

Trust and Reliability

# FIRST

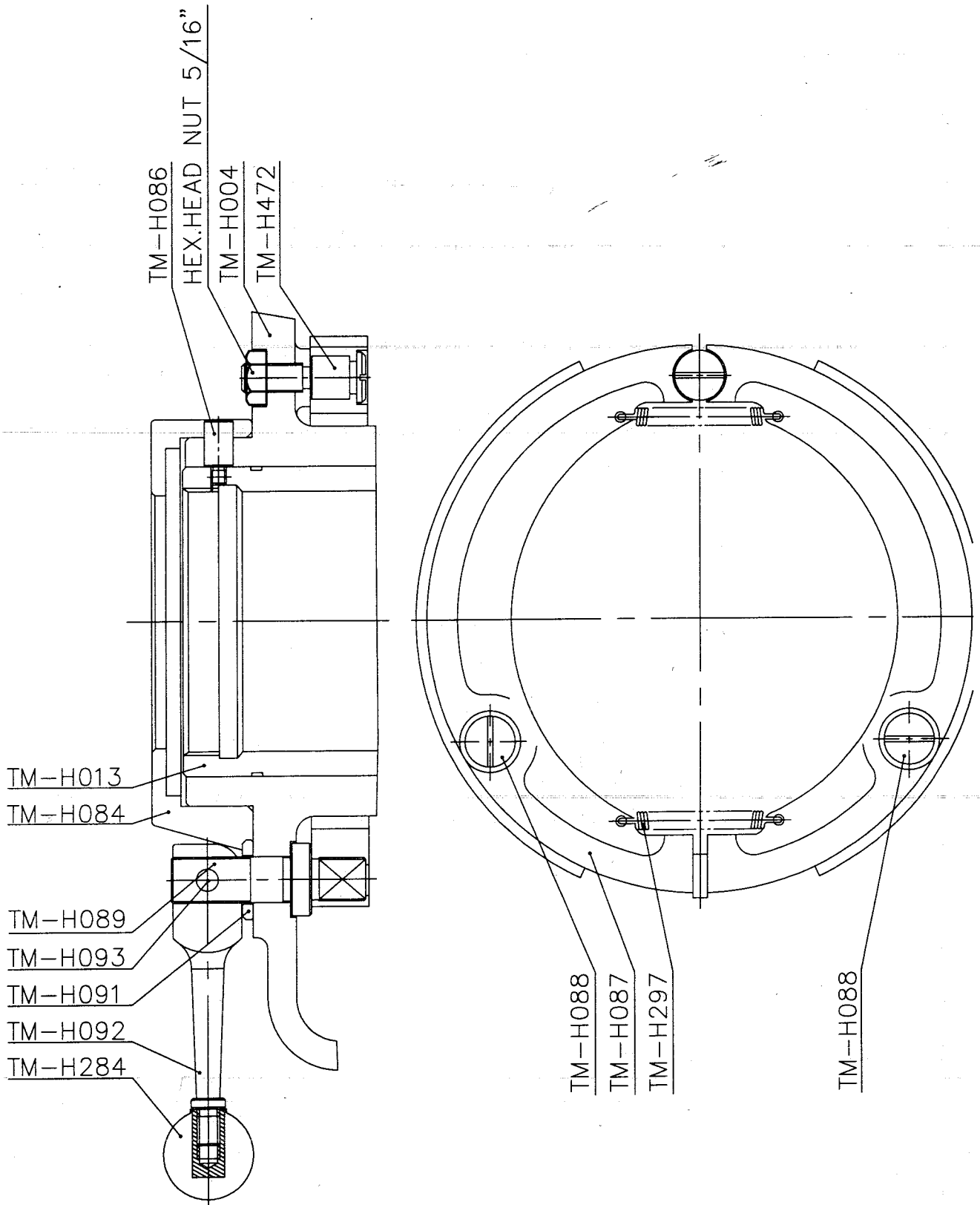
## ***PARTS LIST.***

### ***TM / VS HEAD***

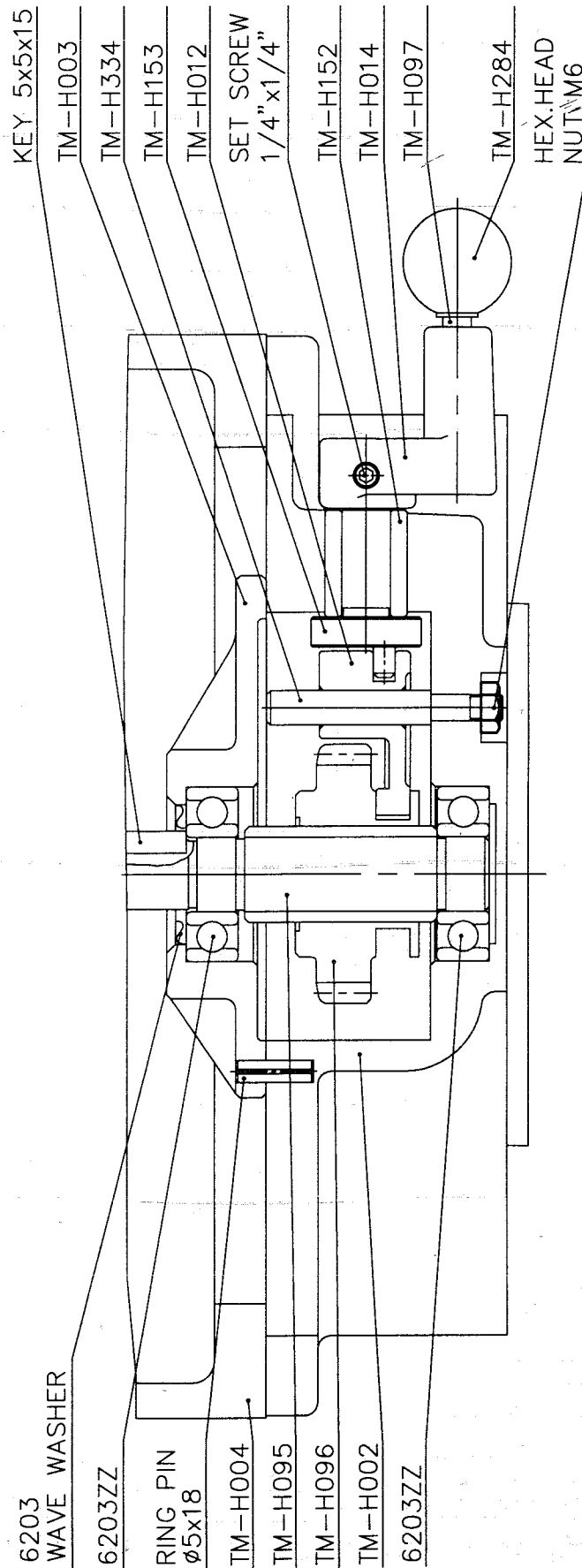
LONG CHANG MACHINERY CO., LTD.

