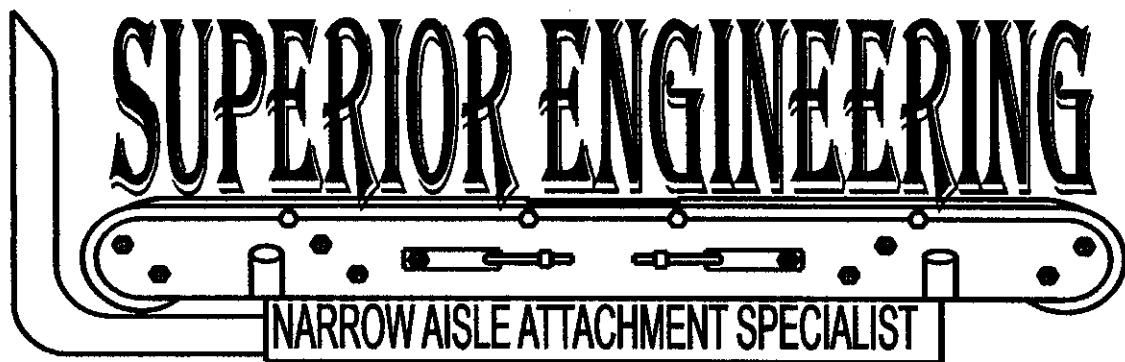


PART AND SERVICE

MANUAL FOR



1-800-359-3052

TURRET HEAD ATTACHMENT

SUPERIOR ENGINEERING INC

ATTACHMENT WARRANTY

SUPERIOR ENGINEERING WARRANTS ITS NEW LIFT TRUCK ATTACHMENTS TO BE FREE OF DEFECTS IN MATERIAL AND WORKMANSHIP, UNDER NORMAL USE AND SERVICE FOR A PERIOD OF SIX (6) MONTHS FROM DATE OF DELIVERY TO ORIGINAL PURCHASER.

SUPERIOR ENGINEERING WARRANTY LIABILITY IS LIMITED SOLELY TO REPAIR OR REPLACEMENT OF ANY PART OR EQUIPMENT RETURNED TO OUR PLANT, FREIGHT PREPAID, AND DETERMINED BY US TO BE DEFECTIVE. SUPERIOR ENGINEERING SHALL NOT BE LIABLE UNDER ANY CIRCUMSTANCES FOR CONSEQUENTIAL OR INCIDENTAL DAMAGES.

EXCEPT FOR REMOVAL OF DEFECTIVE PARTS AND REPLACEMENT WITH PARTS SUPPLIED BY SUPERIOR ENGINEERING, THE WARRANTY FOR ANY PART OR EQUIPMENT WILL BE VOID IF AN ATTEMPT IS MADE BY ANYONE TO ALTER, REPAIR, OR DISASSEMBLE THE ITEM WITHOUT THE AUTHORITY OF SUPERIOR ENGINEERING.

SUPERIOR ENGINEERING MAKES NO OTHER WARRANTY OF ANY KIND WHATSOEVER, EXPRESS OR IMPLIED; AND ALL IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, AND ALL CLAIMS BASED ON MISUSE, NEGLIGENCE, STRICT LIABILITY, IMPROPER MAINTENANCE, OR OTHERWISE, ARE HEREBY DISCLAIMED BY SUPERIOR ENGINEERING AND EXCLUDED FROM THIS AGREEMENT.

SUPERIOR ENGINEERING INC

P. O. BOX 547 BELTON, SC 29627
TELE: (803)226-8799 FAX: (803)231-6718

SUPERIOR ENGINEERING WARRANTY POLICY

SUPERIOR ENGINEERING'S WARRANTY WILL BE ADMINISTERED IN ACCORDANCE WITH THE FOLLOWING GUIDELINES:

- (1) THE WARRANTY POLICY PROVIDES FOR PAYMENT OF WARRANTY LABOR ON NEW LIFT TRUCK PRODUCTS AND SERVICE PARTS AT 75 % OF DEALER'S PUBLISHED RETAIL LABOR RATE.
- (2) LABOR HOURS PAID WILL BE LIMITED BY SUPERIOR ENGINEERING'S STANDARD LABOR TIME SCHEDULE UNLESS PRIOR APPROVAL FOR DEVIATION IS OBTAINED FROM A SUPERIOR ENGINEERING SERVICE REPRESENTATIVE.
- (3) LIFT TRUCK MODIFICATION FOR VARIOUS ATTACHMENT APPLICATIONS ARE NOT CONSIDERED WARRANTY.
- (4) TROUBLESHOOTING TIME IN EXCESS OF ONE HOUR MUST HAVE THE PRIOR APPROVAL OF A SUPERIOR ENGINEERING SERVICE REPRESENTATIVE.
- (5) TRAVEL TIME IN EXCESS OF ONE HOUR MUST HAVE THE PRIOR APPROVAL OF SUPERIOR ENGINEERING SERVICE REPRESENTATIVE.
- (6) WARRANTY REPAIR WILL NOT BE HONORED FOR AMOUNTS EXCEEDING THE COST OF THE ATTACHMENT OR ACCESSORIES.
- (7) SUPERIOR ENGINEERING'S WARRANTY CLAIM FORM MUST BE USED TO SUBMIT CLAIMS. ANY WARRANTY SENT TO SUPERIOR ENGINEERING ON NORMAL INVOICES WILL BE RETURNED.
- (8) THE WARRANTY CLAIM FORM SHOULD BE COMPLETED ACCURATELY AND WITH AS MUCH DETAIL AS POSSIBLE.
- (9) PLEASE CONTACT A SUPERIOR ENGINEERING REPRESENTATIVE TO OBTAIN A WARRANTY CLAIM NUMBER AND A RETURN GOODS AUTHORIZATION (RGA) NUMBER AS REQUIRED.

6/25/97TM

TURRET HEAD INSTALLATION

INSTALLATION INSTRUCTIONS:

THE HANGER BRACKETS WELDED ON THE BACK OF THE ATTACHMENT CONFORM TO THE SPECIFICATIONS OF THE MAST. INSTALL THE MAST ROLLER BEARING KIT ACCORDING TO THE MAST MANUFACTURER'S MANUAL. MEASURE THE INSIDE DIMENSIONS OF THE MAST CHANNEL AND THE OUTSIDE DIMENSIONS OF THE ROLLER BEARINGS AND SHIM THE BEARINGS TO THE MANUFACTURER'S SPECIFICATIONS.

THE THRUST BEARINGS THAT ROLL ON THE OUTSIDE OR INSIDE OF THE MAST RAIL SHOULD BE LOOSENED AND ADJUSTED AWAY FROM THE MAST RAIL FOR INSTALLATION.

BEFORE INSTALLING THE TURRET HEAD, CHECK THE HYDRAULIC SUPPLY GROUP INSTALLED INTERNALLY OR EXTERNALLY ON THE MAST FOR COMPATIBILITY WITH THE ATTACHMENT. HYDRAULIC PRESSURE MUST NOT EXCEED 2500 P.S.I. THE PIVOT CIRCUIT REQUIRES ONLY 1 GPM FOR PROPER ACTIVATION, BUT WILL WORK WELL UP TO 5 GPM. THE SIDE SHIFT CIRCUIT REQUIRES A MINIMUM OF 5 GPM AND WORKS WELL UP TO 10 GPM. CONNECT THE HOSES FOR COMPATIBILITY TO THE DIRECTIONAL MARKINGS ON THE CONTROL VALVE HANDLES. AFTER ALL CONNECTIONS ARE COMPLETED ADJUST THE THRUST BEARINGS TO TOUCH THE MAST RAIL.

AFTER ALL CONNECTIONS HAVE BEEN SECURED RAISE THE MAST TO CHECK FOR INTERFERENCE BETWEEN THE ATTACHMENT AND MAST PARTS. AFTER ALL CONNECTIONS ARE CHECKED FOR SAFE OPERATIONS, REMOVE ANY FOREIGN PARTICLES OF DEBRIS FROM THE ATTACHMENT BEARING TRACKS. LOWER THE ATTACHMENT TO A SAFE WORKING LEVEL AND OPERATE WITHOUT A LOAD TO ELIMINATE ANY AIR IN THE HYDRAULIC CIRCUITS. RECHECK ALL CONNECTIONS FOR POSSIBLE HYDRAULIC LEAKS OR MECHANICAL INTERFERENCE. LOAD THE ATTACHMENT AND OPERATE BOTH HYDRAULIC FUNCTIONS AND CHECK FOR HYDRAULIC LEAKS OF MECHANICAL PROBLEMS.

OPERATING THE ATTACHMENT:

- CHECK THE ATTACHMENT SPECIFICATIONS (CAPACITY, LOAD SIZE)
- CHECK THE LOAD SPECIFICATIONS TO INSURE COMPATIBILITY WITH THE TRUCK/ATTACHMENT COMBINATIONS. YOUR FORKS SHOULD NOT EXCEED THE LENGTH OF YOU LOAD AND SHOULD BE ADJUSTED AS WIDE APART AS YOUR LOAD WILL ACCEPT.

6/25/97TM

OPERATION RECOMMENDATIONS:

- TRAVEL WITH THE LOAD IN A LOWERED POSITION. THIS WILL INCREASE THE TRUCK STABILITY AND OPERATOR VISIBILITY.
- OPERATE THE ROTATION AND SIDE SHIFTING FUNCTIONS AT LOW SPEED.
- STORE THE HEAVIEST LOADS IN THE LOWER STORAGE POSITIONS.
- DO NOT SIDE SHIFT THE ATTACHMENT WHEN LOADED UNLESS THE LIFT TRUCK IS IN A STORAGE RACK AREA OR IN A LOWERED POSITION.
- DO NOT ROTATE THE TURRET ATTACHMENT WHEN LOADED UNLESS YOUR LOAD IS IN A LOWERED POSITION.

ADJUSTMENTS:

- (1) THE BACKLASH ADJUSTMENT OF THE PINION/RACK GEAR.
SEE BACKLASH-ADJUST SHEET.
- (2) ADJUST THE ROTATION SPEED BY MEANS OF THE FLOW VALVES AT THE TOP OF THE PIVOT HEAD AREA. RECOMMENDED SPEED 6 TO 8 SECONDS.
- (3) THE DOUBLE PILOT LOCK VALVE IS FIXED THEREFORE ADJUSTMENT IS NOT REQUIRED.

MAINTENANCE:

THE TURRET HEAD ATTACHMENT, IN MOST APPLICATIONS NEEDS TO BE SERVICED AFTER 200 HOURS. IT IS HIGHLY RECOMMENDED TO VISIBLY CHECK THE ATTACHMENT DAILY FOR OBVIOUS PROBLEMS. ALWAYS INSPECT THE ATTACHMENT AFTER ANY COLLISIONS, SHOCKS, OR UNUSUAL NOISES.

