

15. VARIABLE FREQUENCY DRIVE (VFD)

Speed adjustments can be made with the speed pot located on the front control panel. Consult the Allen Bradley owner's manual for information concerning the Variable Frequency Drive.

16. RECOMMENDED SPARE PARTS LIST

<u>Fischbein Part #</u>	<u>Description of Part</u>	<u>Quantity</u>
67312	Controller, Temperature	1
66512	Fuse, FNM - 10 Amp	2
P3331	Fuse, FNM - 2 Amp	3
54090	Belts, Carrier	2
67373	Heater Cartridge	2
67185	Fuse, 6 AMP, KTK-6	2
66552	Switch, 22mm Bulb-24VAC	2
54223	Drive Wheel Trimmer	1 (trimmer option)
54225	Idler Wheel Trimmer	1 (trimmer option)
54124	Blade, Trimmer	1 (trimmer option)
54053	Knurled Drive Wheel	1
54052	Knurled Idler Wheel	1
19468	Knurled Wheel Spring	1
A5678	Thermocouple, Type "J"	1

17. SAFELY DISPOSING OF A HAS-200

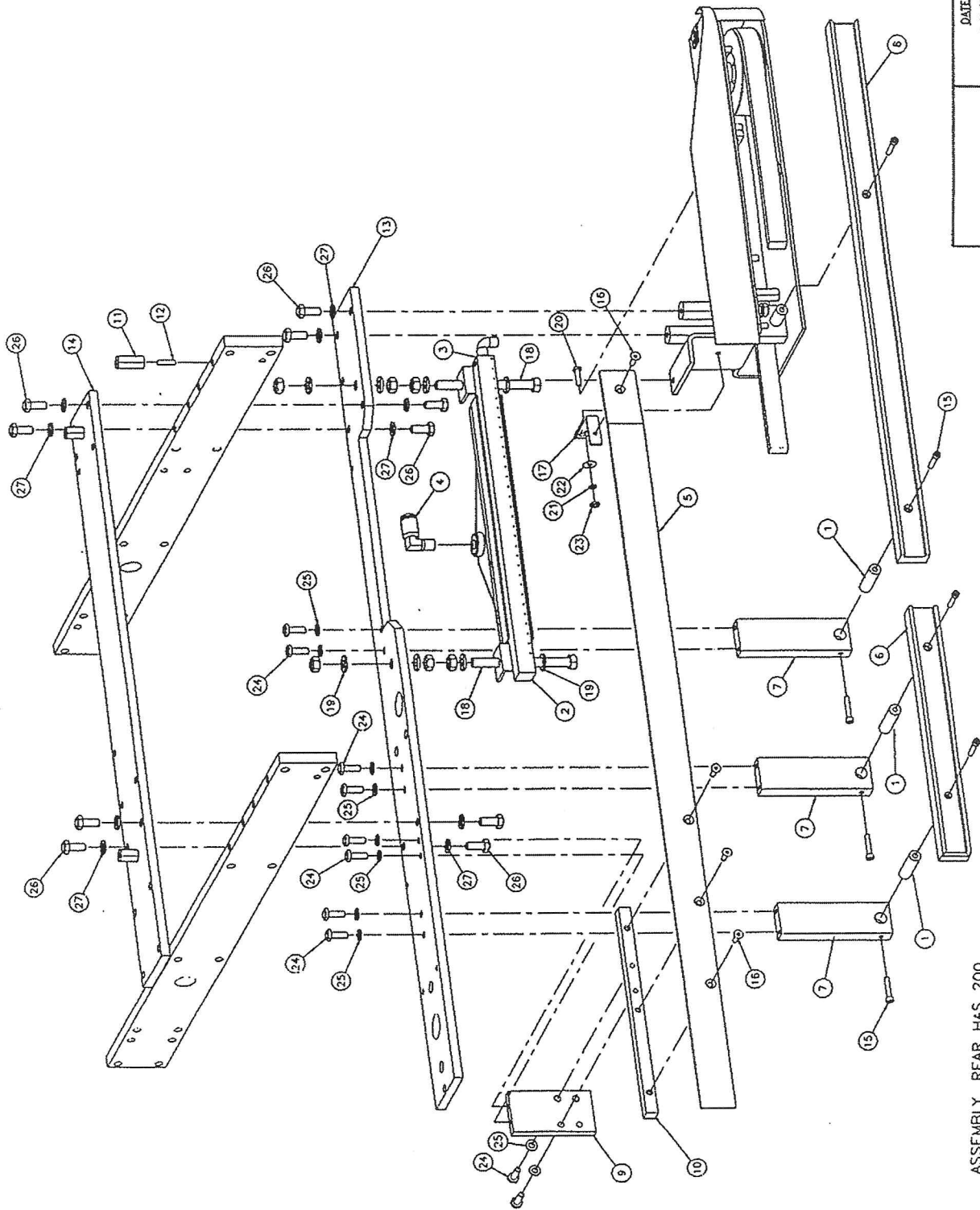
If a Hot Air Sealer becomes damaged beyond repair or simply worn to a nonfunctional state after years of service, it should be put out of service only after it is safe to dispose of it. First, drain all the oil from the gearbox, which is located on the carriage assembly just above the air connection, and properly dispose of it. The drive belts, bulbs and any plastic parts should then be removed and disposed of separately before rendering the machine to a recycling or metal scrap facility.