2150-7721-100

PARTS NO		PC	DESCRIPTION	REMARKS
1	TM-H004	1	BELT HOUSINGG	
2	TM-H013	1	SPINDLE PULLEY BEARING SLEEVE	
3	TM-H084	1	CAM RING	
4	TM-H086	2	SPINDLE CLUTCH CAM RING PIN	
5	TM-H087	1	BRAKE BLOCK	
6	TM-H088	2	BRAKE RING SCREW	
7	TM-H089	1	BRAKE LOCK STUD	
8	TM-H091	1	BRAKE LOCK WASHER	
9	TM-H092	1	BRAKE LOCK HANDLE	
10	TM-H093	1	BRAKE LOCK PIN	
11	TM-H284	1	BLACK PLASTIC BALL	
12	TM-H297	2	SPRING	
13	TM-H472	1	BRAKE RING SCREW	
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PARTS NO		PC	DESCRIPTION	REMARKS
1	TM-H002	1	GEAR HOUSING	
2	TM-H003	1	GEAR HOUSING COVER	
3	TM-H004	1	BELT HOUSING	
4	TM-H012	1	BACK GEAR SHIFTER FORK	
5	TM-H014	1	SHIFT CRANK	
6	TM-H095	1	COUNTER SHAFT	
7	TM-H096	1	COUNTER SHAFT GEAR	
8	TM-H097	1	GEAR SHAFT PLUNGER	
9	TM-H152	1	BACK GEAR SHAFT BUSHING	
10	TM-H153	1	BACK GEAR SHAFT CRANK	
11	TM-H284	1	BLACK PLASTIC BALL	
12	TM-H334	1	SUB GEAR SHAFT	
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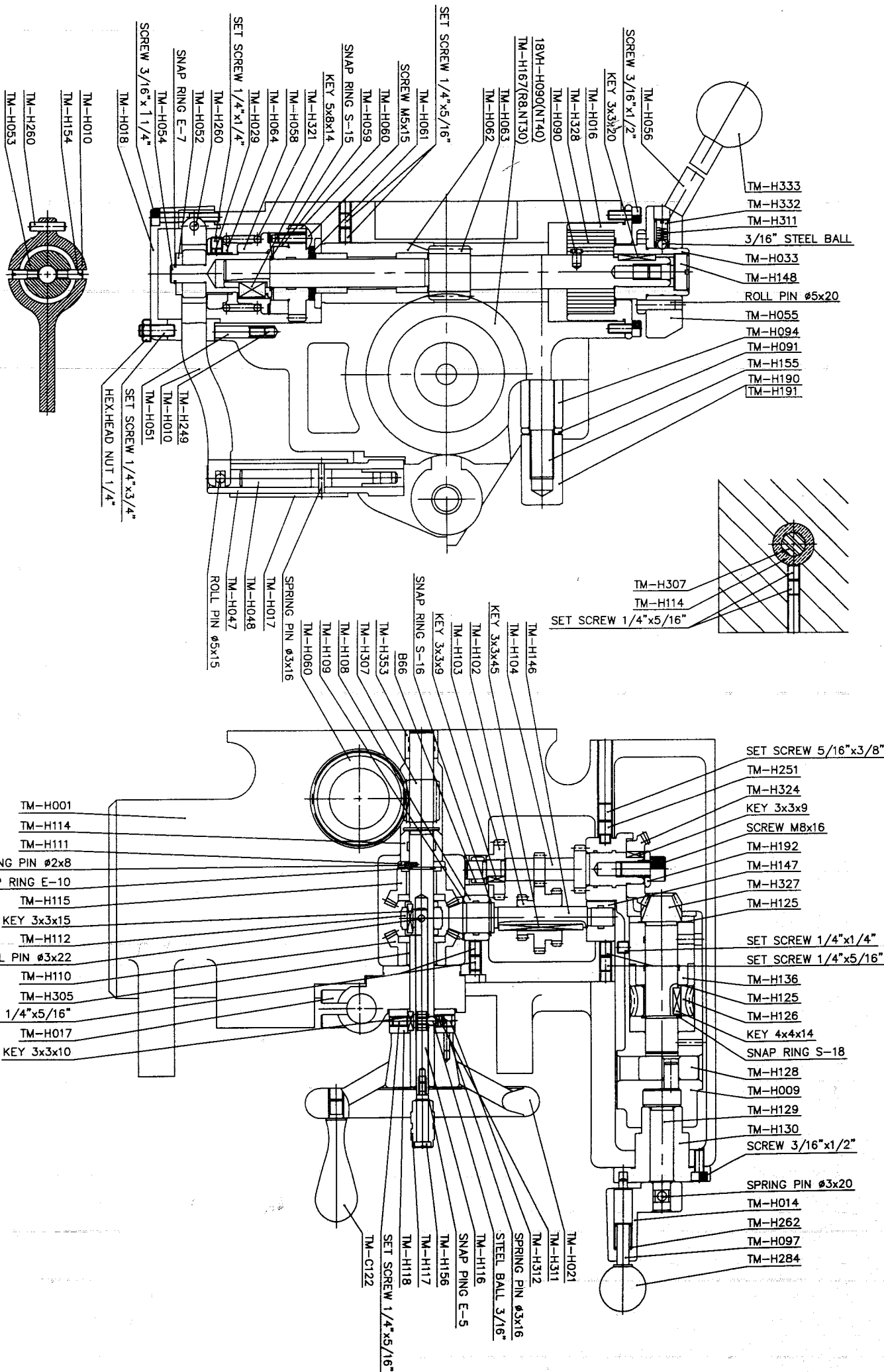


PARTS NO		PC	DESCRIPTION	REMARKS
1	TM-H001	1	QUILL HOUSING	
2	TM-H009	1	WORM GEAR CRADLE	
3	TM-H010	1	OVERLOAD CLUTCH TRIP LEVER	
4	TM-H014	1	SHIFT CRANK	
5	TM-H016	1	SPRING COVER	
6	TM-H017	1	FEED TRIP BRACKET	
7	TM-H018	1	CLUTCH ARM COVER	
8	TM-H021	1	HAND WHEEL	
9	TM-H029	1	SPINDLE LOCKNUT BINDING	
10	TM-H033	1	PINION SHAFT HUB SLEEVE	
11	TM-H047	1	CAM ROD SLEEVE ASSEMBLY	
12	TM-H048	1	CAM ROD	
13	TM-H051	1	OVERLOAD CLUTCH LEVER SPRING PLUNGER	
14	TM-H052	1	OVERLOAD CLUTCH WASHER	
15	TM-H053	1	CLUTCH RING	
16	TM-H054	1	OVERLOAD CLUTCH SLEEVE	
17	TM-H055	1	PINION SHAFT HUB	
18	TM-H056	1	PINION SHAFT HUB HANDLE	
19	TM-H058	1	OVERLOAD CLUTCH	
20	TM-H059	1	OVERLOAD CLUTCH RING	
21	TM-H060	1	OVERLOAD CLUTCH WORM GEAR	
22	TM-H061	1	PINION SHAFT WORM GEAR SPACER	
23	TM-H062	1	QUILL PINION SHAFT BUSHING	
24	TM-H063	1	QUILL PINION SHAFT	
25	TM-H064	1	QUILL PINION OVERLOAD CLUTCH LOCK NUT	
26	TM-H090	1	LOCK SPRING STUD	
27	TM-H091	1	BRAKE LOCK WASHER	
28	TM-H094	2	LOWER CLAMPING BOLT SPACER	
29	TM-H097	1	GEAR SHAFT PLUNGER	
30	TM-H102	1	FEED DRIVE CLUSTER GEAR	
31	TM-H103	1	FEED DRIVE GEAR	
32	TM-H104	1	CLUSTER GEAR INPUT SHAFT	
33	TM-H108	1	BEVEL GEAR BEARING	
34	TM-H109	1	BEVEL GEAR THRUST SPACER	