(A) 200 HOUR OR MONTHLY CHECK

- OBSERVE ALL BEARINGS AND TRACKS
- HYDRAULIC HOSES AND TRACK ASSEMBLY
- GREASE RACK GEAR
- CHAIN TENSIONS DURING ROTATION.
- * SEE ROTATION ASSEMBLY DRAWING *

(B) 1000 HOUR OR 6 MONTH CHECK

- PERFORM ALL OPERATIONS PARAGRAPH (A)
- CLEAN ALL MOVING PARTS.
- CLEAN THE ROTATION CHAIN. INSPECT THE CONDITION OF THE CHAIN AND CONNECTION LINKS. LUBRICATE WITH OIL OR LIGHT GREASE.*
- CLEAN AND INSPECT THE CONDITION OF THE RACK AND PINION ASSEMBLY. LUBRICATE WITH HIGH QUALITY GREASE.*
- LOCATE THE GREASE FITTING FOR THE PIVOT SHAFT AND GREASE.*
- GREASE THE EIGHT MAIN LOAD BEARINGS.*
- CHECK ALL STRUCTURAL ASSEMBLIES AND THE BOLT ON PARTS FOR TIGHTNESS.

*REFER TO SPECIFICATION PAGE

*SEE LUBRICATION CHART

6/25/97TM

(C) 2000 HOUR OR ONE YEAR CHECK

- PERFORM ALL OPERATIONS ON PARAGRAPH (A) AND (B).
- INSPECT THE CHAIN, ANY EXCESSIVE WEAR IN THE PIN CONNECTION REQUIRE REPLACEMENT.
- INSPECT ALL ROLLER BEARINGS, ANY SURFACE IMPERFECTION OR NOISE DURING OPERATION REQUIRES REPLACEMENT.
- INSPECT ROTATION ASSEMBLY, ANY EXCESSIVE WEAR WILL REQUIRE THE REPLACEMENT OF THE BUSHINGS.
- INSPECT FORKS. ANY CRACKS IN THE FORK REQUIRES REPLACEMENT. PAY PARTICULAR ATTENTION IN THE AREA OF THE HEEL AND HOOKS. INSPECT FOR WEAR ON THE BOTTOM OF THE HEEL, 10 PERCENT WEAR REDUCES CAPACITY 50 PERCENT. FORKS CANNOT BE REPAIRED BY WELDING. ONLY REPLACEMENT IS ACCEPTABLE.
- INSPECT ALL HYDRAULIC CONNECTIONS AND COMPONENTS. FOR SPECIFIC REPAIR, REFER TO INDIVIDUAL REPAIR INSTRUCTION SHEETS.

2/15/91

LUBRICATION CHART

THE FOLLOWING LUBRICANTS ARE RECOMMENDED:

<u>MANUFACTURER</u>	<u>BEARINGS</u>	<u>RACK GEAR</u>
SHELL	ALVANIA EP2	CARDIUM EP COMPOUND C
EXXON	RONEX WB	SURRETT FLUID 30
TEXACO	MULTIFAX EP2	CRATER 2X AND 3X FLUID
MOBIL	MOBILUX EP2	MOBILTAC C
UNION	UNOBA EP2	GEARITE HVY
SUN	PRESTIGE 742 EP	GEAR COMPOUND 407

**OTHER LUBRICANTS OF THE SAME QUALITY OF OTHER MANUFACTURERS
MAY ALSO BE USED.**

**BEFORE GREASING THE RACK GEAR, THE GEAR TEETH MUST BE CLEANED
ESPECIALLY AT THE BOTTOM OF THE TEETH**

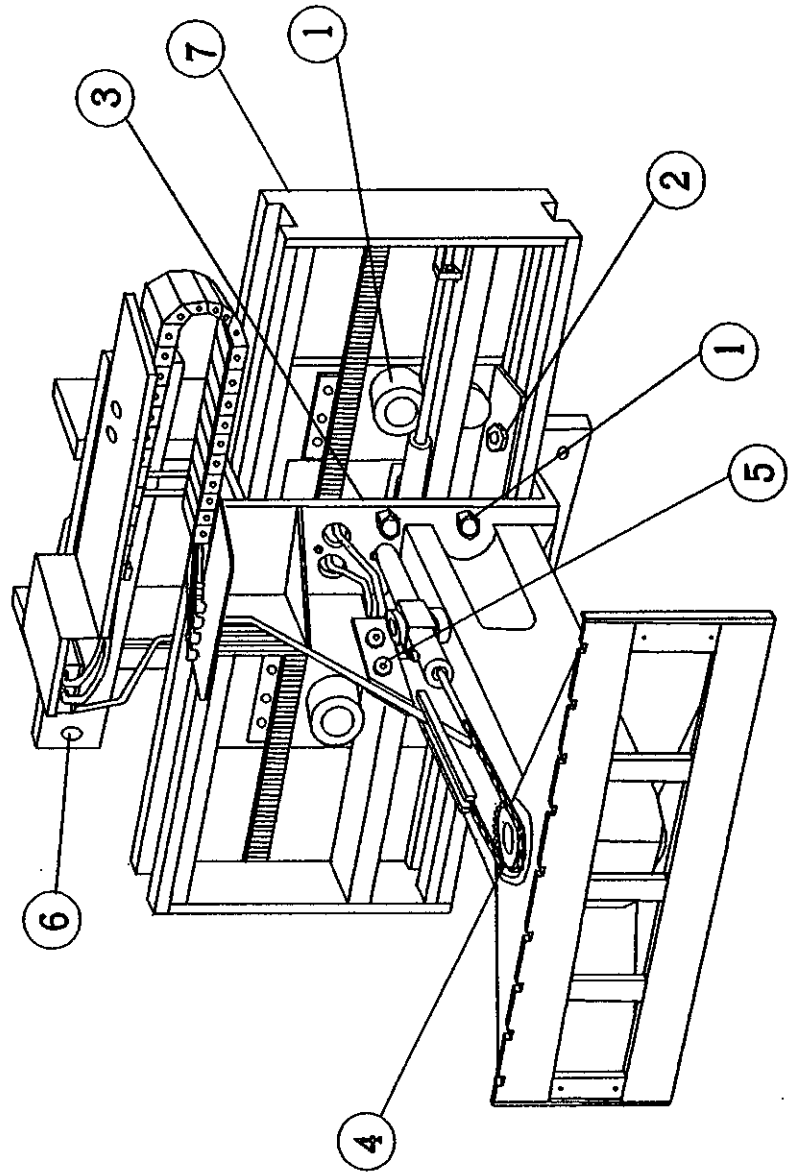
(MOTOR OIL, HYDRAULIC OIL)

**ANY LIGHT OIL CAN BE USED FOR LIGHTLY LUBRICATING TO CHAIN PIVOT
POINTS.**

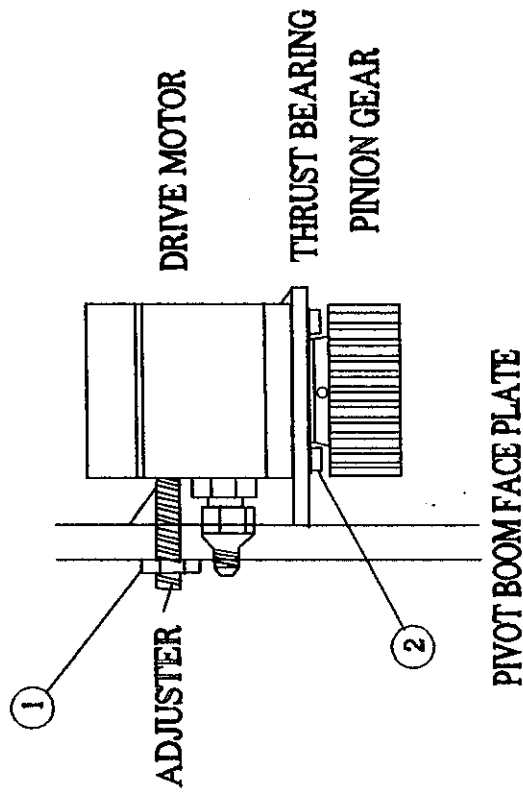
010491TM

TORQUE SPECIFICATIONS

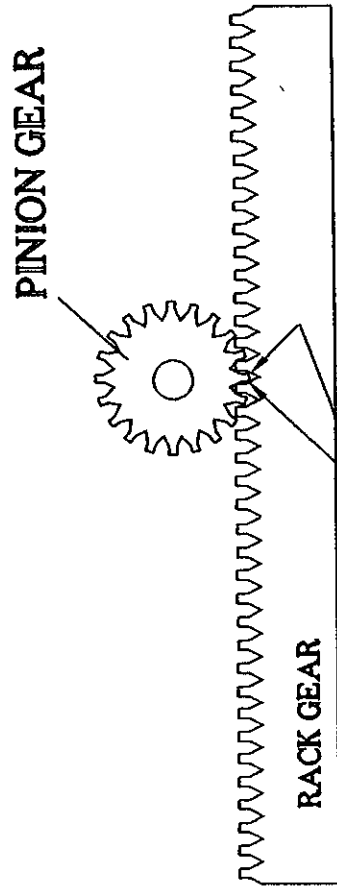
ITEM NO.	QUANTITY	DESCRIPTION	TORQUE
1	8	MAIN LOAD BEARINGS	425 FT.LBS.
2	14	SECONDARY LOAD BEARINGS (25/30)	190 FT.LBS.
2	14	SECONDARY LOAD BEARINGS (35/40)	235 FT.LBS.
3	4	MOTOR SUPPORT BOLTS	45 FT.LBS.
4	2	PIVOT SHAFT ALIGNMENT BOLTS	65 FT.LBS.
5	2	PIVOT CYLINDER MOUNT BOLTS	50 FT.LBS.
6	6	THRUST BEARINGS	55 FT.LBS.
7	5	RACK GEAR BOLTS	35 FT.LBS.



NOTE: USE LOCKTITE 242 ON ALL THREADS



DRIVE MOTOR ASSEMBLY



③ USE TWO SHIMS, EITHER .005 OR .006, TO SET BACKLASH HERE.