19. EXPLODED DRAWINGS & PARTS LISTS

ITEM #	DESCRIPTION	DRAWING/SHEET #	PAGE #
1	Assembly, Rear HAS 200 (Sheet 2 of 3)	Drawing 54128	27
2	Assembly, Rear HAS 200 (Sheet 2 of 3)	Parts Sheet 54128	28
3	Assembly, Rear HAS 200 (Sheet 3 of 3)	Drawing 54128	29
4	Assembly, Rear HAS 200 (Sheet 3 of 3)	Parts Sheet 54128	30
5	Assembly, Frame HAS 200	Drawing 54129	31
6	Assembly, Frame HAS 200	Parts Sheet 54129	32
7	Assembly, Front HAS 200 (Sheet 2 of 3)	Drawing 54163	33
8	Assembly, Front HAS 200 (Sheet 2 of 3)	Parts Sheet 54163	34
9	Assembly, Front HAS 200 (Sheet 3 of 3)	Drawing 54163	35
10	Assembly, Front HAS 200 (Sheet 3 of 3)	Parts Sheet 54163	36
11	Assembly, Infeed Left HAS 200	Drawing 54180	37
12	Assembly, Infeed Left HAS 200	Parts Sheet 54180	38
13	Assembly, Infeed Right HAS 200	Drawing 54185	39
14	Assembly, Infeed Right HAS 200	Parts Sheet 54185	40
15	Assembly, Carriage HAS 200	Drawing 54186	41
16	Assembly, Carriage HAS 200	Parts Sheet 54186	42

ASSEMBLY, REAR HAS 200 (54128

<u>ITEM NO.</u>	<u>QTY.</u>	<u>PART NO.</u>	<u>PART DESCRIPTION</u>
1	3	54051	MOUNT, TRACK ADJUSTABLE
2	1	19406	CHAMBER, HEAT - RIGHT
3	1	16154	SEALANT, SILICONE GASKET
4	1	18107	FITTING, ELBOW 1/4M X 3/8
5	1	54060	GUIDE, FRONT
6	1	54064	GUIDE, BELT REAR
7	3	54066	MOUNT, TRACK LEFT REAR
8	1	54191	GUIDE, BELT FRONT REAR
9	1	54054	MOUNT, AIR COOLER
10	1	54063	MOUNT, GUIDE FRONT
11	1	54050	STANDOFF, 1/2 HEX HAS 200
12	1	SS516181	SCREW, SOC SET 5/16-18 X 1
13	1	54070	PLATE, BOTTOM REAR
14	1	54071	PLATE, TOP REAR
15	7	SC103212	SCREW, SOC CAP 10-32 X 1/2
16	4	SF103212	SCREW, SOC FLAT 10-32 X 1/2
17	1	54141	BRACKET, GUIDE MOUNTING
18	2	H3816412	BOLT, HEX 3/8-16 X 4 1/2 FULL THRD
19	8	WL38	WASHER, LOCK 3/8
20	1	H10321	BOLT, HEX 10-32 X 1
21	1	WL10	WASHER, LOCK #10
22	1	WF10	WASHER, FLAT #10
23	1	NH1032	NUT, HEX 10-32
24	10	H142034	BOLT, HEX 1/4-20 X 3/4
25	10	WL14	WASHER, LOCK 1/4
26	10	H5161834	BOLT, HEX 5/16-18 X 3/4
27	10	WL516	WASHER, LOCK 5/16