PARTS NO		PC	DESCRIPTION	REMARKS
35	TM-H110	1	FEED REVERSE BEVEL GEAR	
36	TM-H111	1	FEED WORM SHAFT THRUST WASHER	
37	TM-H112	1	FEED REVERSE CLUTCH	
38	TM-H114	1	FEED WORM SHAFT BUSHING	
39	TM-H115	1	FEED REVERSE BEVEL GEAR	
40	TM-H116	1	REVERSE CLUTCH ROD	
41	TM-H117	1	REVERSE KNOB	
42	TM-H118	1	HANDWHEEL CLUTCH	
43	TM-H125	2	WORM GEAR SPACER	
44	TM-H126	1	FEED DRIVE WORM GEAR	
45	TM-H128	1	FEED ENGAGE PIN	
46	TM-H129	1	WORM GEAR CRADLE THROW-OUT	
47	TM-H130	1	SHIFT SLEEVE	
48	TM-H136	1	WORM CRADLE BUSHING	
49	TM-H146	1	FEED REVERSE BEVEL PINION	
50	TM-H147	1	CLUSTER GEAR SHAFT UPPER BEARING	
51	TM-H148	1	PINION SHAFT HUB SAREW	
52	TM-H154	2	CLUTCH RING SCREW	
53	TM-H155	4	1/2" T-BOLT	
54	TM-H156	1	BOLT	
55	TM-H167	1	QUILL	
56	TM-H190	2	SPECIAL HEX NUT	
57	TM-H191	2	SPECIAL HEX NUT	
58	TM-H192	1	WASHER	
59	TM-H249	1	SPRING	
60	TM-H251	1	SOCKET SET SCREW	
61	TM-H260	1	ROLL PIN	
62	TM-H262	1	SPRING	
63	TM-H284	1	BLACK PLASTIC BALL	
64	TM-H305	2	SLEEVE	
65	TM-H307	1	WORM	
66	TM-H311	1	SPRING	
67	TM-H312	1	WASHER	
68	TM-H321	1	SAFETY CLUTCH SPRING	