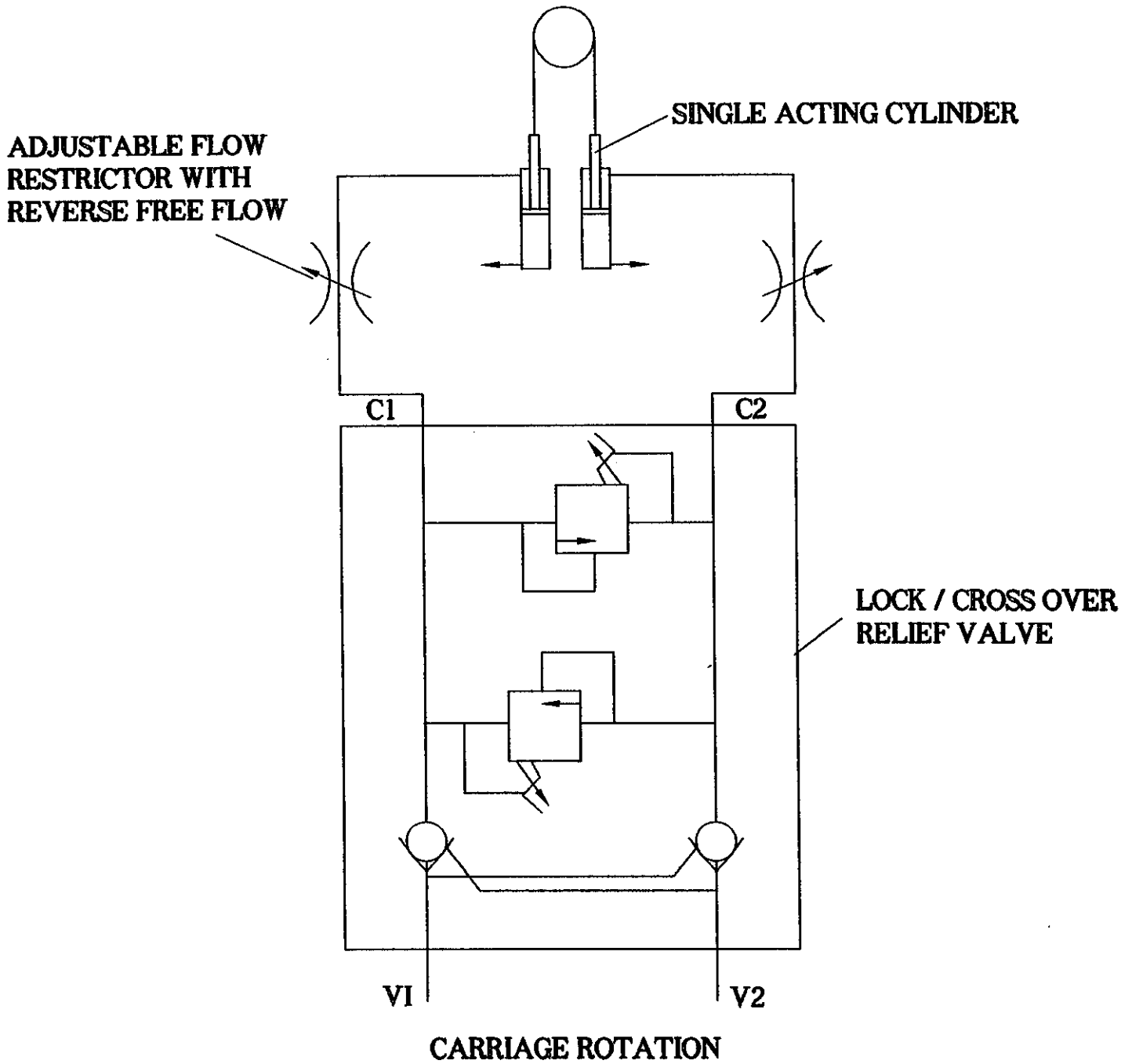
ALIGN THE PINION GEAR TOOTH DIRECTLY IN LINE WITH THE RACK GEAR.

PINION / GEAR RACK ASSEMBLY

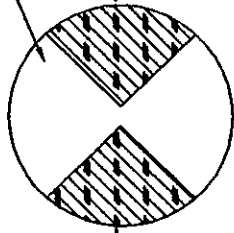
PINION / RACK GEAR BACKLASH ADJUSTING PROCEDURE

- 1 - LOOSEN MOTOR ADJUSTMENT LOCKNUT AND BACK ADJUSTING BOLTS OFF.
- 2 - LOOSEN 4 BOLTS RETAINING THE MOTOR
- 3 - SET ADJUSTMENT TO .010 - .012 BETWEEN THE PINION GEAR AND RACK USING A FEELER GAUGE.

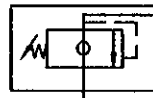
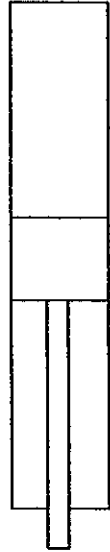
HYDRAULIC CIRCUITS