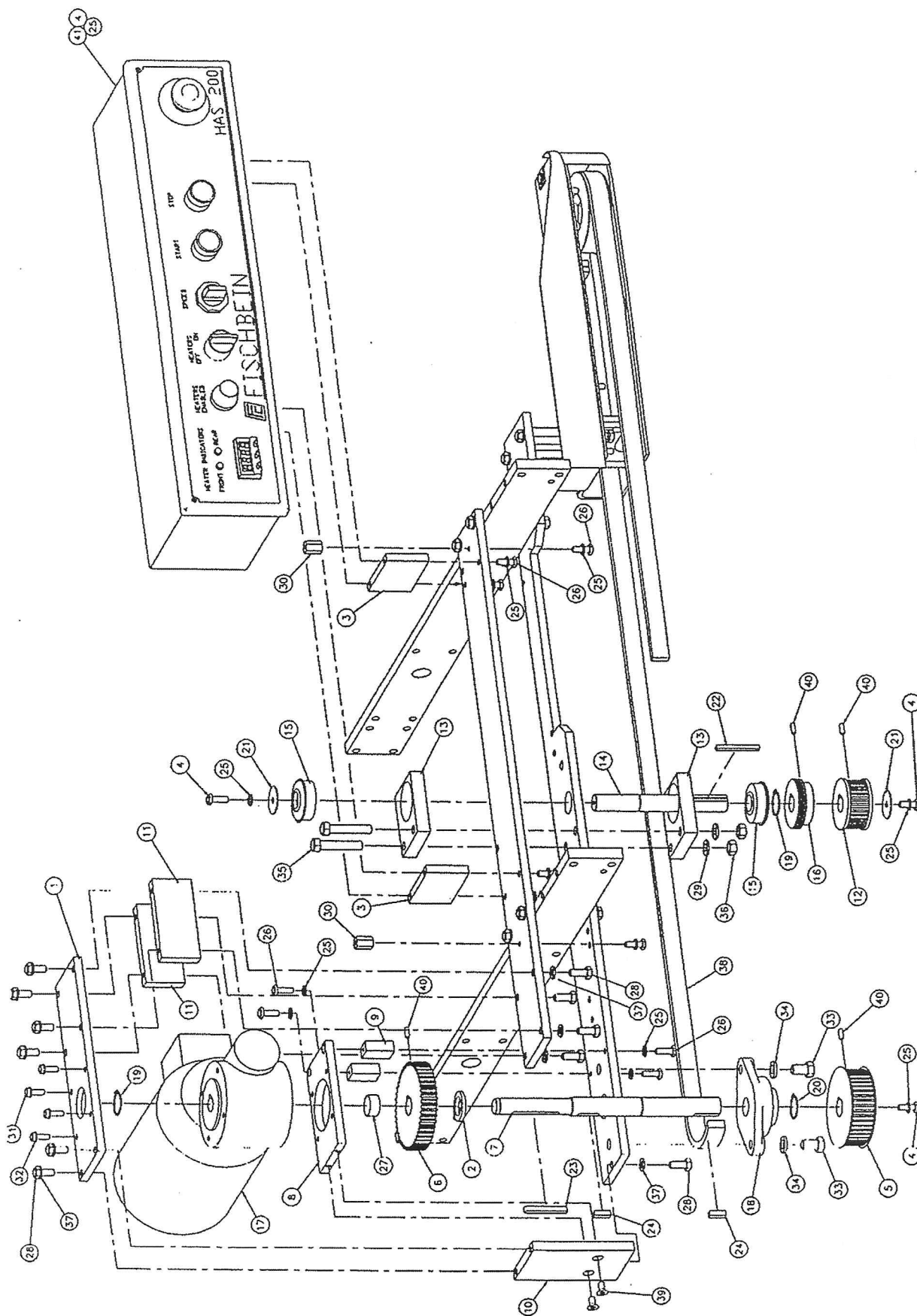
ASSEMBLY, REAR HAS 200

DATE:
5/6/98

DRAWING NUMBER:
54128

ASSEMBLY, REAR HAS 200 (54128

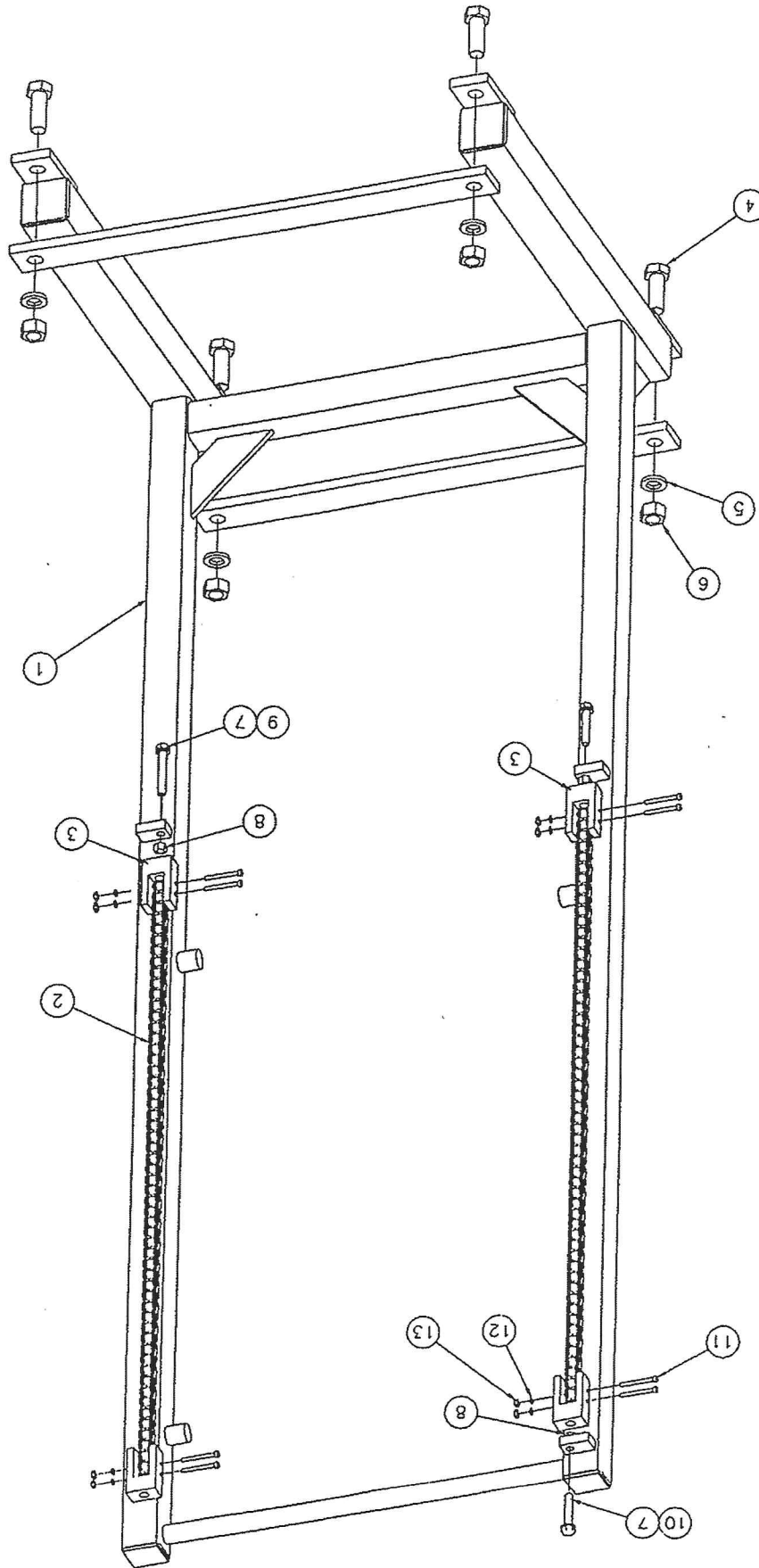
<u>ITEM NO.</u>	<u>QTY.</u>	<u>PART NO.</u>	<u>PART DESCRIPTION</u>
1	1	54135	PLATE, TOP GERAMOTOR MOUNTING
2	1	54146	SPACER, SHAFT
3	2	54169	BLOCK, CONSOLE MOUNTING
4	6	H142012	BOLT, HEX 1/4-20 X 1/2
5	1	19432	SPROCKET, DRIVE
6	1	54133	GEAR, SPUR
7	1	54134	SHAFT, DRIVE
8	1	54136	PLATE, MOTOR MOUNTING
9	2	54137	STANDOFF, MOTOR MOUNT
10	1	54138	PLATE, END
11	2	54145	PLATE, GEARBOX MOUNTING
12	1	194B2	SPROCKET, DRIVE TRIMMER
13	2	54047	MOUNT, BEARING KNURLED WHEEL
14	1	54069	SHAFT, KNURLED WHEEL
15	2	54084	BEARING, 7512 DLG
16	1	54053	WHEEL, KNURLED DRIVE
17	1	67349	GEARMOTOR, BISON 840 AC
18	1	68266	BEARING, 2-BOLT FLANGE FC2
19	2	T3167	RING, SNAP 3/4
20	2	A5086	RING, SNAP EXTERNAL
21	2	54095	FENDER WASHER 9/32 X 1 1/4
22	1	54085	KEY, 3/16 SQ X 2.0
23	1	54149	KEY, GEARMOTOR
24	2	54150	KEY, GEAR
25	15	WL14	WASHER, LOCK 1/4
26	8	H142034	BOLT, HEX 1/4-20 X 3/4
27	1	54147	SPACER, DRIVE SHAFT
28	19	H5161834	BOLT, HEX 5/16-18 X 3/4
29	2	WL38	WASHER, LOCK 3/8
30	2	67274	STANDOFF, HEX 1/2" 1/4-20 X 3/4 LG
31	4	HM616	BOLT, HEX METRIC 6 X 16MM LG
32	4	WLM6	WASHER, LOCK METRIC 6MM
33	2	H71614112	BOLT, HEX 7/16-14 X 1 1/2
34	2	WL716	WASHER, LOCK 7/16
35	2	H3816114	BOLT, HEX 3/8-16 X 1 1/4
36	2	NH3816	NUT, HEX 3/8-16
37	19	WL516	WASHER, LOCK 5/16
38	1	54090	BELT, HPT 2600-8M-20E
39	2	SF14201	SCREW, SOC FLAT 1/4-20 X 1
40	4	SS103212	SCREW, SOC SET #10-32 X 1/2
41	1	54049	ASSEMBLY, CONSOLE BOX