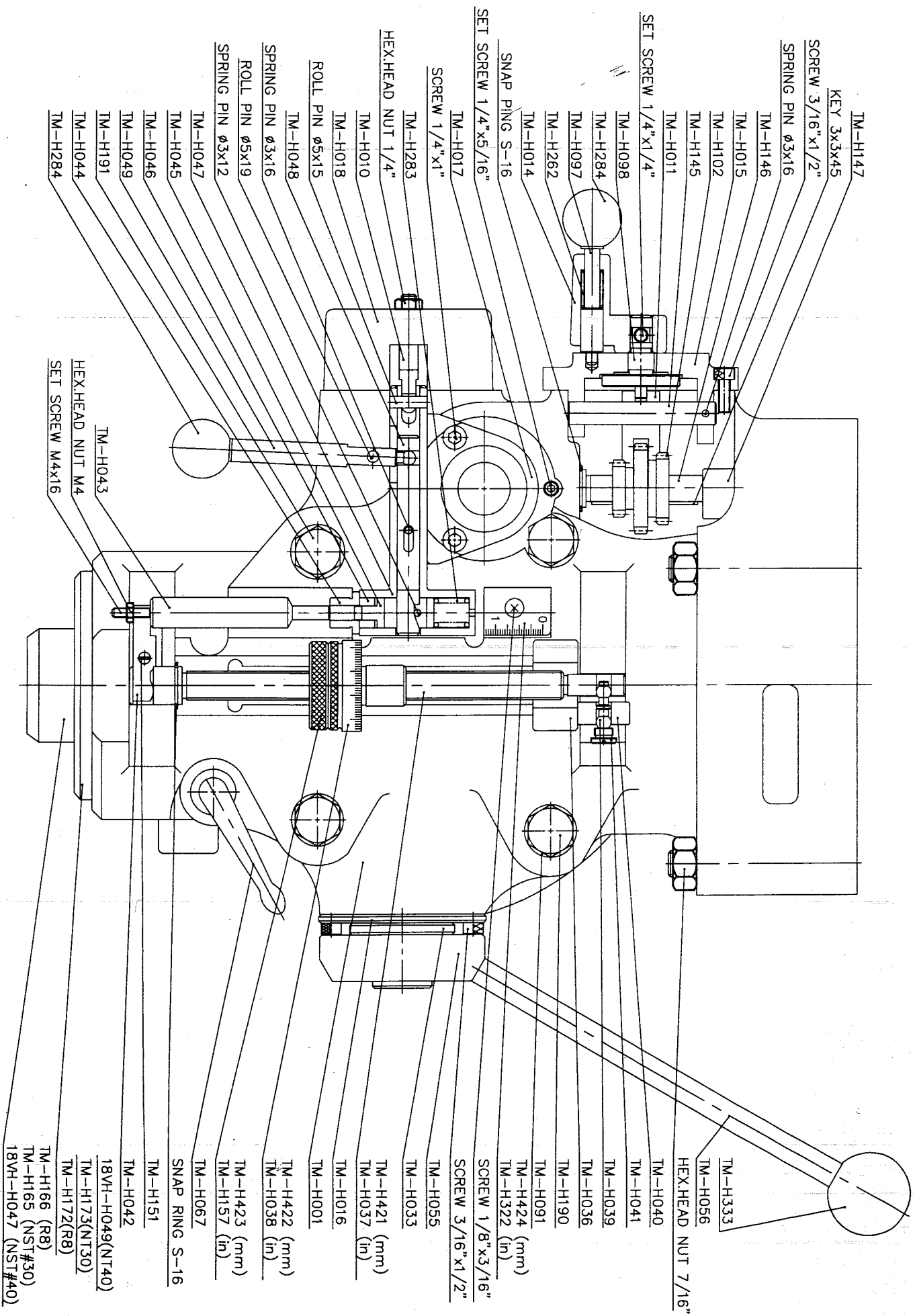




FILE NAME: TM/VS-04  
2150-7721-100

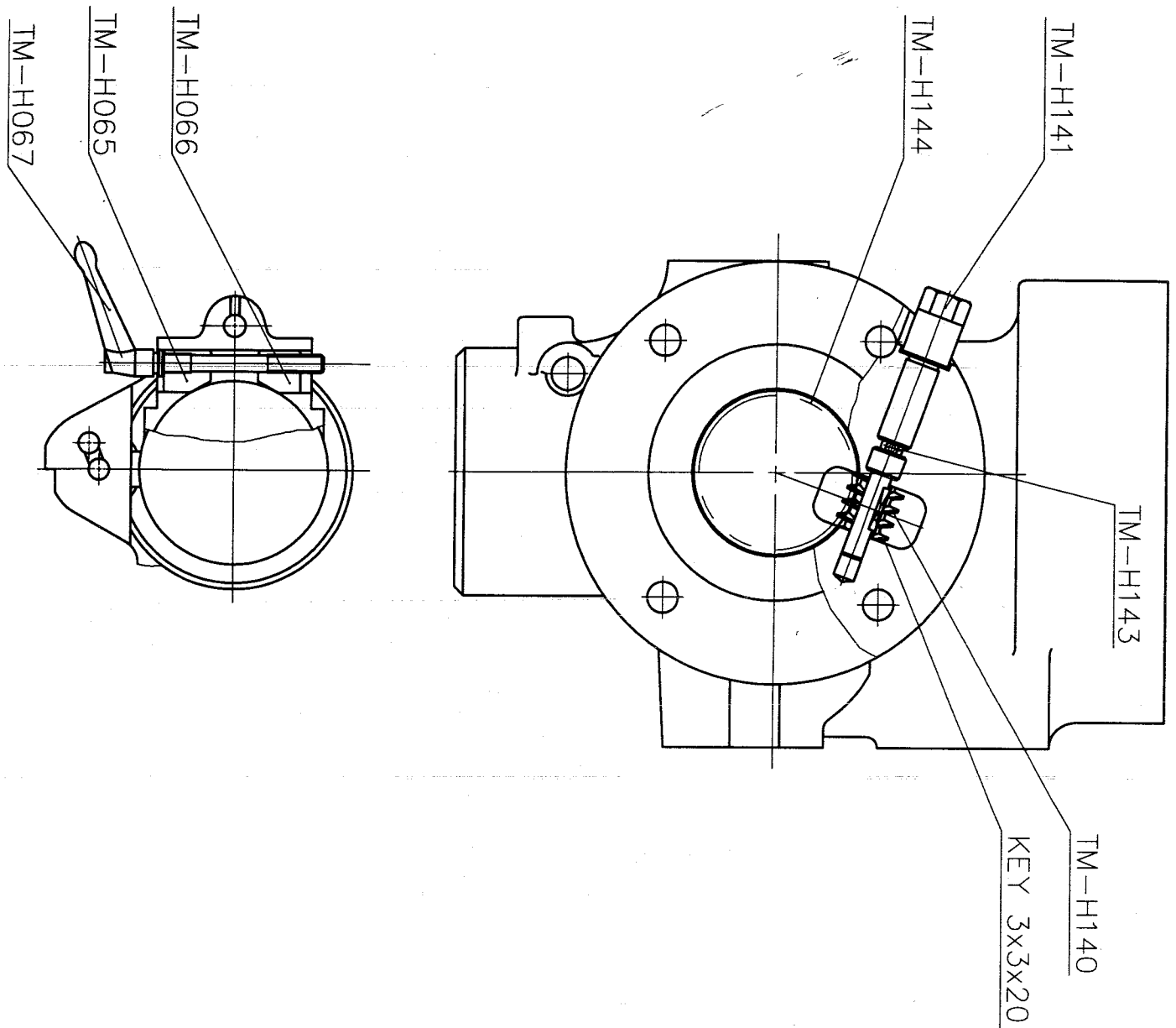
PARTS NO		PC	DESCRIPTION	REMARKS
1	TM-H001	1	QUILL HOUSING	
2	TM-H010	1	OVERLOAD CLUTCH TRIP LEVER	
3	TM-H011	1	FEED GEAR SHIFTER FORK	
4	TM-H014	1	SHIFT CRANK	
5	TM-H015	1	CLUSTER GEAR COVER	
6	TM-H016	1	SPRING COVER	
7	TM-H017	1	FEED TRIP BRACKET	
8	TM-H018	1	CLUTCH ARM COVER	
9	TM-H033	1	PINION SHAFT HUB SLEEVE	
10	TM-H036	1	QUILL STOP KNOB	
11	TM-H037	1	QUILL STOP MICRO SCREW (IN)	
12	TM-H038	1	MICROMETER SCALE (IN)	
13	TM-H039	1	REVERSE TRIP BALL LEVER	
14	TM-H040	1	FEED REVERSE TRIP PLUNGER	
15	TM-H041	1	REVERSE TRIP BALL LEVER SCREW	
16	TM-H042	1	FEED TRIP LEVER	
17	TM-H043	1	FEED TRIP PLUNGER	
18	TM-H044	1	TRIP PLUNGER BUSHING	
19	TM-H045	1	TRIP PLUNGER	
20	TM-H046	1	FEED TRIP PLUNGER BUSHING	
21	TM-H047	1	CAM ROD SLEEVE ASSEMBLY	
22	TM-H048	1	CAM ROD	
23	TM-H049	1	TRIP HAND	
24	TM-H055	1	PINION SHAFT HUB	
25	TM-H056	1	PINION SHAFT HUB HANDLE	
26	TM-H067	1	QUILL LOCK BOLT	
27	TM-H091	4	BRAKE LOCK WASHER	
28	TM-H097	1	GEAR SHAFT PLUNGER	
29	TM-H098	1	CLUSTER GEAR SHIFT CRANK	
30	TM-H102	1	FEED DRIVE CLUSTER GEAR	
31	TM-H145	1	FEED SHIFT ROD	
32	TM-H146	1	FEED REVERSE BEVEL PINION	
33	TM-H147	1	CLUSTER GEAR SHAFT UPPER BEARING	
34	TM-H151	1	TRIP LEVER PIN	