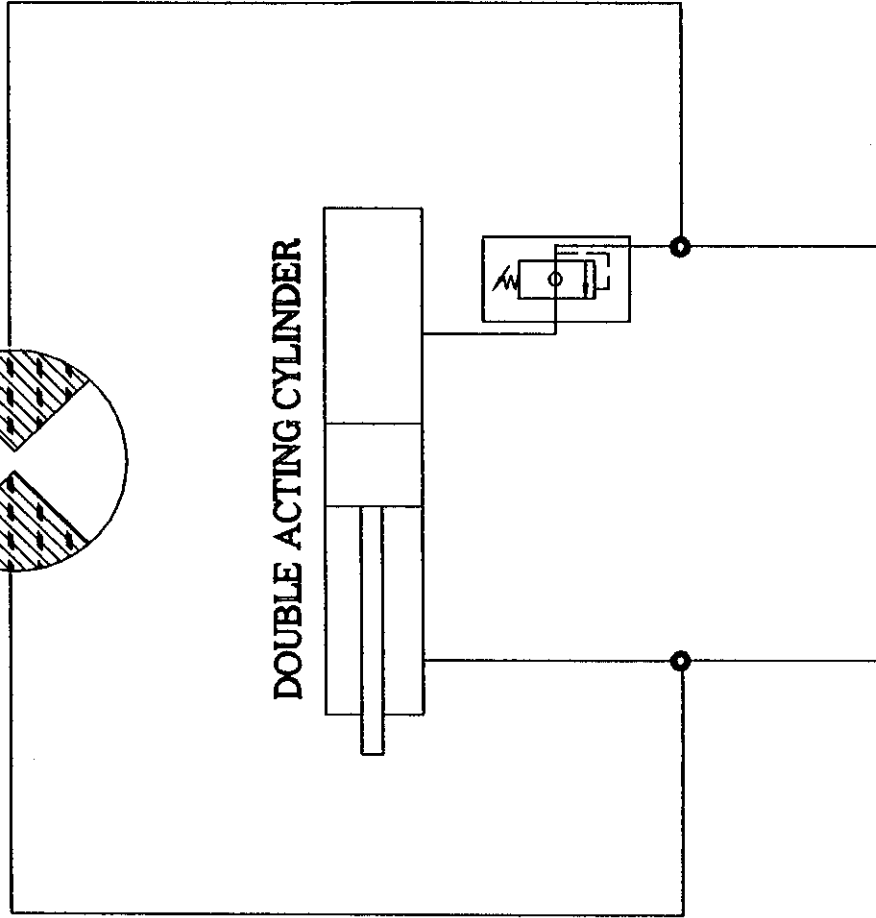
HYDRAULIC MOTOR
FIXED DISPLACEMENT
REVERIBLE



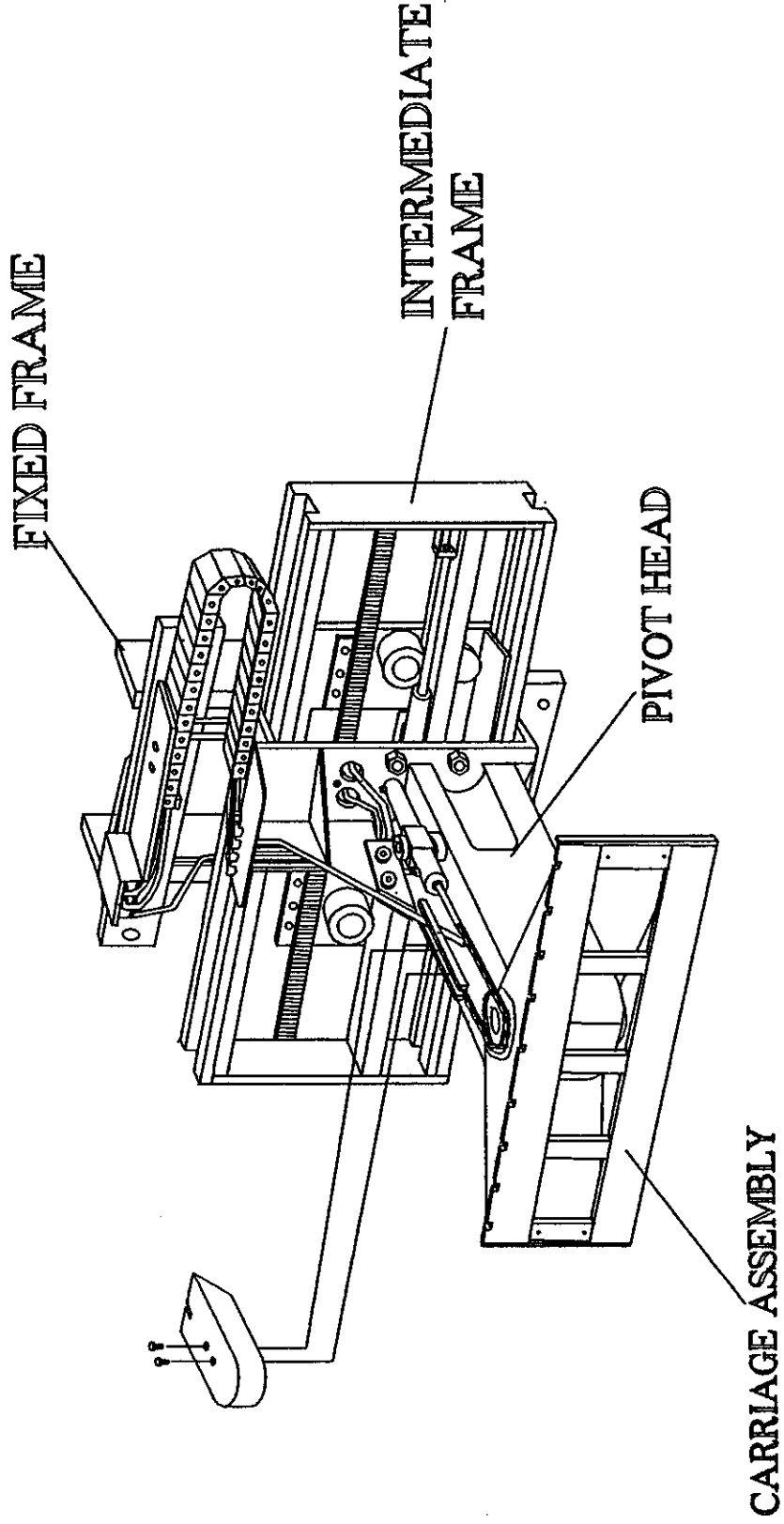
DOUBLE ACTING CYLINDER



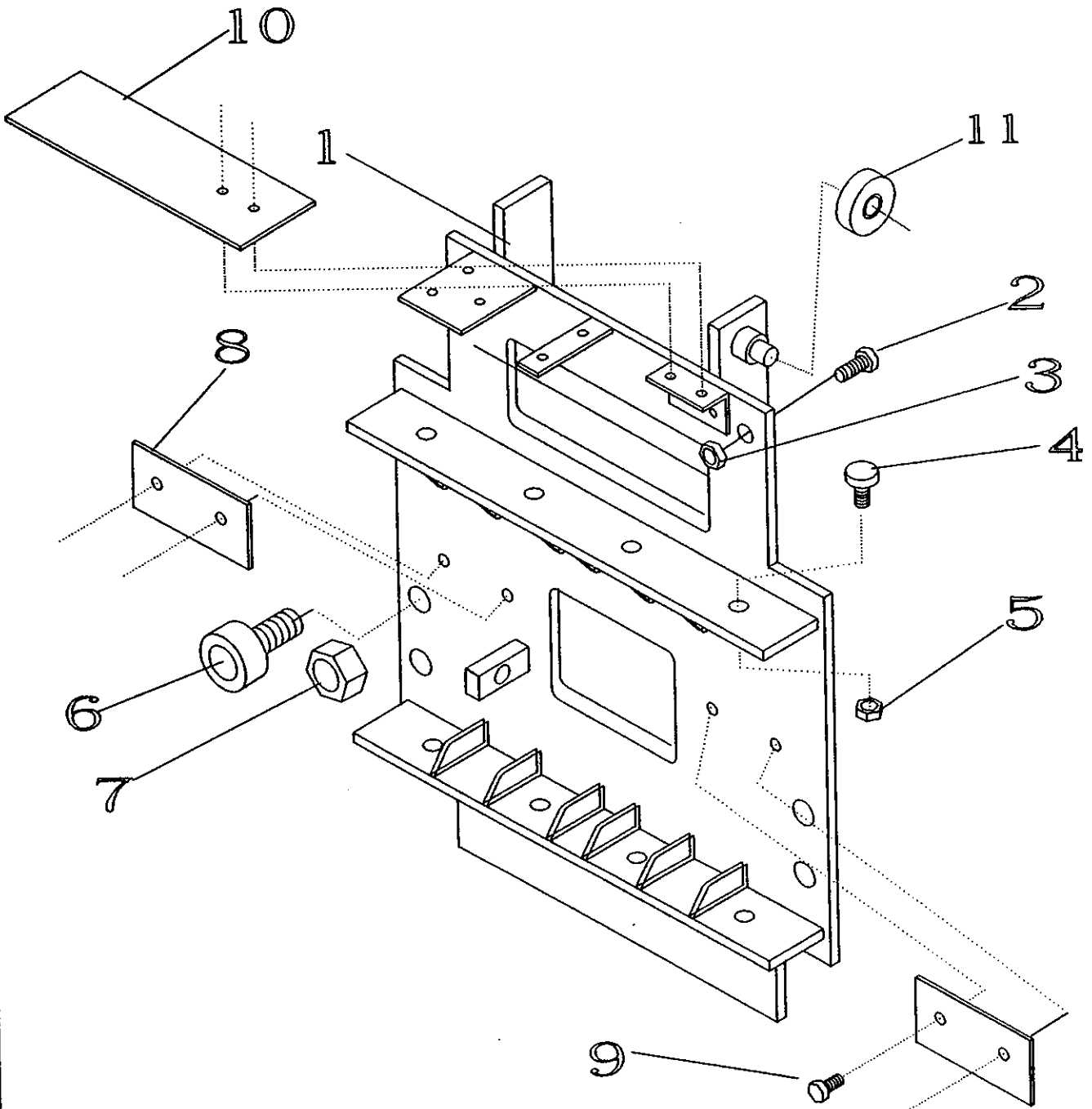
SIDE SHIFTING



TURRET HEAD ASSEMBLIES



FIXED FRAME ASSEMBLY

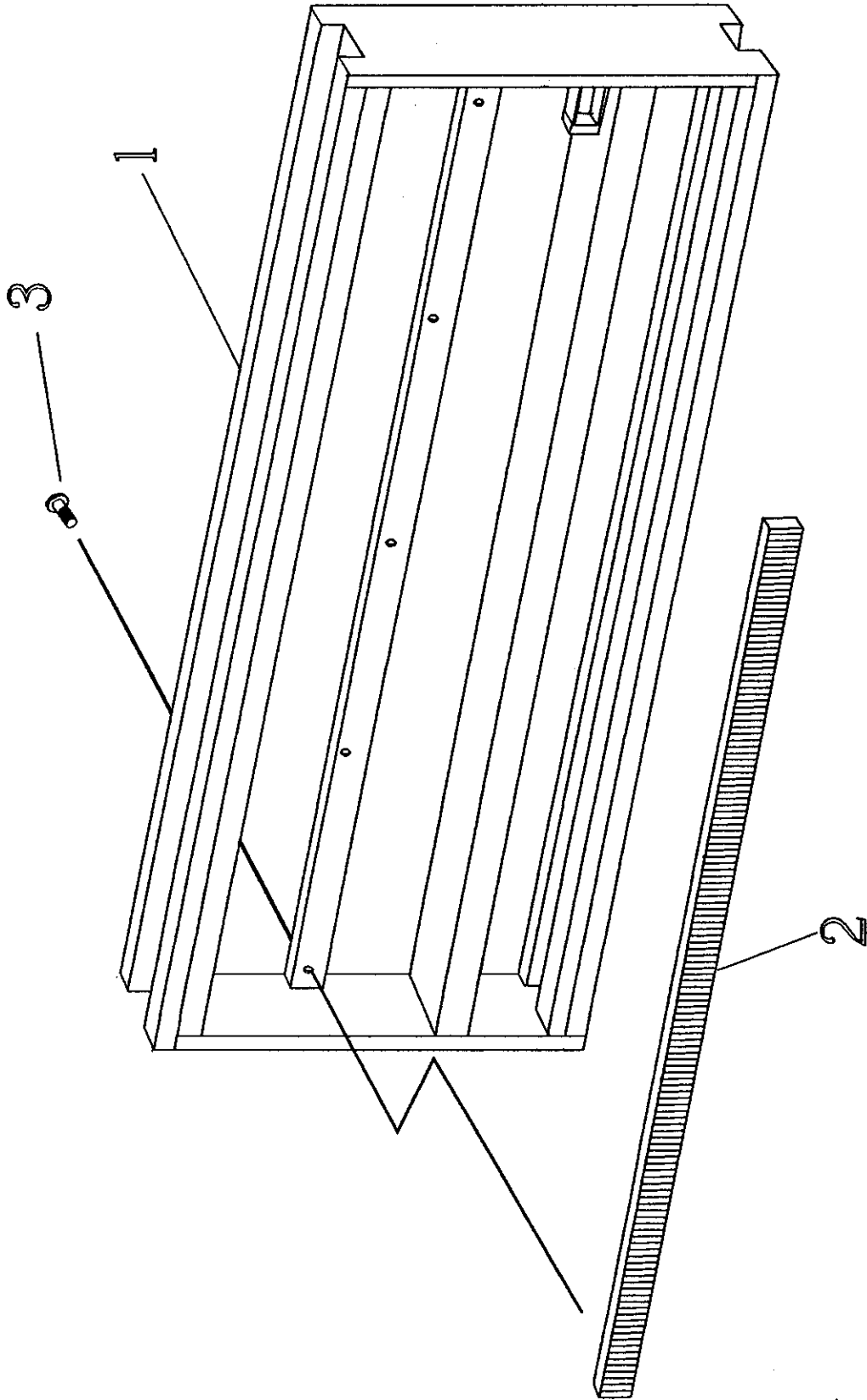


6/25/97
020791TM

FIXED FRAME ASSEMBLY

<u>ITEM NO.</u>	<u>REQ'D</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
1	1	8203S	FIXED FRAME 2500
1	1	8203	FIXED FRAME 2500
1	1	8204	FIXED FRAME 3300
2	4	8362	THURST BEARING
2A	4	8360	THURST BEARING STUD
2A	4	8360S	THURST BEARING STUD
2	6	8359	THRUST BRG. 2500
3	4	9109	NUT FOR 2500
3	6	9109	NUT FOR 3300
4	8	8383	ROLLER BRG. 2500
4	8	8357	ROLLER BRG. 3300
5	8	9105	NUT FOR 2500
5	8	9110	NUT FOR 3300
6	4	8355	LOAD BEARING
7	4	9104	NUT
8	2	8391	WEAR STRIP
9	4	9111	FASTENER
10	1	8328C	GUARD
11	4	8361	CARRIAGE BEARING