ASSEMBLY, REAR HAS 200	DATE: 5/6/98	DRAWING NUMBER: 54128
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ASSEMBLY, FRAME HAS 200 (54129)

<u>ITEM NO.</u>	<u>QTY.</u>	<u>PART NO.</u>	<u>PART DESCRIPTION</u>
1	1	54000	FRAME, HOT AIR SEALER 200
2	10	66006	CHAIN, ROLLER #50
3	3	54001	MOUNT, CHAIN
4	4	H34102	BOLT, HEX HD 3/4-10 X 2 UNC
5	4	WL34	WASHER, LOCK 3/4
6	4	NH3410	NUT, HEX 3/4-10
7	1	H3816212	BOLT, HEX HD 3/8-16 X 2 1/2 FT UNC
8	3	NH3816	NUT, HEX 3/8-16
9	3	WL38	WASHER, LOCK 3/8
10	2	H38162	BOLT, HEX HD 3/8-16 X 2 FT UNC
11	8	SC1032134	SCREW, SOC CAP 10-32 X 1 3/4 UNC
12	8	WL10	WASHER, LOCK #10
13	8	NH1032	NUT, HEX #10-32
14	2	54184	BAR, HAS 200 FRAME LIFT



ASSEMBLY, FRAME HAS 200

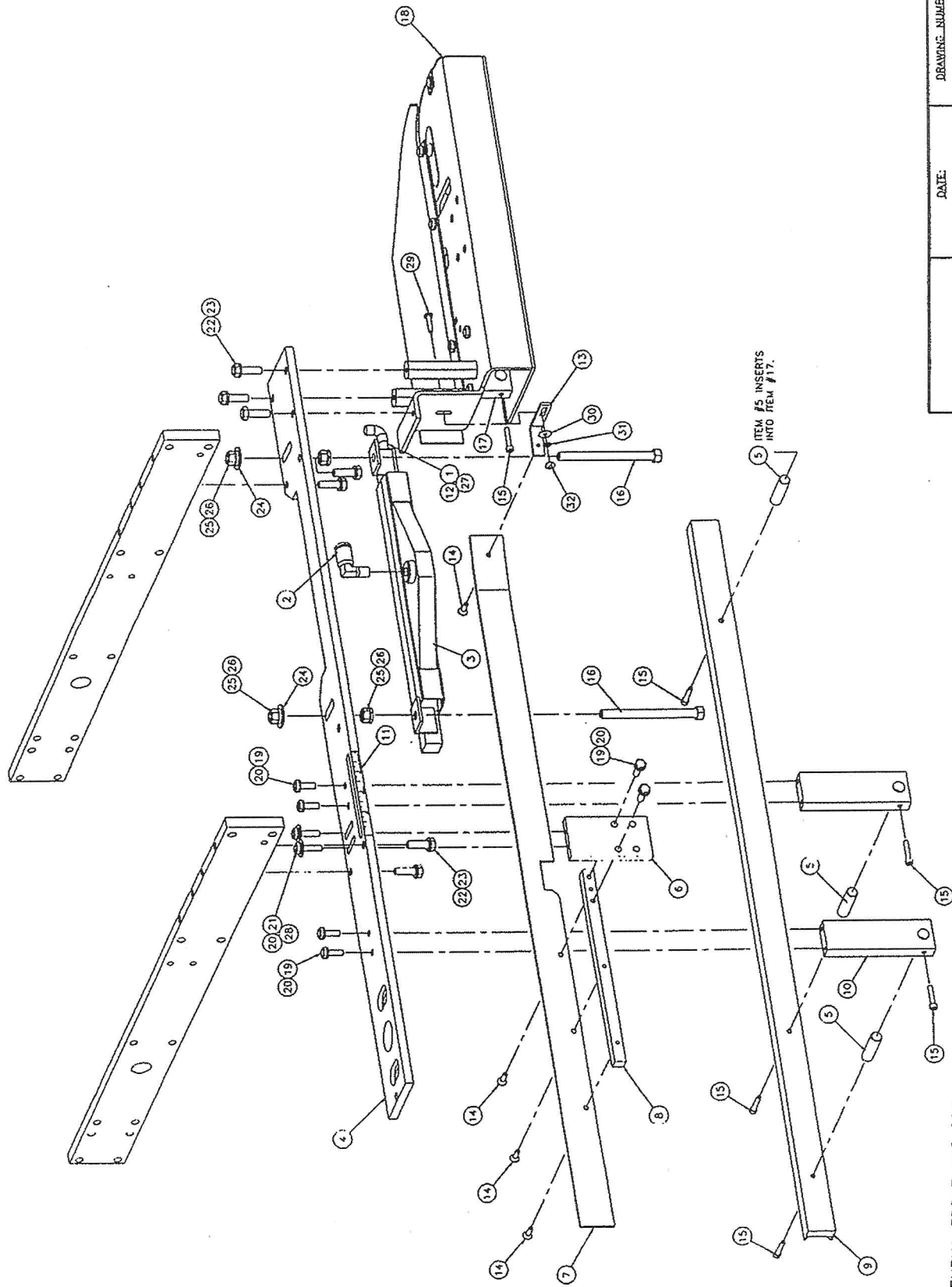
DRAWING NUMBER: 54129	DATE: 5/6/98	SHEET 1 OF 1
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ASSEMBLY, FRONT HAS 200 (54163