FILE NAME: TM/VS-07  
 2150-7721-100

PARTS NO		PC	DESCRIPTION	REMARKS
1	TM-H065	1	QUILL LOCK SLEEVE	
2	TM-H066	1	QUILL LOCK SLEEVE	
3	TM-H067	1	QUILL LOCK BOLT	
4	TM-H140	1	WARM GEAR	
5	TM-H141	1	WARM SHAFT	
6	TM-H143	1	SOCKET SET SCREW	
7	TM-H144	1	GEAR	
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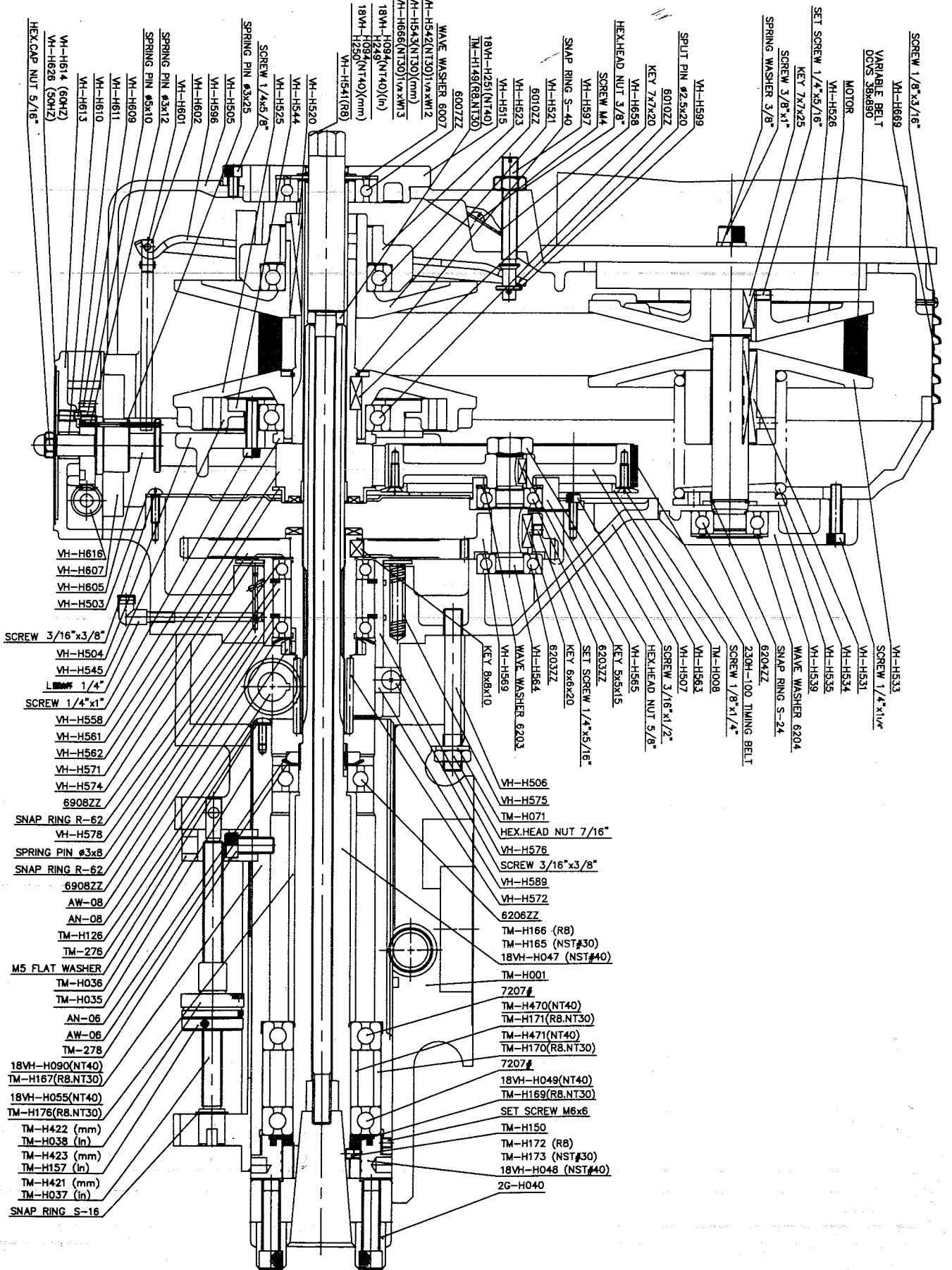


PARTS NO		PC	DESCRIPTION	REMARKS
1	TM-H001	1	QUILL HOUSING	
2	TM-H008	2	TIMING BELT PULLEY FLANGE	
3	TM-H035	1	QUILL SKIRT	
4	TM-H036	1	QUILL STOP KNOB	
5	TM-H037	1	QUILL STOP MICRO SCREW (IN)	
6	TM-H038	1	MICRO METER NUT (IN)	
7	TM-H071	3	VERTICAL TEE BOLT WASHER	
8	TM-H126	1	FEED DRIVE WORM GEAR	
9	TM-H149	1	DRAWBAR WASHER (R8)	
10	TM-H150	2	SOCKET SET SCREW	
11	TM-H157	1	QUILL MICRO STOP NUT (IN)	
12	TM-H165	1	SPINDLE (NT30)	
13	TM-H166	1	SPINDLE (R8)	
14	TM-H167	1	QUILL (R8 NT30)	
15	TM-H169	1	SPINDLE DIRT SHIELD	
16	TM-H170	1	BEARING SPACER (R8 NT30)	
17	TM-H171	1	BEARING SPACER (R8 NT30)	
18	TM-H172	1	NOSE PIECE (R8)	
19	TM-H173	1	NOSE PIECE (NT30)	
20	TM-H176	1	SLEEVE (R8 NT30)	
21	TM-H276	1	ROUND HD MACHINE SCREW	M5x12
22	TM-H278	1	SOCKET HD CAP SCREW	3/8"x5/8"
23	TM-H421	1	QUILL STOP MICRO SCREW	
24	TM-H422	1	MICRO METER NUT	
25	TM-H423	1	QUILL MICRO STOP NUT	
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PARTS NO		PC	DESCRIPTION	REMARKS
1	VH-H503	1	GEAR HOUSING PLATE	
2	VH-H504	1	BELT HOUSING (BOTTOM)	
3	VH-H505	1	BELT HOUSING (UP)	
4	VH-H506	3	STUDS	
5	VH-H507	1	GEAR HOUSING	
6	VH-H515	1	TOP BEARING CAP	
7	VH-H520	1	KEY	
8	VH-H521	1	ADJ DRIVEN VARI-DISC ASSEMBLY	
9	VH-H523	1	SLIDING HOUSING	
10	VH-H525	1	STATIONARY DRIVEN VARI-DISC	
11	VH-H526	1	STATIONARY MOTOR VARI-DISC	
12	VH-H531	1	SLIDING KEY	
13	VH-H533	1	ADJ MOTOR VARI-DISC	
14	VH-H534	1	SPRING	
15	VH-H535	1	SPRING WASHER	
16	VH-H539	1	MOTOR PULLEY COVER	
17	VH-H541	1	DRAWBAR (R8 6/17"x20UNF)	
18	VH-H542	1	DRAWBAR (NT30 1/2"xW12)	
19	VH-H543	1	DRAWBAR (NT30 M12xP1.75)	
20	VH-H544	1	BRAKE BRG.CAP	
21	VH-H545	1	BRAKE SHOE	
22	VH-H558	1	SPINDLE PULLEY SPACER	
23	VH-H561	1	SPINDLE PULLEY HUB	
24	VH-H562	1	TIMING PULLEY CLUTCH SLEEVE	
25	VH-H563	1	TIMING BELT PULLEY	
26	VH-H564	1	BULL GEAR PINION COUNTER SHAFT	
27	VH-H565	1	BEARING CAP	
28	VH-H569	1	COUNTER SHAFT GEAR	
29	VH-H571	1	SPINDLE BULL GEAR ASSEMBLY	
30	VH-H572	1	SPINDLE GEAR HUB	
31	VH-H574	1	BULL GEAR BEARING SLEEVE WASHER	
32	VH-H575	3	SPRING	
33	VH-H576	1	BULL GEAR BEARING SLEEVE	
34	VH-H578	1	BULL GEAR BEARING SPACER	



