BODY	1		
6	07120160-006	CHV-160-006	SEAL COVER	1		
7	07120130-007	CHV-130-007	MAIN SCREW	i		
8	07800160-029	PHV-160-029	KEY	1	12X25X5	
9	07120160-008	CHV-160-008	COLLAR	1		la Page 1
10	OS352007	OS352007	CHIP SEAL	1	35X20X7	
11	07120160-009	CHV-160-009	PISTON	1		
12	07120160-010	CHV-160-010	CYLINDER BODY	1		
13	07120160-011	CHV-160-011	SLEEVE	1		
14	07120160-012	CHV-160-012	POWER PUSH ROD	1		
15	07800160-034	PHV-160-034	CLUTCH(凹)	51		
16	07800160-033	PHV-160-033	CLUTCH(LTI)	1		
17	07800160-035	PHV-160-035	MINOR SCREW ROD	1	the second	
18	R04X4	RO4X4	ROLLER	4	4X4M/M	
19	07800160-037	PHV-160-037	CLUTCH SPRING	1		
20	07800160-036	PHV-160-036	CLUTCH WASHER	1	/ ESE Hin	
21	SR-S-14	SR-S-14	SNAP RING	1	S-14	
22	SB03	SB03	STEEL BALL	1	3M/M	
23	SSM06X08L	SSM06X08L	SET SCREW	1	M6X8L	
24	SSM06X08L	SSM06X08L	SET REW	2	M6X8L	
25	SB04	SB04	STEEL BALL	26	4M/M	
26	07800160-027	PHV-160-027	BACKUP RING	1		
27	OS201006	OS201006	OIL-SEAL	1	20X10X06	
28	07800160-021	PHV-160-021	PACKING RING	1		
29	07800160-026	PHV-160-026	BOSTER RING	1		
30	OS352508	OS352508	OIL-SEAL	1	35X25X08	
31	OR-P-28	OR-P-28	O-RING	1	P-28	
32	SSM06X10L	SSM06X10L	SET SCREW	1	M6X10L	
33	DS204015	DS204015	DISC SPRING	1	20X40X1.5	
34	07120160-013	07120160-013	KEY	1	10X4X15L	
35	SSM06X08L	SSM06X08L	SET SCREW	1	M6X8L	
36	07800160-024	PHV-160-024	OIL PLUG	1		
37	OR-P-10	OR-P-10	O-RING	2	P-10	
38	07800160-025	PHV-160-025	OIL PLUG SEAL	1		
39	WS212	WS212	SNAP RING	1		
40	07120160-015	CHV-160-015	SNAP RING WASHER	1		

**PART LISTS** 

MODEL:CHV-130V MECH./HYDR. MC COMPACT VISE.

41	07120160-016	CHV-160-016	COLLAR	1	
42	SCM05X16	SCM05X16	SOCKET CAP SCREW	3	M5X16L
43	SR-R-42	SR-R-42	SNAP RING	2	R42
44	07120160-020	CHV-160-020	CHIP SEAL	2	
45	SSM06X08L	SSM06X08L	SET SCREW	2	M6X8L
46	WS6203	WS6203	SPRING WASHER	4	6203
47	07120160-021	CHV-160-021	SPRING WASHER	1	
48	07120130-022	CHV-130-022	ADJUSTING SCREW	1	
49	07120160-023	CMV-160-023	CHIP COVER BLOCK	2	
50	SCM06X10L	SCM06X10L	SOCKET CAP SCREW	2	M6X10L
51	SCM10X40L	SCM10X40L	SOCKET CAP SCREW	4	M10X40L
52	OC-1/4"	OC-1/4"	OIL CAP	1	1/4"
53	07800160-006	PHV-160-006	SEMI-SPHERE SEGMENT	1	
54	SCM10X20L	SCM10X20L	SOCKET CAP SCREW	4	M10X20L
55	07120130-024	CHV-100-024	CHIP COVER GUIDE	1	
56	SSM06X08L	SSM06X08L	SET SCREW	4	M6X8L
57	07120160-025	CHV-160-025	VISE CLAMP BLOCK	4	
58	SDM04X08L	SDM04X08L	ROUND SOCKET CAP SCREW	2	M04X08L
59	07130130-026	CHV-100-026	CHIP COVER (FORWARD 1)	1	
60	07120130-027	CMV-100-027	CHIP COVER (FORWARD 2)	1	
61	07120130-028-1	CHV-130-028-1	CHIP COVER	1	50m/m
	07120130-028-2	CHV-130-028-2	CHIP COVER	1	100m/m
	07120130-028-3	CHV-130-028-3	CHIP COVER	1	150m/m
	07120130-028-4	CHV-130-028-4	CHIP COVER	1	200m/m
62	07800200-058	PHV-160-058	GUIDE KEY	2	18m/m
63	SCM06X10L	SCM06X10L	SOCKET CAP SCREW	2	M6X10L
64	07800100-054	07800100-054	HANDLE	1	
65	GR-001	GR-001	HANDLE GRIP	1	10m/m
66	07120130-029	CHV-130-029	NAME PLATES	2	
67	SDM04X08L	SDM04X08L	ROUND SET SCREW	4	M4X8L