<u>ITEM NO.</u>	<u>QTY.</u>	<u>PART NO.</u>	<u>PART DESCRIPTION</u>
1	2	54010	BEARING, FLANGED DU 3/8"
2	1	54027	POST, PIVOT
3	1	54028	BUSHING, PIVOT
4	1	54056	MOUNT, SPRING
5	2	54087	SHIM, SPRING MOUNT
6	1	54088	BRACKET, IDLER
7	1	19468	SPRING, TENSION
8	8	54052	WHEEL, KNURLED DRIVE
9	1	66231	BOLT, SHOULDER 3/8 DIA X 5/8
10	1	19515-P0000	BOLT, SHOULDER 3/8 DIA
11	2	19T28	BOLT, SHOULDER 3/8 DIA
12	1	H5161834	BOLT, HEX 5/16-18 X 3/4
13	1	WL516	WASHER, LOCK 5/16
14	1	H1420412FT	BOLT, HEX 1/4-20 X 4 1/2 FULL THRD
15	2	WL14	WASHER, LOCK 1/4
16	1	NH1420	NUT, HEX 1/4-20
17	2	SC14201	SCREW, SOC CAP 1/4-20 X 1
18	2	NH1032	NUT, HEX 10-32
19	1	19432	SPROCKET, DRIVE
20	1	54041	PLATE, TOP FRONT
21	1	54057	PLATE, MOUNTING END
22	1	54090	BELT, HPT 2600-8M-20E
23	1	54133	GEAR, SPUR
24	1	54144	SHAFT, IDLER
25	1	54148	SPACER, IDLER SHAFT TOP
26	2	68266	BEARING, 2-BOLT FLANGE
27	2	A5086	RING, SNAP - EXTERNAL
28	4	WL716	WASHER, LOCK 7/16
29	4	NH71614	NUT, HEX 7/16-14
30	4	H716141	BOLT, HEX 7/16-14 X 1
31	2	SS103212	SCREW, SOC SET #10-32 X 1/2
32	1	54146	SPACER, SHAFT
33	1	WF14	WASHER, FLAT 1/4
34	5	WL516	WASHER, LOCK 5/16
35	1	H142012	BOLT, HEX 1/4-20 X 1/2
36	1	WL14	WASHER, LOCK 1/4
37	1	67274	STANDOFF, 1/2" HEX 1/4-20 X 3/4
38	1	H142034	BOLT, HEX 1/4-20 X 3/4
39	1	54150	KEY, GEAR
40	1	A2772	KEY, 1/8 SQ X 1 3/16 ROUND ENDS

ASSEMBLY, FRONT HAS 200 (54163

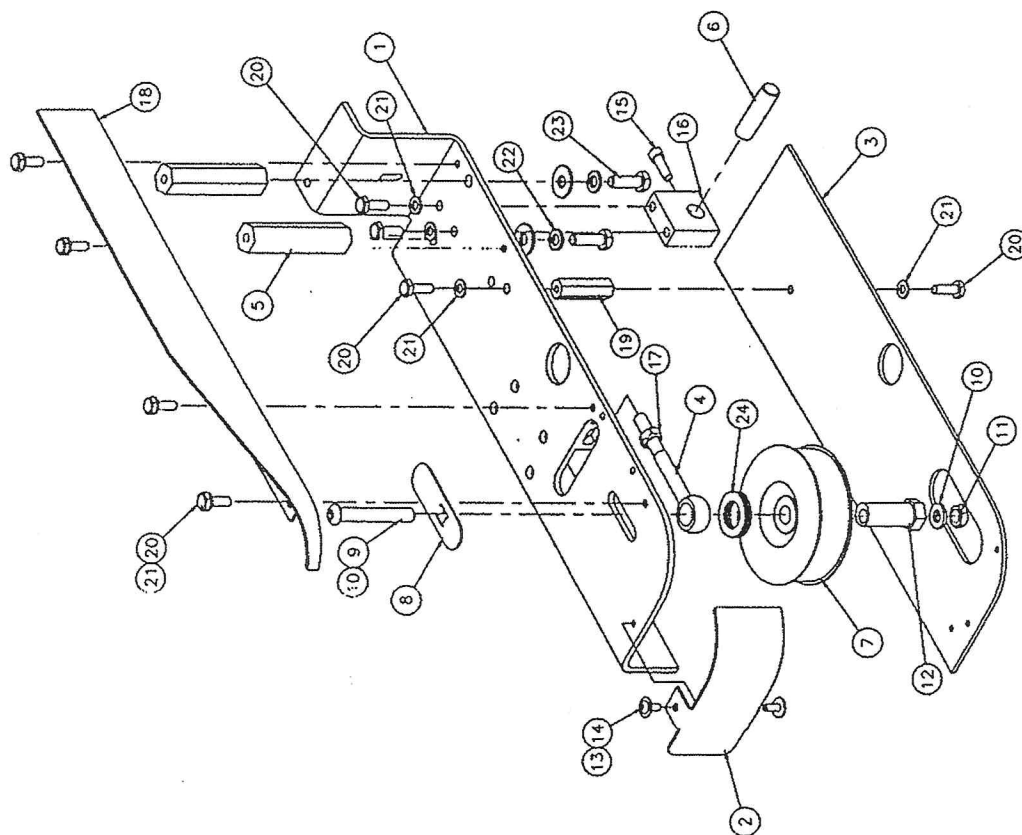
<u>ITEM NO.</u>	<u>QTY.</u>	<u>PART NO.</u>	<u>PART DESCRIPTION</u>
1	1	16154	SEALANT, SILICONE GASKET
2	1	18107	FITTING, ELBOW 1/4M X 3/8
3	1	19405	CHAMBER HEAT LEFT
4	1	54042	PLATE, BOTTOM FRONT
5	3	54051	MOUNT TRACK ADJUSTABLE
6	1	54054	MOUNT, AIR COOLER
7	1	54061	GUIDE, REAR
8	1	54063	MOUNT, GUIDE FRONT
9	1	54065	GUIDE, BELT FRONT
10	2	54066	MOUNT, TRACK LEFT REAR
11	1	54098	RULE, ADHESIVE BACK
12	1	A5678	THERMOCOUPLE, RING (TYPE J)
13	1	54141	BRACKET, BAG GUIDE MOUNTING
14	3	SF103212	SCREW, SOC FLAT #10-32 X 1/2
15	7	SC103234	SCREW, SOC CAP #10-32 X 3/4
16	2	H3816412	BOLT, HEX 3/8-16 X 4 1/2 FULL THRD
17	17	54048	MOUNT, TRACK - LEFT FRONT
18	18	54185	ASS'Y, INFEED RIGHT
19	4	H142034	BOLT, HEX 1/4-20 X 3/4
20	18	WL14	WASHER, LOCK 1/4
21	2	H14201	BOLT, HEX 1/4-20 X 1
22	7	H5161834	BOLT, HEX 5/16-18 X 3/4
23	7	WL516	WASHER, LOCK 5/16
24	2	WF38	WASHER, FLAT 3/8
25	6	NH3816	NUT, HEX 3/8-16
26	4	WL38	WASHER, LOCK 3/8
27	1	B103214	SCREW, BTTN HEAD 10-32 X 1/4
28	2	WF14	WASHER, LOCK 1/4
29	1	H10321	BOLT, HEX 10-32 X 1
30	1	WF10	WASHER, FLAT #10
31	1	WL10	WASHER, LOCK #10
32	1	NH1032	NUT, HEX 10-32