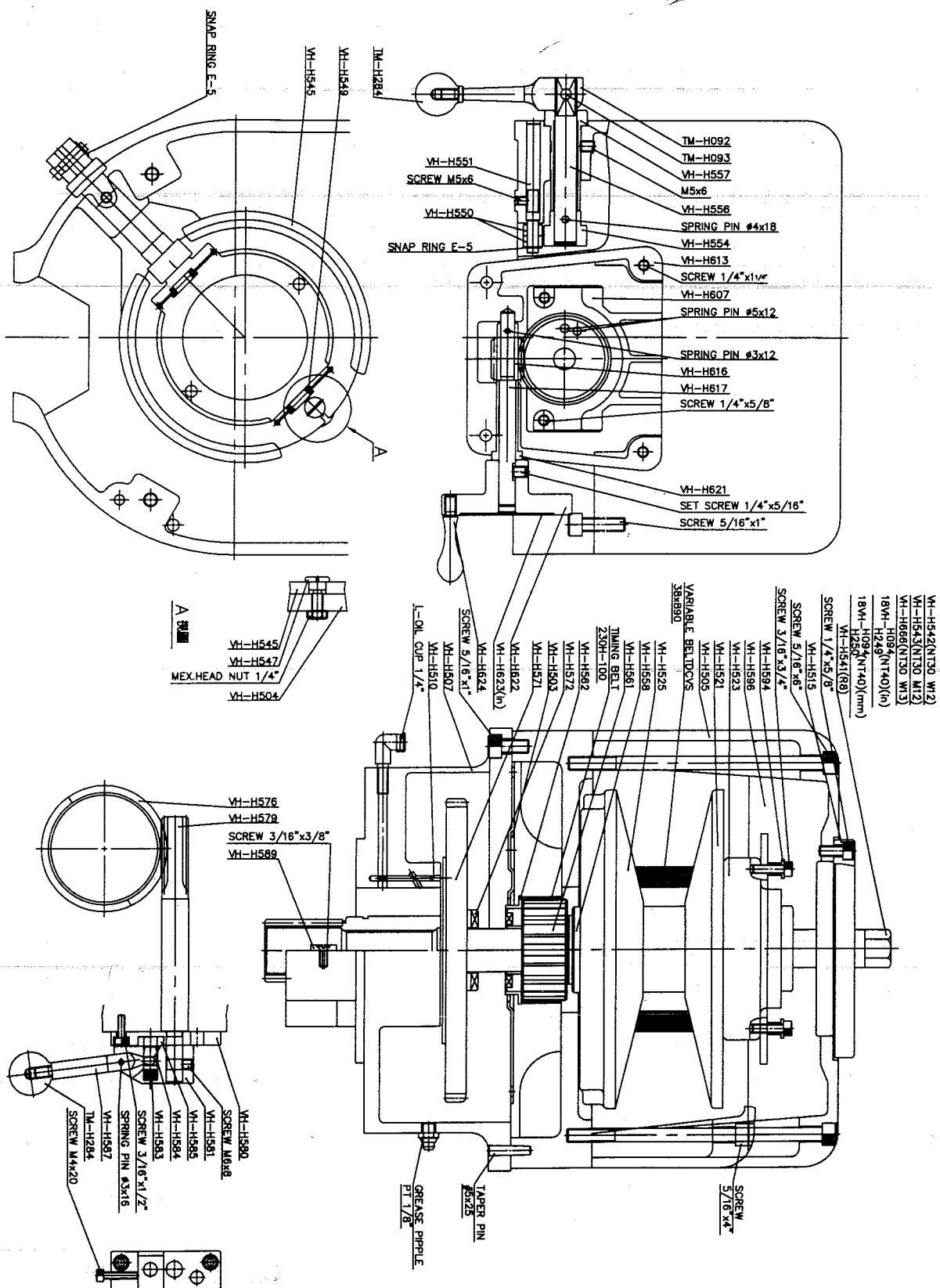
PARTS NO		PC	DESCRIPTION	REMARKS
1	VH-H589	2	GUIDE	
2	VH-H596	1	SPEED CHANGE PLATE	
3	VH-H597	1	SPEED CHANGE PLATE PIVOT STUD	
4	VH-H599	1	WASHER	
5	VH-H601	1	ROLL PIN	
6	VH-H602	1	SPEED CHANGE CHAIN STUD	
7	VH-H605	1	SPEED CHANGE CHAIN DRUM	
8	VH-H607	1	WORM GEAR SHAFT SUPPORTER	
9	VH-H609	1	SPEED CHANGE WORM GEAR	
10	VH-H610	1	BRONZE BEARING	
11	VH-H611	1	LOCK SCREW	
12	VH-H613	1	SPEED CHANGE HOUSING	
13	VH-H614	1	VARI SPEED DIAL (60HZ)	
14	VH-H616	1	WORM	
15	VH-H626	1	VARI SPEED DIAL (50HZ)	
16	VH-H658	2	COVER	
17	VH-H666	1	DRAWBAR (NT30 1/2"xW13)	
18	VH-H669	1	REAR COVER	
19				
20	18VH-H047	1	SPINDLE (NT40)	
21	18VH-H048	1	NOSE PIECE (NT40)	
22	18VH-H049	1	SPINDLE DIRT SHIELD (NT40)	
23	18VH-H055	1	BEARING SPACER (NT40)	
24	18VH-H090	1	QUILL (NT40)	
25	18VH-H094	1	DRAWBAR NUT (NT40)	
26	18VH-H249	1	DRAWBAR (NT40 5/8"xW11)	
27	18VH-H250	1	DRAWBAR (NT40 M16xP2.0)	
28	18VH-H251	1	DRAWBAR WASHER (NT40)	
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FILE NAME: VS-04  
2150-7721-100

PARTS NO		PC	DESCRIPTION	REMARKS
1	VH-H503	1	GEAR HOUSING PLATE	
2	VH-H504	1	BELT HOUSING (BOTTOM)	
3	VH-H505	1	BELT HOUSING (UP)	
4	VH-H507	1	GEAR HOUSING	
5	VH-H510	1	OIL PLUG	
6	VH-H515	1	TOP BEARING CAP	
7	VH-H521	1	ADJ DRIVEN VARI-DISC ASSEMBLY	
8	VH-H523	1	SLIDING HOUSING	
9	VH-H525	1	STATIONARY DRIVEN VARI-DISC	
10	VH-H541	1	DRAWBAR (R8 6/17"x20UNF)	
11	VH-H542	1	DRAWBAR (NT30 1/2"xW12)	
12	VH-H543	1	DRAWBAR (NT30 M12xP1.75)	
13	VH-H545	1	BRAKE SHOE	
14	VH-H547	1	BRAKE RING SCREW	
15	VH-H549	2	BRAKE SPRING	
16	VH-H550	2	BRAKE OPERATING FINGER	
17	VH-H551	1	BRAKE FINGER PIVOT STUD	
18	VH-H554	1	BRAKE LOCK CAM	
19	VH-H556	1	BRAKE LOCK SHAFT	
20	VH-H557	1	SLEEVE FOR BRAKE	
21	VH-H558	1	SPINDLE PULLEY SPACER	
22	VH-H561	1	SPINDLE PULLEY HUB	
23	VH-H562	1	TIMING PULLEY CLUTCH SLEEVE	
24	VH-H571	1	SPINDLE BULL GEAR ASSEMBLY	
25	VH-H572	1	SPINDLE GEAR HUB	
26	VH-H576	1	BULL GEAR BEARING SLEEVE	
27	VH-H579	1	BULL GEAR SHIFTER PINION	
28	VH-H580	1	HI-LOW DETENT PLATE	
29	VH-H581	1	HI-LOW PINION BLOCK	
30	VH-H583	1	SPRING	
31	VH-H584	1	HI-LOW DETENT PLUNGER	
32	VH-H585	1	ADJ PLATE	
33	VH-H587	1	HI-LOW SHIFT CRANK	
34	VH-H589	2	GUIDE	