INTERMEDIATE FRAME

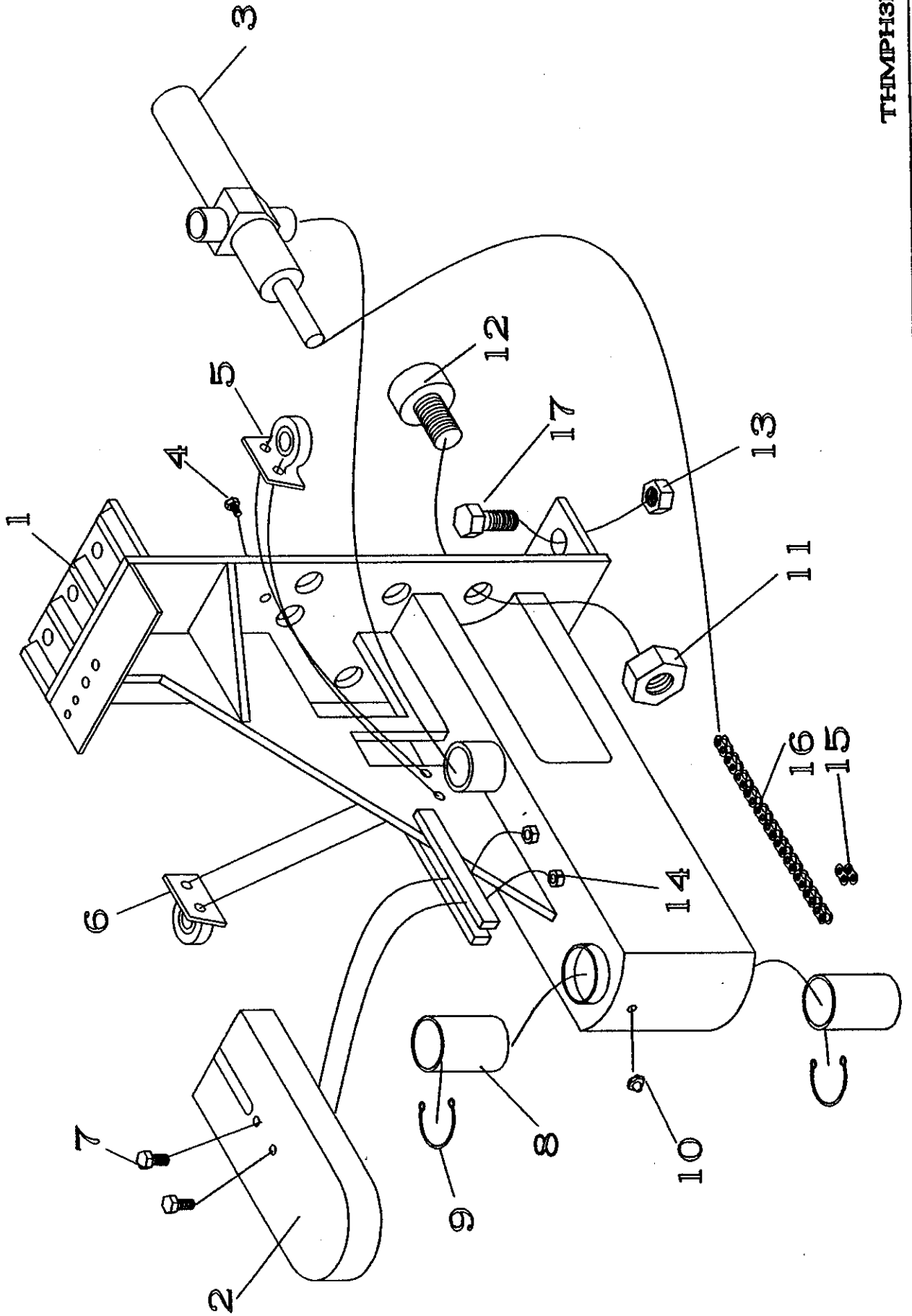


6/25/97
020791TM

INTERMEDIATE FRAME

<u>ITEM NO.</u>	<u>REQ'D</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
1	1	8201	INT. FRAME 3300 48" STROKE
1	1	820140	INT. FRAME 3300 40" STROKE
1	1	820142	INT. FRAME 3300 42" STROKE
1	1	820154	INT. FRAME 3300 54" STROKE
1	1	820160	INT. FRAME 3300 60" STROKE
1	1		
1	2	8202	INT. FRAME 2500 48" STROKE
1	1	820240	INT. FRAME 2500 40" STROKE
1	1	820242	INT. FRAME 2500 42" STROKE
1	1	820254	INT. FRAME 2500 54" STROKE
1	1	820260	INT. FRAME 2500 60" STROKE
2	1	8375	RACK GEAR 48"-54"-60" STROKE
2	1	837540	RACK GEAR 40" STROKE
2	1	837542	RACK GEAR 42" STROKE
3	5	9108	FASTENER

PIVOT HEAD ASSEMBLY



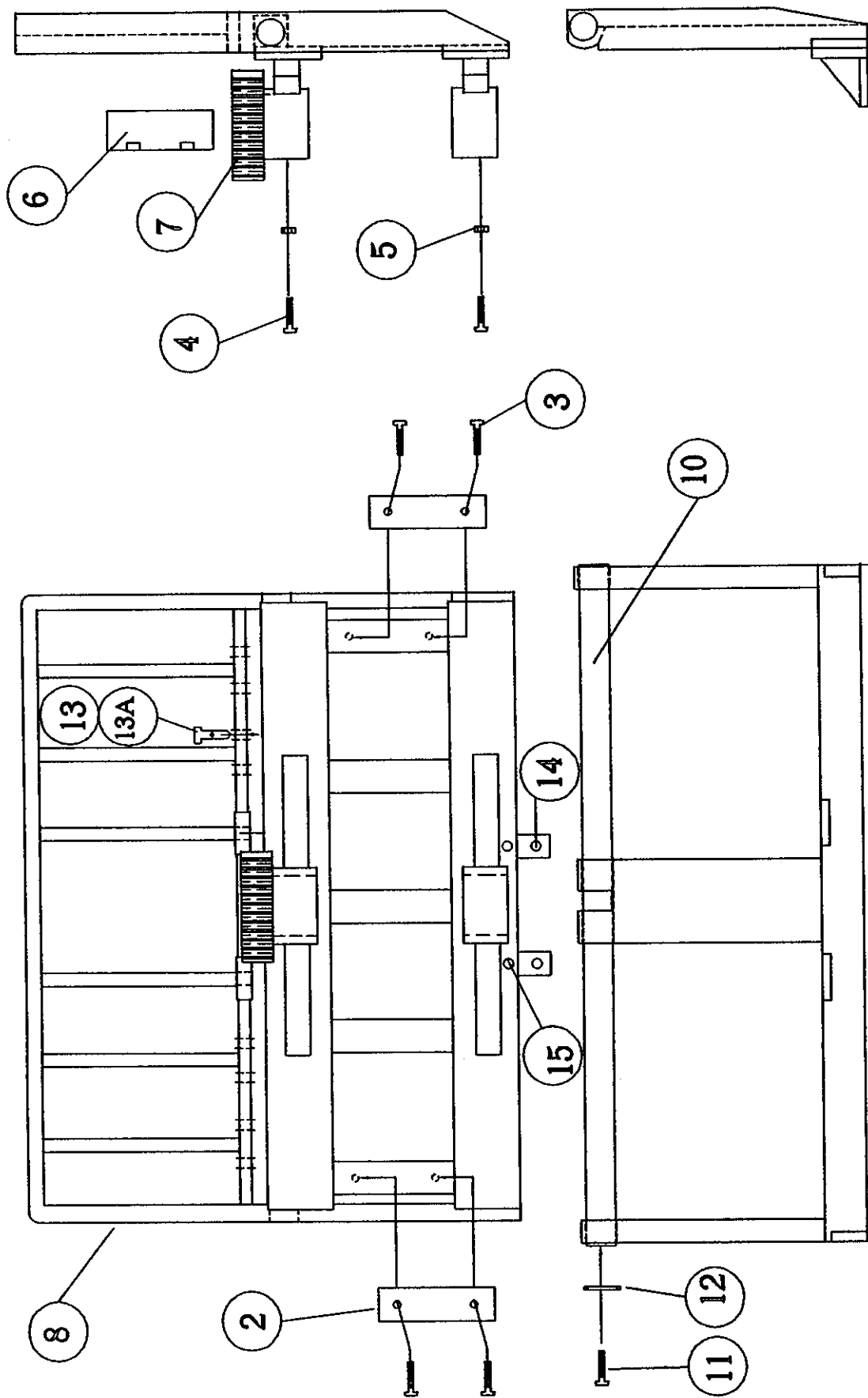
6/25/97

PIVOT HEAD ASSEMBLY

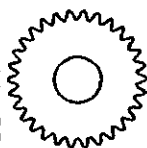
<u>ITEM</u>	<u>REQ'D</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
1	1	9007	PIVOT ASSY 2500 40"-48" LOAD
1	1	9008	PIVOT ASSY 3300 40"-48" LOAD
2	1	8380	CHAIN GUARD
3	2	8326	PIVOT CYLINDER
4	1	8400	ADJUSTER ASSY.
5	1	8354	CYLINDER BRACKET
6	1	8353	CYLINDER BRACKET
7	2	9107	FASTENER
8	2	8394	BUSHING FOR 2500
8	2	8395	BUSHING FOR 3300
9	2	9103	SNAP RING 2500
9	2	9103A	SNAP RING 3300
10	1	8393	GREASE FITG (ZERK)
11	4	9104	NUT
12	4	8355	LOAD BEARING
13	6	9105	NUT
14	2	9106	NUT
15	2	8352	CONNECTING LINK
16	1	8351	PIVOT CHAIN
17	6	8383	ROLLER BRG 2500
17	6	8357	ROLLER BRG 3300
*18	4	9113B	BOLT 3/8 x 1 FOR HYD. MOTOR
*19	4	9113C	LOCKWASHER 3/8" FOR HYD. MOTOR
*20	1	96380	GUARD FOR HYD. VALVES (TILT
		CARR)	
*21	2	HH5-.25-NC-3.5	BOLTS FOR SOLENOID VALVE MOUNTING
*22	5	LW-.25	LOCK WASHER 1/4" FOR SOLENOID VALV
*23	3	HH5-.25-NC-3.0	BOLT FOR CHECK VALVE (.25 x 3.0")
*24	3	HN-.25	NUT FOR CHECK VALVE .25 NC