DRAWING NUMBER: 54163	DATE: 5/6/98	ASSEMBLY, FRONT HAS 200
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ASSEMBLY, INFEED LEFT HAS 200 (54180)

<u>ITEM NO.</u>	<u>QTY.</u>	<u>PART NO.</u>	<u>PART DESCRIPTION</u>
1	1	54161	INFEED, LEFT
2	1	54167	GUARD, INFEED
3	1	54166	PLATE, INFEED BOTTOM
4	1	67351	EYEBOLT, HAS INFEED
5	2	54058	SPACER, HEX
6	1	54051	MOUNT, TRACK ADJUSTABLE
7	1	54009	ASSEMBLY, SPROCKET, IDLER WHEEL
8	1	A2727	COVER, BEARING - INFEED
9	1	SB3816212	SCREW, SOC BTN 3/8-16 X 2 1/2 UNC
10	1	WL38	WASHER, LOCK 3/8
11	1	NJ3816	NUT, JAM 3/8-16
12	1	19433	BUSHING, ADJUSTABLE
13	2	WL10	WASHER, LOCK #10
14	2	SB103212	SCREW, SOC BTN #10-32 X 1/2 UNC
15	1	SC142034	SCREW, SOC CAP 1/4-20 X 3/4 UNC
16	1	54048	MOUNT, TRACK - LEFT FRONT
17	1	NH3816	NUT, HEX 3/8-16
18	1	54043	GUIDE, INFEED LEFT HAND
19	1	19T15	SPACER, HEX
20	8	H142012	BOLT, HEX HD 1/4-20 X 1/2 UNC
21	8	WL14	WASHER, LOCK 1/4
22	1	WL516	WASHER, LOCK 5/16
23	1	H5161834	BOLT, HEX HD 5/16-18 X 3/4 UNC
24	7	T3129	WASHER, THRUST

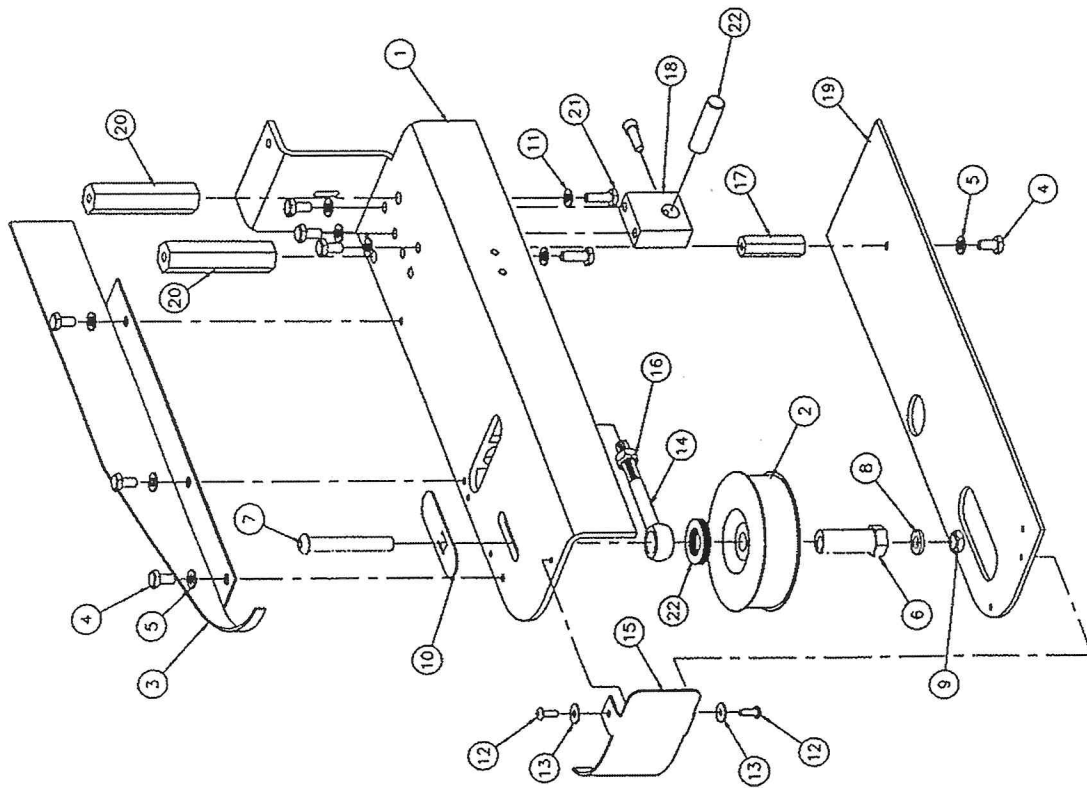


ASSEMBLY, INFEED LEFT HAS 200

SHEET 1 OF 1	DATE: 5/6/98	DRAWING NUMBER: 54180
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ASSEMBLY, INFEED RIGHT HAS 200 (54185)