PARTS NO		PC	DESCRIPTION	REMARKS
1	VH-H594	2	PIVOT SLEEVE	
2	VH-H596	1	SPEED CHANGE PLATE	
3	VH-H607	1	WORM GEAR SHAFT SUPPORTER	
4	VH-H613	1	SPEED CHANGE HOUSING	
5	VH-H616	1	WORM	
6	VH-H617	1	SPEED CONTROL SHAFT	
7	VH-H621	1	BRONZE BEARING	
8	VH-H622	1	SPEED CHANGE HAND WHEEL	
9	VH-H623	1	SPEED CHANGE WARING PLATE	
10	VH-H624	1	HANDLE	
11	VH-H666	1	DRAWBAR (NT30 1/2"xW13)	
12				
13	TM-H092	1	BRAKE LOCK HANDLE	
14	TM-H093	1	BRAKE LOCK PIN	
15	TM-H284	8	BLACK PLASTIC BALL	
16				
17	18VH-H094	1	BRAWBAR NUT (NT40)	
18	18VH-H249	1	BRAWBAR (NT40 5/8"xW11)	
19	18VH-H251	1	BRAWBAR (NT40 M16xP2.0)	
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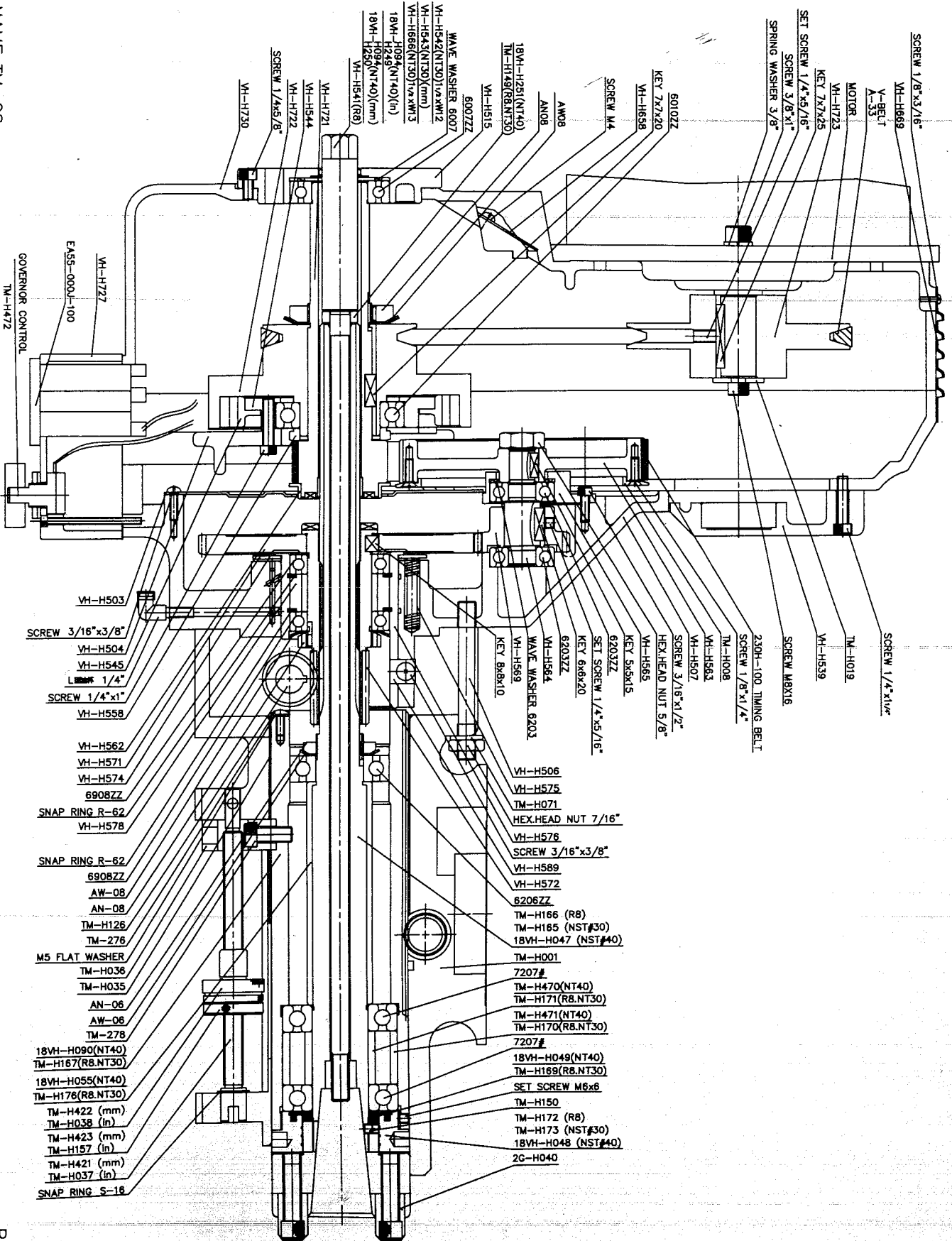