NOTES * ITEMS 18 - 24 NOT SHOWN
ITEMS 20 - 24 ARE FOR TH WITH TILT CARRIAGE

PMPH27

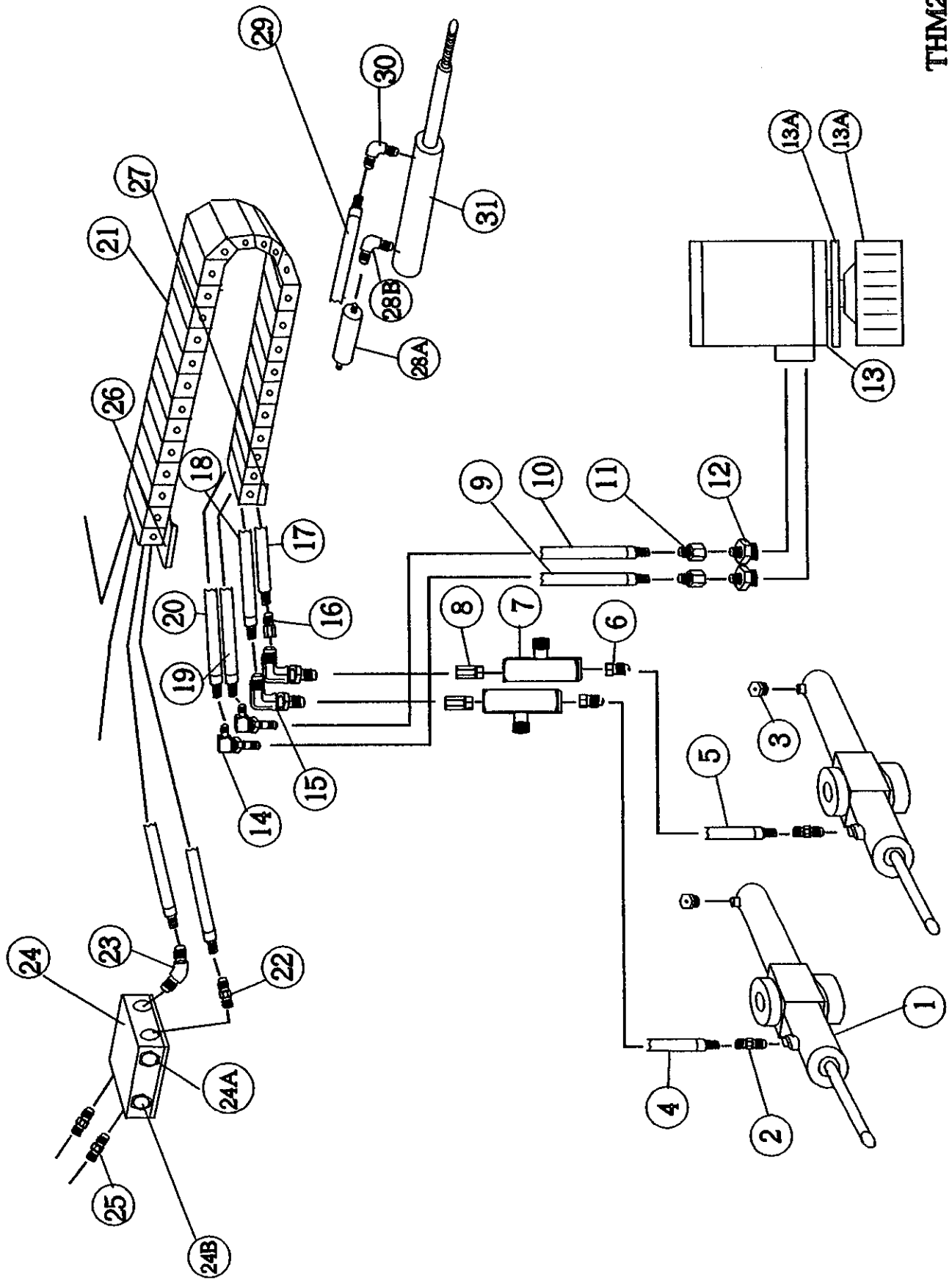


* TOP VIEW #7

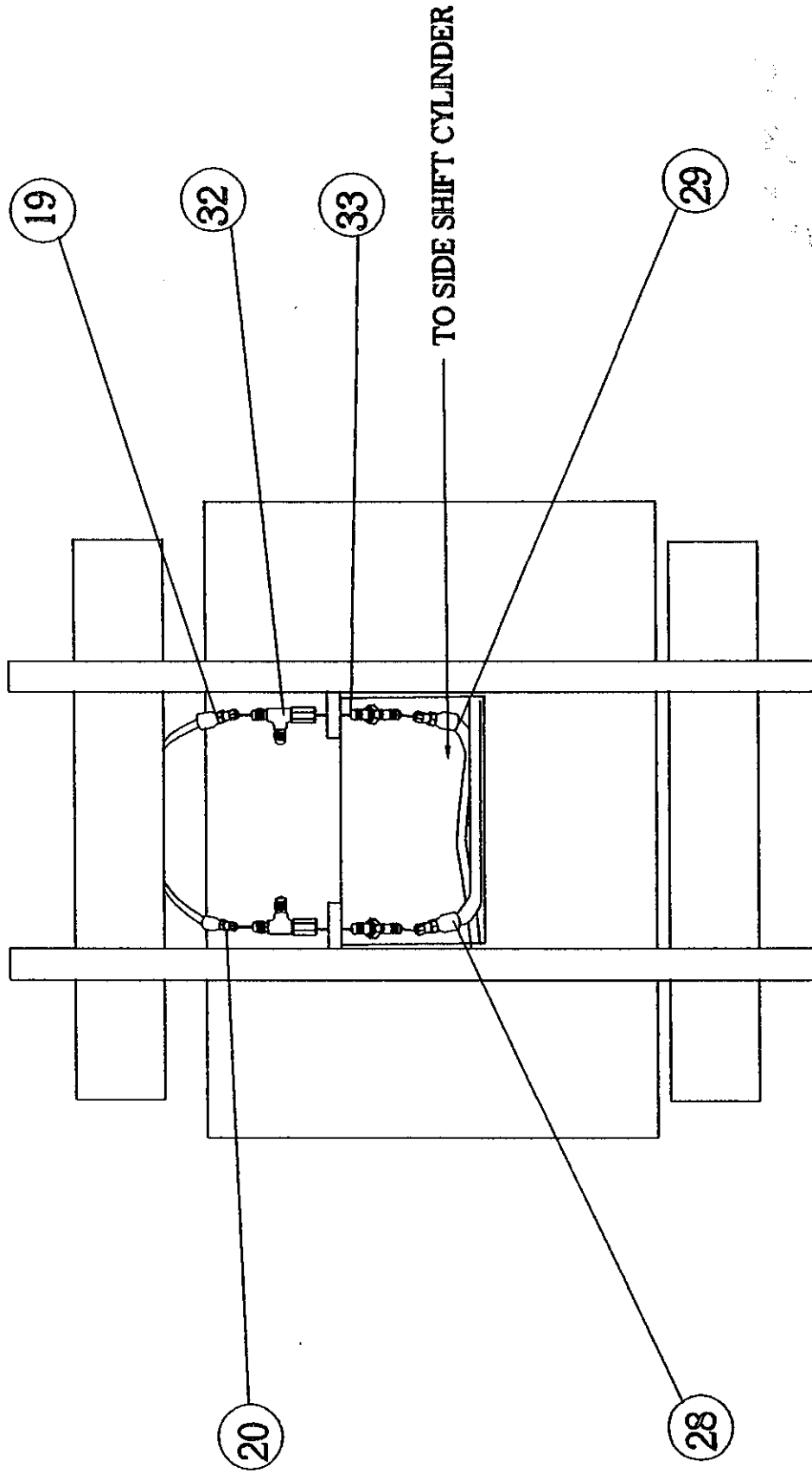


HYDRAULICS FOR TURRET HEAD

SEE BACK VIEW OF HYDRAULICS



BACK-VIEW HYDRAULICS FOR TURRET HEAD

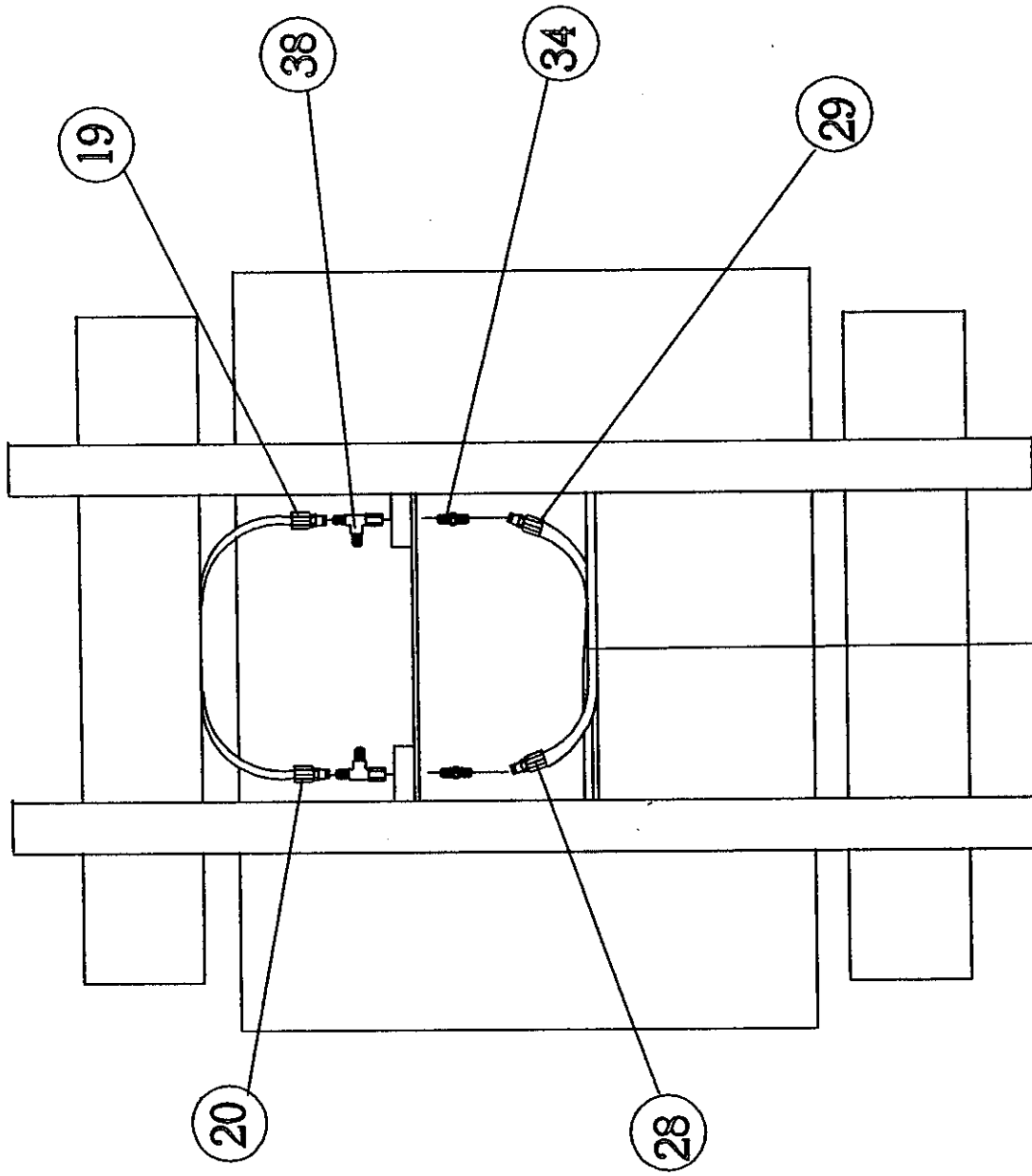


5-27-98

HYDRAULIC SYSTEM PARTS

<u>ITEM</u>	<u>REQ'D</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
1	2	8326	PIVOT CYLINDER
N/A	N/A	8326SK	PIVOT CYL. SEAL KIT
2	2	8322	ADAPTER FITTING
3	2	8331	BREATHER PLUG
3	2	8335	ADAPTER FITTING
3	2	8336	HOSE ASSEMBLY
4	1	8301	R/HAND PIVOT CYL. HOSE
5	1	8302	L/HAND PIVOT CYL. HOSE
6	2	8311	ADAPTER FITTING
7	2	8321	FLOW CONTROL VALVE
8	2	8332	ADAPTER FITTING
9	1	8306	L/HAND MOTOR HOSE
10	1	8305	R/HAND MOTOR HOSE
11	2	8319	ADAPTER FOR MOTOR PORT
12	2	8323	MOTOR PORT ADAPTER
13	1	8325	HYDRAULIC MOTOR
13A	1	8376	PINION GEAR
13B	1	SE1002	THRUST BEARING KIT
N/A	1	8325SK	HYD. MOTOR SEAL KIT
14	2	8315	ADAPTER FITTING
15	2	8318	ADAPTER FITTING
16	1	8319	ADAPTER
17	1	8304	HOSE ASSY.
18	1	8303	HOSE ASSY.
19	1	8307M	HOSE ASSY.
20	1	8308M	HOSE ASSY.
21	1	8328	CABLE TRACK
21	1	8328B	RIVET KIT
22	1	8312	ADAPTER FITTING
23	1	8322	ADAPTER
24	1	8324	CHECK VALVE ASSY.
24A	2	8324A	RELIEF VALVE
24B	2	8324B	CHECK VALVE
25	2	8399	ADAPTER
26	1	8329	FIXED BRACKET
27	1	8330	SWIVEL BRACKET
28	1	83812	HOSE ASSY.
28A	1	83810	CHECK VALVE ASSY.
28B	1	83811	ADAPTER
29	1	8381M	HOSE ASSY.
30	2	8317	ADAPTER
31	1	8327	S/SHIFT CYL
N/A	N/A	8327SK	S/SHIFT CYL SEAL KIT
32	2	8313	BULKHEAD
33	2	8314	RUN-TEE