<u>ITEM NO.</u>	<u>QTY.</u>	<u>PART NO.</u>	<u>PART DESCRIPTION</u>
1	1	54162	INFEED, RIGHT
2	1	54009	ASSEMBLY, SPROCKET WHEEL
3	1	54044	GUIDE, INFEED RIGHT HAND
4	8	H142012	BOLT, HEX HD 1/4-20 X 1/2
5	8	WL14	WASHER, LOCK 1/4
6	1	19433	BUSHING, ADJUSTABLE
7	1	SB3816212	SCREW, SOC BTN 3/8-16 X 2 1/2
8	1	WL38	WASHER, LOCK 3/8
9	1	NJ3816	NUT, JAM 3/8-16
10	1	A2727	COVER, BEARING
11	3	WL516	WASHER, LOCK 5/16
12	2	SB103212	SCREW, SOC BTN 10-32 X 1/2
13	2	WL10	WASHER, LOCK #10
14	1	67351	EYEBOLT, HAS INFEED
15	1	54167	GUARD, INFEED
16	1	NH3816	NUT, HEX 3/8-16
17	1	19T15	SPACER, HEX
18	1	54048	MOUNT, TRACK - LEFT FRONT
19	1	54166	PLATE, INFEED BOTTOM
20	1	54058	SPACER, INFEED
21	3	H5161834	BOLT, HEX HD 5/16-18 X 3/4
22	1	54051	MOUNT, TRACK ADJUSTABLE
22	7	T3129	WASHER, THRUST

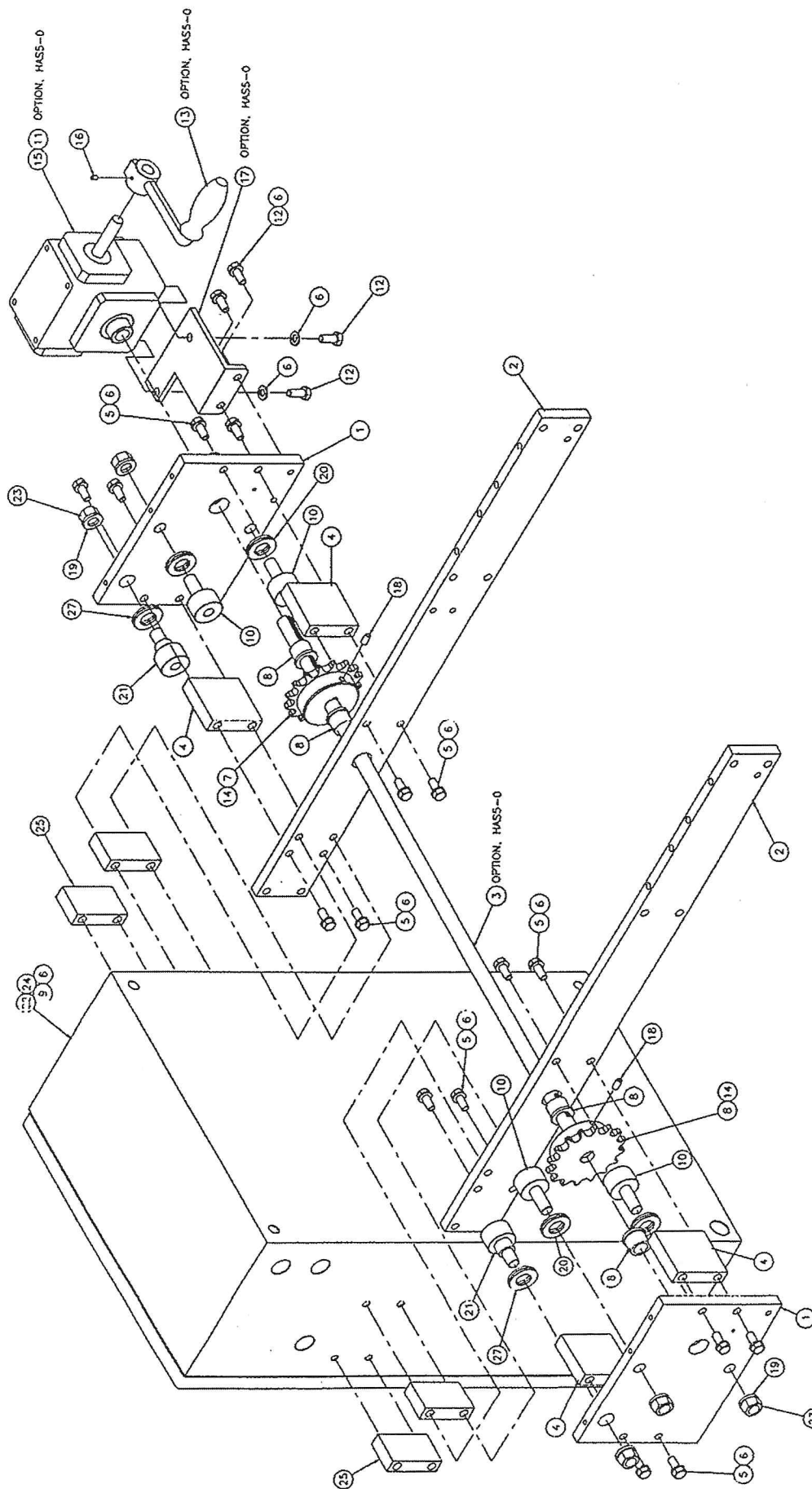


ASSEMBLY, INFED RIGHT HAS 200

DRAWING NUMBER: 54185	DATE: 5/6/98	SHEET 1 OF 1
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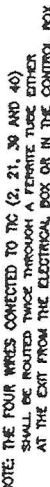
ASSEMBLY, CARRIAGE HAS 200 (54186)