PARTS NO		PC	DESCRIPTION	REMARKS
1	VH-H503	1	GEAR HOUSING PLATE	
2	VH-H504	1	BELT HOUSING (BOTTOM)	
3	VH-H506	3	STUDS	
4	VH-H507	1	GEAR HOUSING	
5	VH-H515	1	TOP BEARING CAP	
6	VH-H539	1	MOTOR PULLEY COVER	
7	VH-H541	1	DRAWBAR (R8 6/17"x20UNF)	
8	VH-H542	1	DRAWBAR (NT30 1/2"xW12)	
9	VH-H543	1	DRAWBAR (NT30 M12xP1.75)	
10	VH-H544	1	BRAKE BRG.CAP	
11	VH-H545	1	BRAKE SHOE	
12	VH-H558	1	SPINDLE PULLEY SPACER	
13	VH-H562	1	TIMING PULLEY CLUTCH SLEEVE	
14	VH-H563	1	TIMING BELT PULLEY	
15	VH-H564	1	BULL GEAR PINION COUNTER SHAFT	
16	VH-H565	1	BEARING CAP	
17	VH-H569	1	COUNTER SHAFT GEAR	
18	VH-H571	1	SPINDLE BULL GEAR ASSEMBLY	
19	VH-H572	1	SPINDLE GEAR HUB	
20	VH-H574	1	BULL GEAR BEARING SLEEVE WASHER	
21	VH-H575	3	SPRING	
22	VH-H576	1	BULL GEAR BEARING SLEEVE	
23	VH-H578	1	BULL GEAR BEARING SPACER	
24	VH-H589	2	GUIDE	
25	VH-H658	2	COVER	
26	VH-H666	1	DRAWBAR (NT30 1/2"xW13)	
27	VH-H669	1	REAR COVER	
28				
29	VH-H721		SPINDLE PULLEY HUB	
30	VH-H722		SPINDLE PULLEY	
31	VH-H723		MOTOR PULLEY	
32	VH-H730		BELT HOUSING (UP)	
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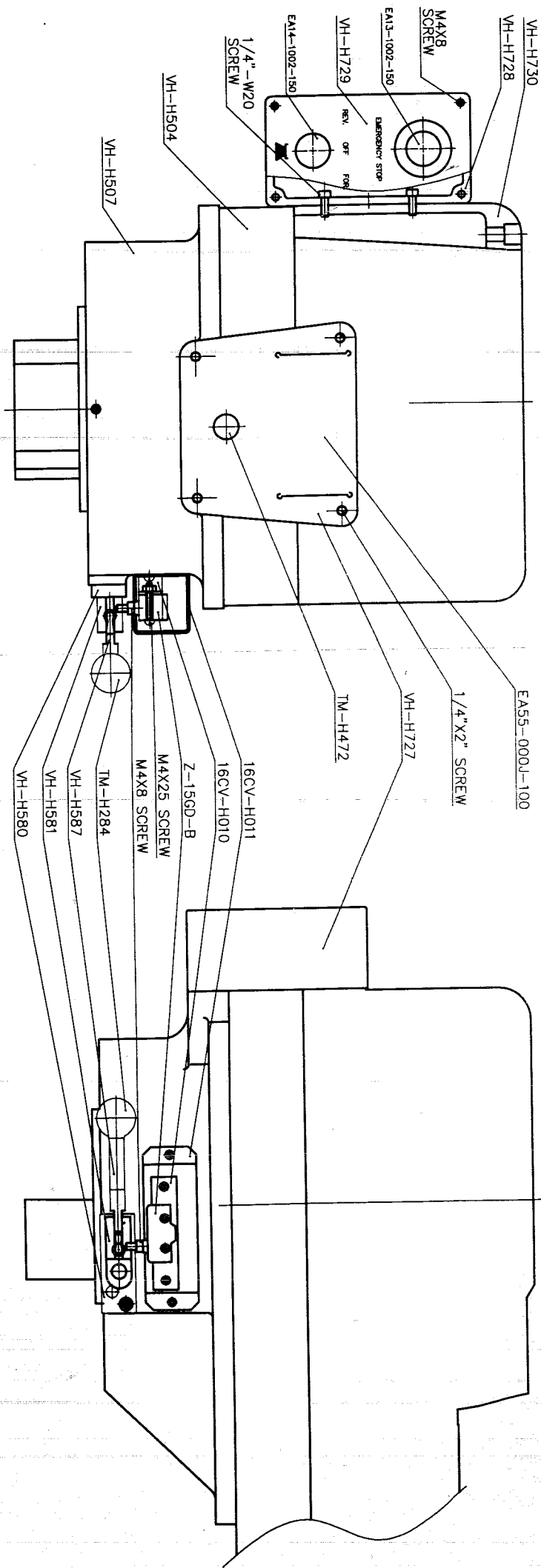
PARTS NO		PC	DESCRIPTION	REMARKS
1	TM-H001	1	QUILL HOUSING	
2	TM-H008	2	TIMING BELT PULLEY FLANGE	
3	TM-H019	1	MOTOR PULLEY WASHER	
4	TM-H035	1	QUILL SKIRT	
5	TM-H036	1	QUILL STOP KNOB	
6	TM-H037	1	QUILL STOP MICRO SCREW (IN)	
7	TM-H038	1	MICRO METER NUT (IN)	
8	TM-H071	3	VERTICAL TEE BOLT WASHER	
9	TM-H126	1	FEED DRIVE WORM GEAR	
10	TM-H149	1	DRAWBAR WASHER (R8)	
11	TM-H150	2	SOCKET SET SCREW	
12	TM-H157	1	QUILL MICRO STOP NUT (IN)	
13	TM-H165	1	SPINDLE (NT30)	
14	TM-H166	1	SPINDLE (R8)	
15	TM-H167	1	QUILL (R8 NT30)	
16	TM-H169	1	SPINDLE DIRT SHIELD	
17	TM-H170	1	BEARING SPACER (R8 NT30)	
18	TM-H171	1	BEARING SPACER (R8 NT30)	
19	TM-H172	1	NOSE PIECE (R8)	
20	TM-H173	1	NOSE PIECE (NT30)	
21	TM-H176	1	SLEEVE (R8 NT30)	M5x12
22	TM-H276	1	ROUND HD MACHINE SCREW	3/8"x5/8"
23	TM-H278	1	SOCKET HD CAP SCREW	
24	TM-H421	1	QUILL STOP MICRO SCREW	
25	TM-H422	1	MICRO METER NUT	
26	TM-H423	1	QUILL MICRO STOP NUT	
27	TM-H470	1	BEARING SPACER (NT40)	
28	TM-H471	1	BEARING SPACER (NT40)	
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PARTS NO		PC	DESCRIPTION	REMARKS
1	18VH-H048	1	NOSE PIECE (NT40)	
2	18VH-H049	1	SPINDLE DIRT SHIELD (NT40)	
3	18VH-H055	1	BEARING SPACER (NT40)	
4	18VH-H090	1	QUILL (NT40)	
5	18VH-H094	1	DRAWBAR NUT (NT40)	
6	18VH-H249	1	DRAWBAR (NT40 5/8"xW11)	
7	18VH-H250	1	DRAWBAR (NT40 M16xP2.0)	
8	18VH-H251	1	DRAWBAR WASHER (NT40)	
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PARTS NO		PC	DESCRIPTION	REMARKS
1	VH-H504	1	BELT HOUSING (BOTTOM)	
2	VH-H507	1	GEAR HOUSING	
3	VH-H580	1	HI-LOW DETENT PLATE	
4	VH-H581	1	HI-LOW PINION BLOCK	
5	VH-H587	1	HI-LOW SHIFT CRANK	
6	VH-H727		SPEED CHANGE HOUSING	
7	VH-H728		OPERATION PLATE HOUSING	
8	VH-H729		OPERATION PLATE	
9	VH-H730		BELT HOUSING (UP)	
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15	TM-H284	1	BLACK PLASTIC BALL	
16	TM-H472	1	GOVERNOR CONTROL	
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22	16CV-H010		LIMIT SWITCH BRACKET	
23	16CV-H011		COVER	
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FILE NAME: TM-30  
2150-7721-100