MODEL:CHV-160V
MECH./HYDR, MC COMPACT VISE.

PART LISTS DATE:8 JULY. 1998

Computer No.07120160

NO. Computer No. Part No. Part Name Q'ty Specification Remark 07120160-001 CHV-160-001 MAIN BODY 1 07120160-002 CHV-160-002 MAIN SCREW SUPPORT 1 3 07120160-003 CHV-160-003 MOVABLE 1 4 07120160-004 CHV-160-004 2 JAW PLATES 5 07120160-005 CHV-160-005 LOCK DOWN BODY 1 07120160-006 6 CHV-160-006 SEAL COVER 1 07120160-007 CHV-160-007 1 MAIN SCREW 8 07800160-029 PHV-160-029 KEY 12X25X5 07120160-008 CHV-160-008 COLLAR 1 10 OS352007 OS352007 CHIP SEAL 35X20X7 11 07120160-009 CHV-160-009 **PISTON** 1 12 07120160-010 CHV-160-010 CYLINDER BODY 1 07120160-011 CHV-160-011 SLEEVE 14 07120160-012 CHV-160-012 POWER PUSH ROD 07800160-034 PHV-160-034 CLUTCH(凹) 9 16 07800160-033 PHV-160-033 CLUTCH(凸) 1 17 07800160-035 PHV-160-035 MINOR SCREW ROD 1 18 R04X4 RO4X4 ROLLER 4 4X4M/M 07800160-037 19 PHV-160-037 CLUTCH SPRING 07800160-036 20 PHV-160-036 CLUTCH WASHER 1 SR-S-14 21 SR-S-14 SNAP RING 1 S-14 22 SB03 **SB03** STEEL BALL 1 3M/M 23 SSM06X08L SSM06X08L SET SCREW M6X8L 24 SSM06X08L SSM06X08L SET SCREW 2 M6X8L 25 **SB04 SB04** STEEL BALL 26 4M/M 07800160-027 PHV-160-027 26 BACKUP RING OS201006 27 OS201006 OIL-SEAL 1 20X10X06 28 07800160-021 PHV-160-021 PACKING RING 1 29 07800160-026 PHV-160-026 **BOSTER RING** 1 30 OS352508 OS352508 OIL-SEAL 1 35X25X08 31 OR-P-28 OR-P-28 O-RING P-28 1 SSM06X10L SSM06X10L SET SCREW M6X10L 33 DS204015 DS204015 DISC SPRING 20X40X1.5 34 07120160-013 07120160-013 KEY 1 10X4X15L 35 SSM06X08L SSM06X08L SET SCREW 1 M6X8L 36 07800160-024 PHV-160-024 OIL PLUG 1 37 OR-P-10 OR-P-10 2 O-RING P-10 38 07800160-025 PHV-160-025 OIL PLUG SEAL 1 39 WS212 WS212 SNAP RING 1 40 07120160-015 CHV-160-015 SNAP RING WASHER

MODEL:CHV-160V MECH./HYDR. MC COMPACT VISE.