BACK-VIEW FOR TILTING TURRET

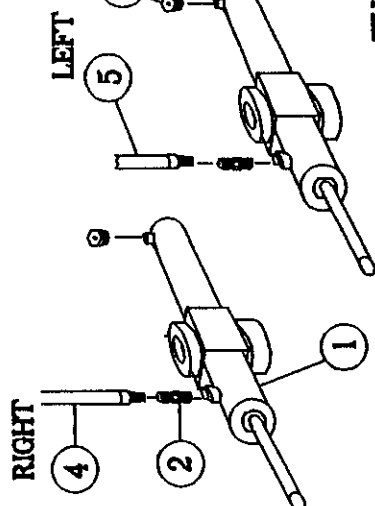
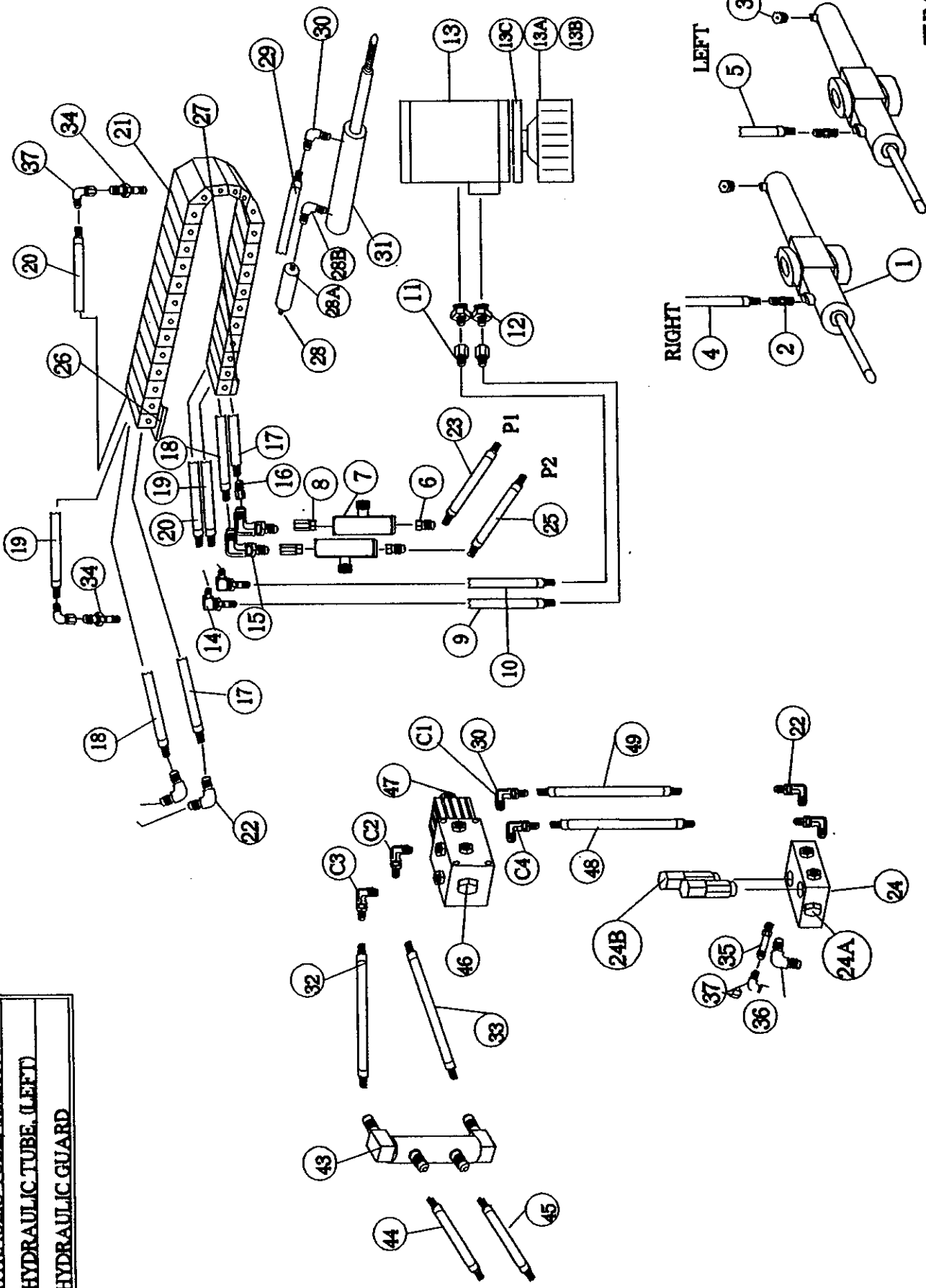


TO SIDE SHIFT CYLINDER

HYDRAULICS FOR TILTING TURRET HEAD

ITEMS NOT SHOWN:

40	TILT CYLINDER
41	HYDRAULIC TUBE, (RIGHT)
42	HYDRAULIC TUBE, (LEFT)
50	HYDRAULIC GUARD



THM2AT

6/25/97

TILTING TURRET
HYDRAULIC SYSTEM PARTS

<u>ITEM</u>	<u>REQ'D</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
1	2	8326	PIVOT CYLINDER
N/A	-	8326SK	CYL. SEAL KIT
2	2	8322	ADAPTER FITTING
3	2	8331	BREATHER PLUG
3	2	8335	ADAPTOR FITTING
3	2	8336	HOSE ASSY.
4	1	96301	RIGHT PIVOT CYL. HOSE
5	1	96302	LEFT PIVOT CYL. HOSE
6	2	8311	ADAPTER VALVE
7	2	8321	FLOW CONTROL VALVE
8	2	8332	ADAPTER, VALVE
9	1	96303	L/HAND MOTOR HOSE
10	1	96304	R/HAND MOTOR HOSE
11	2	8319	ADAPTER, FOR MOTOR
12	2	8323	ADAPTER PORT, MOTOR
13	1	*8325	HYD. MOTOR (SEE NOTE)
13	1	**8325A	HYD. MOTOR (SEE NOTE)**
13A	1	8376	PINION GEAR
13B	1	306142	WOODRUFF KEY
13C	-	SE1002	THURST BEARING KIT
13	-	*8325SK	SEAL KIT, HYD MOTOR (8325)
13	-	**8325SK-B	SEAL KIT, HYD. MOTOR (8325A)
14	2	8315	ADAPTER FITTING
15	2	8318	ADAPTER FITTING
16	1	8319	ADAPTER FITTING
17	1	96305	HOSE ASSY. PIVOT LEFT
18	1	96306	HOSE ASSY. PIVOT RIGHT
19	1	96307	LEFT HOSE HYD MOTOR
20	1	96308	RIGHT HOSE HYD. MOTOR
21	1	8328	CABLE TRACK
21	-	8328A	ONE LINK CABLE TRACK
22	4	8312	ADAPTER
23	1	96309	HOSE ASSY. TO P1 ON VALVE
24	1	8324	CHECK VALVE ASSY.
24A	-	8324A	CARTRIDGE, CHECK (2 PER)
24B	-	8324B	RELIEF CARTRIDGE (2 PER)
25	1	96310	HOSE ASSY. TO P2 ON VALVE

* SERIAL NO# UP TO AND INCLUDING 103113 USED 8325 MOTOR
ALL TH33 MUST USE THIS MOTOR
 TH25 CAN USE 8325-B MOTOR

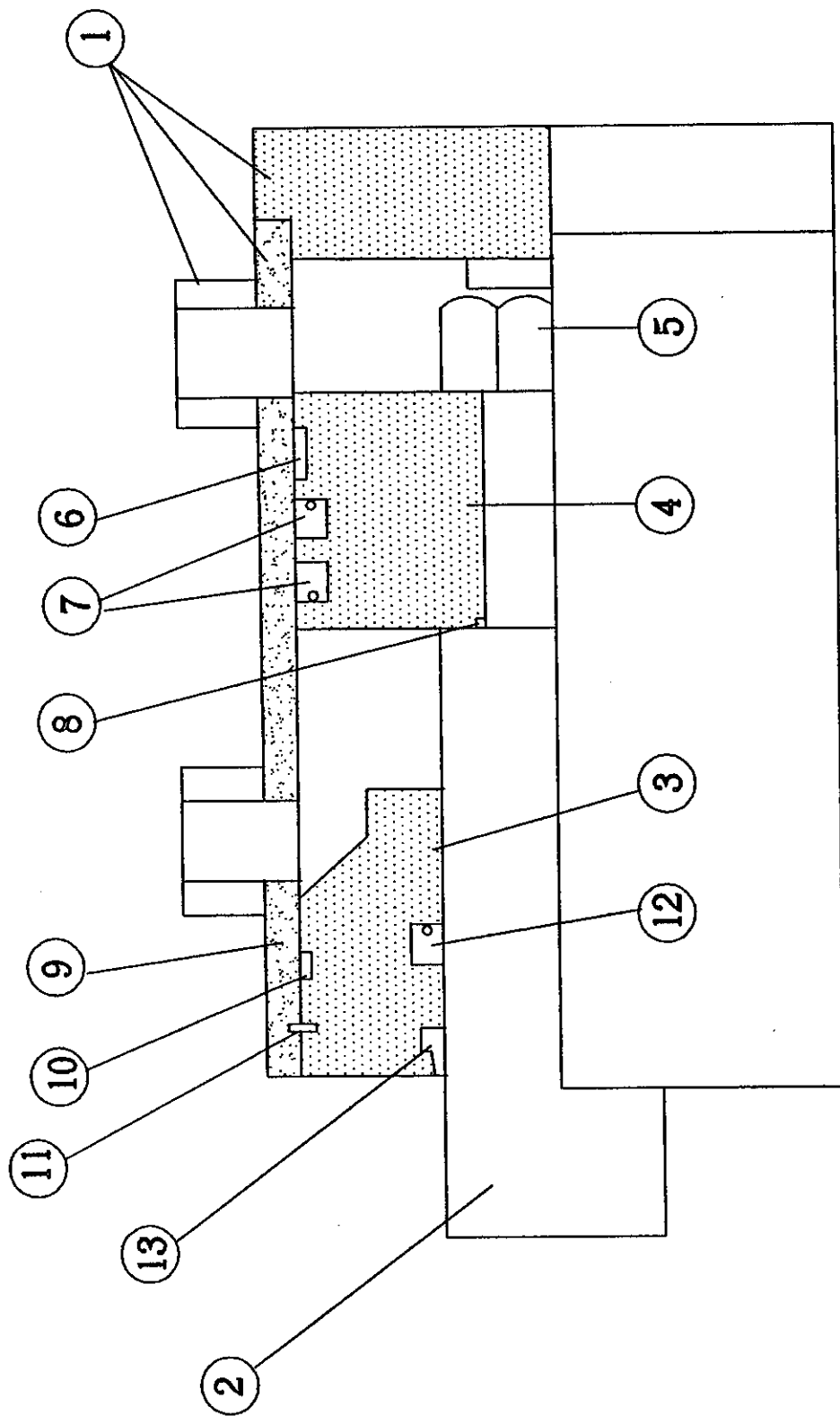
**SERIAL NO# 103114 TO PRESENT USE'S 8325-B MOTOR ALL MODELS.