<u>ITEM NO.</u>	<u>QTY.</u>	<u>PART NO.</u>	<u>PART DESCRIPTION</u>
1	2	54126	PLATE, CARRIAGE OUTSIDE
2	2	54127	PLATE, CARRIAGE MOUNTING
3	3	54012	SHAFT
4	4	54004	SPACER, RAIL
5	16	H516181	BOLT, HEX HD 5/16-18 X 1 UNC
6	30	WL516	WASHER, LOCK 5/16
7	2	54074	SPROCKET, CHAIN
8	4	54072	BUSHING, .627 ID X .877 OD
9	8	H51618212	BOLT, HEX HD 5/16-18 X 2 1/2
10	4	67353	CAM, FOLLOWER 1.250 DIA X .750
11	1	A2772	KEY, 1/8 SQ X 1 3/16
12	6	H5161834	BOLT, HEX HD 5/16-18 X 3/4 UNC
13	13	54014	CRANK, HOT AIR SEALER 200
14	2	68342	KEY, 3/16 SQ X 1 1/16 LG
15	15	67350	REDUCER, WORM GEAR 50:1
16	1	SS103212	SCREW, SOC SET 10-32 X 1/2
17	17	54159	BRACKET, CRANK MOUNTING
18	4	SS142012	SCREW, SOC SET 1/4-20 X 1/2
19	6	WL12	WASHER, LOCK 1/2
20	8	WF12	WASHER, FLAT 1/2
21	2	67352	CAM FOLLOWER W/ECCENTRIC 1.250 DIA
22	1	54187	ENCLOSURE ELECTRICAL HAS 200
23	6	NH1220	NUT, HEX 1/2-20
24	24	54190	ASSEMBLY, ELECTRICAL PANEL
25	4	54165	BLOCK ELECTRICAL BOX MOUNTING
26	8	NH51618	NUT, HEX 5/16-18
27	4	WF34	WASHER, FLAT 3/4



DRAWING NUMBER: 54186	DATE: 5/6/98	SHEET 1 OF 1
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ASSEMBLY, CARRIAGE HAS 200



DATE	DESCRIPTION	AMOUNT	BALANCE
1900	TO BALANCE		100.00
1901	BY SALES	50.00	150.00
1902	TO PURCHASE	25.00	125.00
1903	BY SALES	75.00	200.00
1904	TO PURCHASE	30.00	170.00
1905	BY SALES	60.00	230.00
1906	TO PURCHASE	40.00	190.00
1907	BY SALES	80.00	270.00
1908	TO PURCHASE	50.00	220.00
1909	BY SALES	90.00	310.00
1910	TO PURCHASE	60.00	250.00
1911	BY SALES	100.00	350.00
1912	TO PURCHASE	70.00	280.00
1913	BY SALES	110.00	390.00
1914	TO PURCHASE	80.00	310.00
1915	BY SALES	120.00	430.00
1916	TO PURCHASE	90.00	340.00
1917	BY SALES	130.00	470.00
1918	TO PURCHASE	100.00	370.00
1919	BY SALES	140.00	510.00
1920	TO PURCHASE	110.00	400.00
1921	BY SALES	150.00	550.00
1922	TO PURCHASE	120.00	430.00
1923	BY SALES	160.00	590.00
1924	TO PURCHASE	130.00	460.00
1925	BY SALES	170.00	630.00
1926	TO PURCHASE	140.00	490.00
1927	BY SALES	180.00	670.00
1928	TO PURCHASE	150.00	520.00
1929	BY SALES	190.00	710.00
1930	TO PURCHASE	160.00	550.00
1931	BY SALES	200.00	750.00
1932	TO PURCHASE	170.00	580.00
1933	BY SALES	210.00	790.00
1934	TO PURCHASE	180.00	610.00
1935	BY SALES	220.00	830.00
1936	TO PURCHASE	190.00	640.00
1937	BY SALES	230.00	870.00
1938	TO PURCHASE	200.00	670.00
1939	BY SALES	240.00	910.00
1940	TO PURCHASE	210.00	700.00
1941	BY SALES	250.00	950.00
1942	TO PURCHASE	220.00	730.00
1943	BY SALES	260.00	990.00
1944	TO PURCHASE	230.00	760.00
1945	BY SALES	270.00	1030.00
1946	TO PURCHASE	240.00	790.00
1947	BY SALES	280.00	1070.00
1948	TO PURCHASE	250.00	820.00
1949	BY SALES	290.00	1110.00
1950	TO PURCHASE	260.00	850.00
1951	BY SALES	300.00	1150.00
1952	TO PURCHASE	270.00	880.00
1953	BY SALES	310.00	1190.00
1954	TO PURCHASE	280.00	910.00
1955	BY SALES	320.00	1230.00
1956	TO PURCHASE	290.00	940.00
1957	BY SALES	330.00	1270.00
1958	TO PURCHASE	300.00	970.00
1959	BY SALES	340.00	1310.00
1960	TO PURCHASE	310.00	1000.00
1961	BY SALES	350.00	1350.00
1962	TO PURCHASE	320.00	1030.00
1963	BY SALES	360.00	1390.00
1964	TO PURCHASE	330.00	1060.00
1965	BY SALES	370.00	1430.00
1966	TO PURCHASE	340.00	1090.00
1967	BY SALES	380.00	1470.00
1968	TO PURCHASE	350.00	1120.00
1969	BY SALES	390.00	1510.00
1970	TO PURCHASE	360.00	1150.00
1971	BY SALES	400.00	1550.00
1972	TO PURCHASE	370.00	1180.00
1973	BY SALES	410.00	1590.00
1974	TO PURCHASE	380.00	1210.00
1975	BY SALES	420.00	1630.00
1976	TO PURCHASE	390.00	1240.00
1977	BY SALES	430.00	1670.00
1978	TO PURCHASE	400.00	1270.00
1979	BY SALES	440.00	1710.00
1980	TO PURCHASE	410.00	

Parameter	DESCRIPTION	UNIT
P000	PROCESSED DATA	2
P002	ACQUISITION TIME	0.1s
P003	ACQUISITION TIME	0.1s
P004	ANALOG INPUT RANGE	1
P007	OSCAR ATTRAQ	0
P012	MINIMUM FREQUENCY OUT	1Hz
P013	MAXIMUM FREQUENCY OUT	50Hz
P081	ON PWR	1
P002	OFF1	4
P001	OUTPUT MODE (N/A=0)	4

FOR MORE INFORMATION REGARDING INSTALLATION AND PROGRAMMING
 PLEASE REFER TO SERVICE USER MANUAL

Parameter level	Description	Setting
1	PROPORTIONAL CYCLE TIME	1.5s
1	ALARM DEVIATION SETPOINT	107 °F/O-Parody setting
2	ALARM OPERATING MODE	IN J
2	INPUT SENSITIVITY	IN J
2	REARMING DELAY	7 - standard 0 - per request
3	MAIN SETPOINT OUTPUT DEVICE	804
3	ALARM OUTPUT DEVICE	857

* FOR MORE INFORMATION REGARDING INSTALLATION AND PERFORMANCE, CONTACT THE MANUFACTURER.

[illegible]