## PART LISTS DATE:8 JULY. 1998

Computer No.07120160

41	07120160-016	CHV-160-016	COLLAR	1	
42	SCM05X16	SCM05X16	SOCKET CAP SCREW	3	M5X16L
43	SR-R-42	SR-R-42	SNAP RING	2	R42
44	07120160-020	CHV-160-020	CHIP SEAL	2	
45	SSM06X08L	SSM06X08L	SET SCREW	2	M6X8L
46	WS6203	WS6203	SPRING WASHER	4	6203
47	07120160-021	CHV-160-021	SPRING WASHER	1	
48	07120160-022	CHV-160-022	ADJUSTING SCREW	1	
49	07120160-023	CMV-160-023	CHIP COVER BLOCK	2	
50	SCM06X10L	SCM06X10L	SOCKET CAP SCREW	2	M6X10L
51	SCM12X40L	SCM12X40L	SOCKET CAP SCREW	4	M12X40L
52	OC-1/4"	OC-1/4"	OIL CAP	1	1/4"
53	07800160-006	PHV-160-006	SEMI-SPHERE SEGMENT	1	
54	SCM10X20L	SCM10X20L	SOCKET CAP SCREW	4	M10X20L
55	07120160-024	CHV-160-024	CHIP COVER GUIDE	a\	
56	SSM06X08L	SSM06X08L	SET SCREW	24	M6X8L
57	07120160-025	CHV-160-025	VISE CLAMP BLOCK	4	
58	SDM04X08L	SDM04X08L	ROUND SOCKET CAP SCREW	2	M04X08L
59	07120160-026	CHV-160-026	CHIP COVER (FORWARD 1)	1	and the second second
60	07120160-027	CMV-160-027	CHIP COVER (FORWARD 2)	1	
61	07120160-028-1	CHV-160-028-1		1	60m/m
	07120160-028-2	CHV-160-028-2	CHIP COVER	1	110m/m
	07120160-028-3	CHV-160-028-3	CHIP COVER	1	160m/m
	07120160-028-4	CHV-160-028-4	CHIP COVER	1	210m/m
	07120160-028-5	CHV-160-028-5	CHIP COVER	1	260m/m
62	07800200-058	PHV-200-058	GUIDE KEY	2	18m/m
63	SCM06X10L	SCM06X10L	SOCKET CAP SCREW	2	M6X10L
64	07800160-054	PHV-160-054	HANDLE	1	
65	GR-001	GR-001	HANDLE GRIP	1	10m/m
66	07120160-029	CHV-160-029	NAME PLATES	2	
67	SDM04X08L	SDM04X08L	ROUND SET SCREW	4	M4X8L

PART LISTS

MODEL:CHV-200V

DATE:8 JULY. 1998

NO.	H./HYDR. MC C Computer No.	Part No.	Part Name	Q'ty	Computer No Specification	Remark
1	07120200-001	CHV-200-001	MAIN BODY	1	Specification	rcomun
2	07120200-002	CHV-200-002	MAIN SCREW SUPPORT	1		
3	07120200-003	CHV-200-003	MOVABLE	1		
4	07120200-004	CHV-200-004	JAW PLATES	2		-
5	07120200-005	CHV-200-005	LOCK DOWN BODY	1		
6	07120200-006	CHV-200-006	SEAL COVER	1		
7	07120200-007	CHV-200-007	MAIN SCREW	1		1
8	07800160-029	PHV-160-029	KEY	1	12X25X5	
9	07120200-008	CHV-200-008	COLLAR	1		
10	OS352007	OS352007	CHIP SEAL	1	35X20X7	
11	07120160-009	CHV-160-009	PISTON	1		
12	07120160-010	CHV-160-010	CYLINDER BODY	1		
13	07120160-011	CHV-160-011	SLEEVE	1		
14	07120160-012	CHV-160-012	POWER PUSH ROD	1		
15	07800160-034	PHV-160-034	CLUTCH(凹)	1		
16	07800160-033	PHV-160-033	CLUTCH(LLI)	51		
17	07800160-035	PHV-160-035	MINOR SCREW ROD	1		
18	R04X4	RO4X4	ROLLER	4	4X4M/M	
19	07800160-037	PHV-160-037	CLUTCH SPRING	1	200	18186
20	07800160-036	PHV-160-036	CLUTCH WASHER	1		
21	SR-S-14	SR-S-14	SNAP RING	1	S-14	
22	SB03	SB03	STEEL BALL	1	3M/M	
23	SSM06X08L	SSM06X08L	SET SCREW	1	M6X8L	
24	SSM06X08L	SSM06X08L	SET SCREW	2	M6X8L	
25	SB04	SB04	STEEL BALL	26	4M/M	
26	07800160-027	PHV-160-027	BACKUP RING	1	1412212	
27	OS201006	OS201006	OIL-SEAL	1	20X10X06	
28	07800160-021	PHV-160-021	PACKING RING	1		
29	07800160-026	PHV-160-026	BOSTER RING	1	744	
30	OS352508	OS352508	OIL-SEAL	1	35X25X08	
31	OR-P-28	OR-P-28	O-RING	1	P-28	
32	SSM06X10L	SSM06X10L	SET SCREW	1	M6X10L	
33	DS204015	DS204015	DISC SPRING	1	20X40X1.5	
34	07120160-013	07120160-013	KEY	- 1	10X4X15L	
35	SSM06X08L	SSM06X08L	SET SCREW	1	M6X8L	
36	07800160-024	PHV-160-024	OIL PLUG	1		
37	OR-P-10	OR-P-10	O-RING	2	P-10	
38	07800160-025	PHV-160-025	OIL PLUG SEAL	1	37.5	1
39	WS212	WS212	SNAP RING	1		
40	07120160-015	CHV-160-015	SNAP RING WASHER	1		
41	07120160-016	CHV-160-016	COLLAR	1		-