6/25/97
PMTT27

TILTING TURRET
HYDRAULIC SYSTEM PARTS

<u>ITEM</u>	<u>REQ'D</u>	<u>PART</u>	<u>DESCRIPTION</u>
26	1	8329	BRACKET, FIXED
27	1	8330	BRACKET, SWIVEL
28	1	96311	HOSE ASSY. SS CYL. BASE
28A	1	83810	CHECK VALVE
24B	1	83814	ADAPTER
29	1	96312	HOSE ASSY. SS CYL. ROD END
30	6	8317	ADAPTER
31	1	8327	S/S CYLINDER
31	-	8327SK	S/S CYL. SEAL KIT
32	1	96313	UPPER HOSE FROM C3 TO HYD. SWIVEL
33	1	96314	LOWER HOSE FROM C2 TO HYD. SWIVEL
34	4	8314	BULK HEAD
35	1	8390	EXTENDED ADAPTER
36	1	8312	ADAPTER
37	3	8316	90 - ADAPTER
38	2	8313	TEE ADAPTER
39	-	96105-SK	SEAL KIT TILT CYL.
40	1	96105	TILT CYL.
41	1		96002 TILT CYL. HYD. TUBE RIGHT
42	1	96003	TILT CYL. HYD TUBE LEFT
43	1	HS-1	HYD. SWIVEL
44	1	96315	HOSE ASSY. FROM SWIVEL TO CARR LEFT
45	1	96316	HOSE ASSY. FROM SWIVEL TO CARR RIGHT
46	1	09691712V	SOLENOID VALVE WITH COIL 12V
		09691724V	SOLENOID VALVE WITH COIL 24V
		09691736V	SOLENOID VALVE WITH COIL 36V
		09691748V	SOLENOID VALVE WITH COIL 48V
47	1	09798112V	REPLACEMENT COIL 12V
		09798124V	REPLACEMENT COIL 24V
		09798136V	REPLACEMENT COIL 36V
		09798148V	REPLACEMENT COIL 48V
48	1	96317	HOSE ASSY. C1 TO CHECK
49	1	96318	HOSE ASSY. C4 TO CHECK
50	1	96380	GUARD, FOR HYD. VALVES

PIVOT CYLINDER ASSEMBLY



6/25/97TM

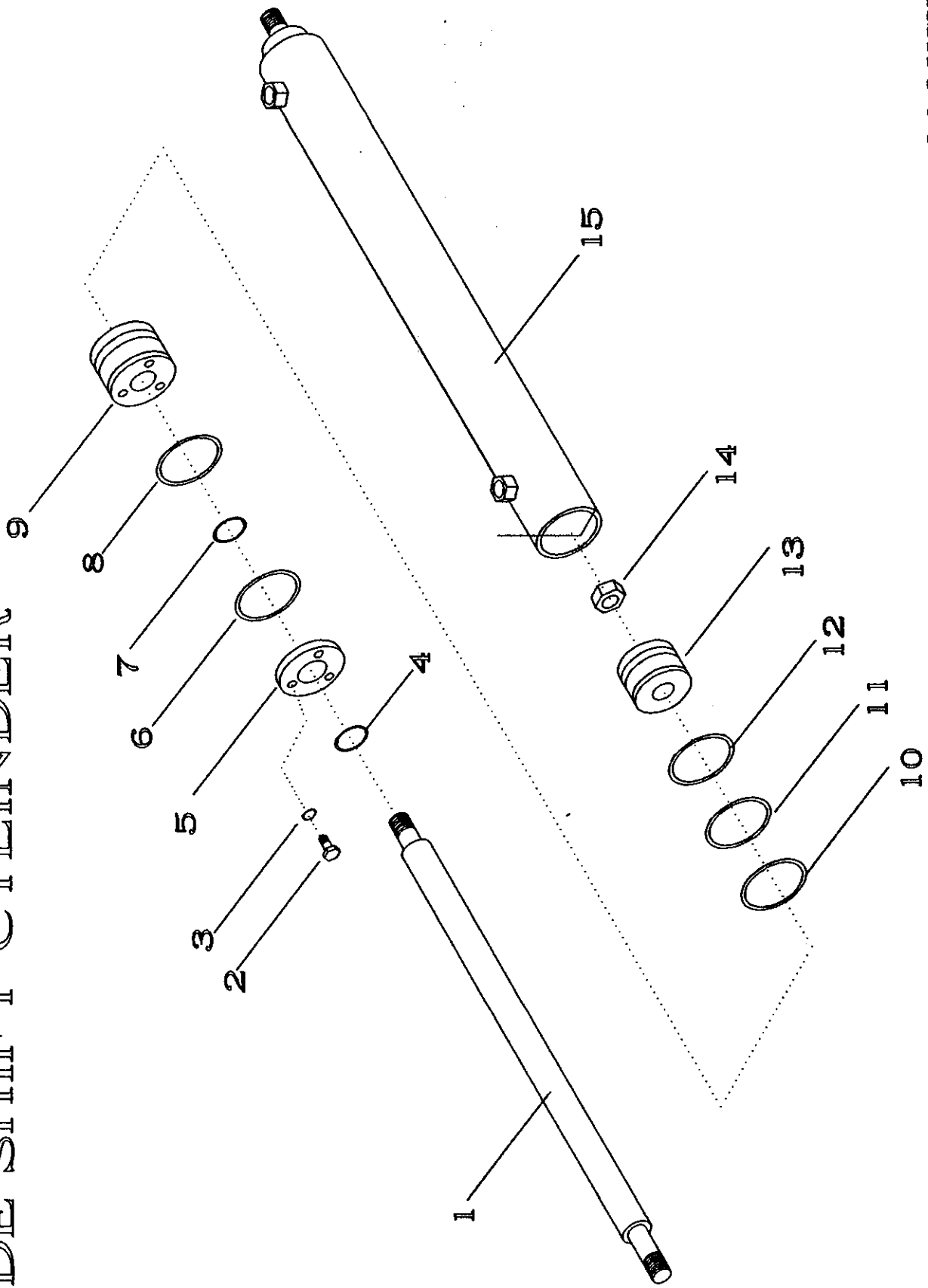
PIVOT CYLINDER 8326

PARTS

REF. NO.	REQ'D	PART NO.	DESCRIPTION
1	1	51385	TUBE ASSY
2	1	51368	ROD ASSY
3	1	51390	HEAD
4	1	51389	PISTON
5	1	51391	NUT
6	1	51394*	WEAR BAND
7	2	51395*	PISTON SEAL
8	1	51396*	O-RING
9	1	51397*	O-RING
10	1	51398*	BACKUP RING
11	1	51399*	SNAP RING
12	1	51337*	ROD SEAL
13	1	51338*	ROD WIPER
14	1	8326SK	SEAL KIT

* PART NUMBER 8326SK CONTAIN ALL ITEMS MARKED WITH AN ASTERISK

SIDE SHIFT CYLINDER



TTH80

5/30/97

M. LUSK

41391TM
6/25/97

8327 SIDE SHIFT CYLINDER

PARTS

REF NO.	REQ'D	PART NO.	DESCRIPTION
1	1	51384	ROD
2	3	51161	S/H CAP SCREW
3	3	51986	LOCK WASHER
4	1	51782*	ROD WIPER
5	1	51262	RETAINER
6	1	51409	RETAINING RING
7	1	51662*	ROD SEAL
8	1	51462*	HEAD O'RING
9	1	51387	HEAD
10	2	51369*	BACKUP
11	1	51437*	PISTON O'RING
12	2	51369*	BACKUP
13	1	51386	PISTON
14	1	51308	NUT S/LOCKING
15	1	51137	TUBE ASSY.
*	1	8327SK	SEAL KIT

* PART NUMBER 8327SK CONTAINS ALL ITEMS MARKED WITH AN ASTERISK

RECOMMENDED SPARE PARTS LIST TURRET HEAD

PART NUMBER	DESCRIPTION	1-2	3-5	6-10
8351	ROTATION CHAIN	1	1	2
8352	MASTER LINK	2	4	6
8326	PIVOT CYLINDER	0	1	2
8326SK	PIVOT CYL SEAL KIT	1	1	2
8327	SIDE SHIFT CYLINDER	0	1	2
8327SK	SS CYLINDER SEAL KIT	1	1	2
8324A	PIVOT CHECK VALVE	1	2	3
8324B	PIVOT RELIEF VALVE	1	2	3
8328	HOSE TRACK	1	1	2
8394	PIVOT BUSHING 25/30	2	2	4
8395	PIVOT BUSHING 35/40	2	2	4
9103	SNAP RINGS	4	4	6
8355	MAIN LOAD BEARING	1	2	4
8383	SECONDARY BEARING 25/30	1	2	4
8357	SECONDARY BEARING 35/40	1	2	4
8359	SIDE THRUST BEARING	1	2	4
8325	HYDRAULIC MOTOR	0	1	2
8325SK	HYD. MOTOR SEAL KIT	1	1	2
8376	DRIVE RACK GEAR	1	1	2
8375	DRIVE PINION GEAR	0	1	2
8382	PIVOT SHAFT 25/30	0	1	1
8350	PIVOT SHAFT 35/40	0	1	1
8391	RACK GEAR WEAR STRIP	2	4	6
8374	STOP BLOCK	2	4	6
8206	CARRIAGE 25/30	0	0	1
8205	CARRIAGE 35/40	0	0	1
8380	CHAIN GUARD	0	1	1