MODEL:CHV-200V

## PART LISTS

DATE:8 JULY. 1998

ODDD.CII , Z	.00 +			
MECH./HYDR.	MC	COMP	ACT	VISE.

	H./HYDR. MC CO				Computer No.0712020
42	SCM05X16	SCM05X16	SOCKET CAP SCREW	3	M5X16L
43	SR-R-42	SR-R-42	SNAP RING	2	R47
44	07120200-020	CHV-200-020	CHIP SEAL	2	
45	SSM06X08L	SSM06X08L	SET SCREW	2	M6X8L
46	WS6204	WS6204	SPRING WASHER	4	6204
47	07120160-021	CHV-160-021	SPRING WASHER	1	
48	07120200-022	CHV-200-022	ADJUSTING SCREW	1	
49	07120160-023	CMV-160-023	CHIP COVER BLOCK	2	
50	SCM06X10L	SCM06X10L	SOCKET CAP SCREW	2	M6X10L
51	SCM12X40L	SCM12X40L	SOCKET CAP SCREW	4	M12X40L
52	OC-1/4"	OC-1/4"	OIL CAP	1	1/4"
53	07800200-006	PHV-200-006	SEMI-SPHERE SEGMENT	1	
54	SCM HX20L	SCMHOX30L	SOCKET CAP SCREW	4	M10X20L
55	07120200-024	CHV-200-024	CHIP COVER GUIDE	1	
56	SSM06X08L	SSM06X08L	SET SCREW	4	M6X8L
57	07120160-025	CHV-160-025	VISE CLAMP BLOCK	4	
58	SDM04X08L	SDM04X08L	ROUND SOCKET CAP SCREW	2	M04X08L
59	07120200-026	CHV-200-026	CHIP COVER (FORWARD 1)	1	
60	07120200-027	CMV-200-027	CHIP COVER (FORWARD 2)	1	
61	07120200-028-1	CHV-200-028-1	CHIP COVER	1	60m/m
	07120200-028-2	CHV-200-028-2	CHIP COVER	1	110m/m
	07120200-028-3	CHV-200-028-3	CHIP COVER	1	160m/m
	07120200-028-4	CHV-200-028-4	CHIP COVER	1	210m/m
	07120200-028-5	CHV-200-028-5	CHIP COVER	1	260m/m
	07120200-028-6	CHV-200-028-6	CHIP COVER	1	310m/m
62	07800200-058	PHV-200-058	GUIDE KEY -	2	18m/m
63	SCM06X10L	SCM06X10L	SOCKET CAP SCREW	2	M6X10L
64	07800160-054	PHV-160-054	HANDLE	1	
65	GR-001	GR-001	HANDLE GRIP	1	10m/m
66	07120160-029	CHV-160-029	NAME PLATES	2	
67	SDM04X08L	SDM04X08L	ROUND SET SCREW	4	M4X8L