

PARTS MANUAL
FOR
HAGIE MODELS 647-S & 647-SX

HAGIE MANUFACTURING COMPANY
BOX 273 CLARION, IOWA 50525 (515) 532-2861
COVERS MACHINE SERIAL NUMBERS: 058818001 THRU: 058818100
059918001 THRU: 059918100

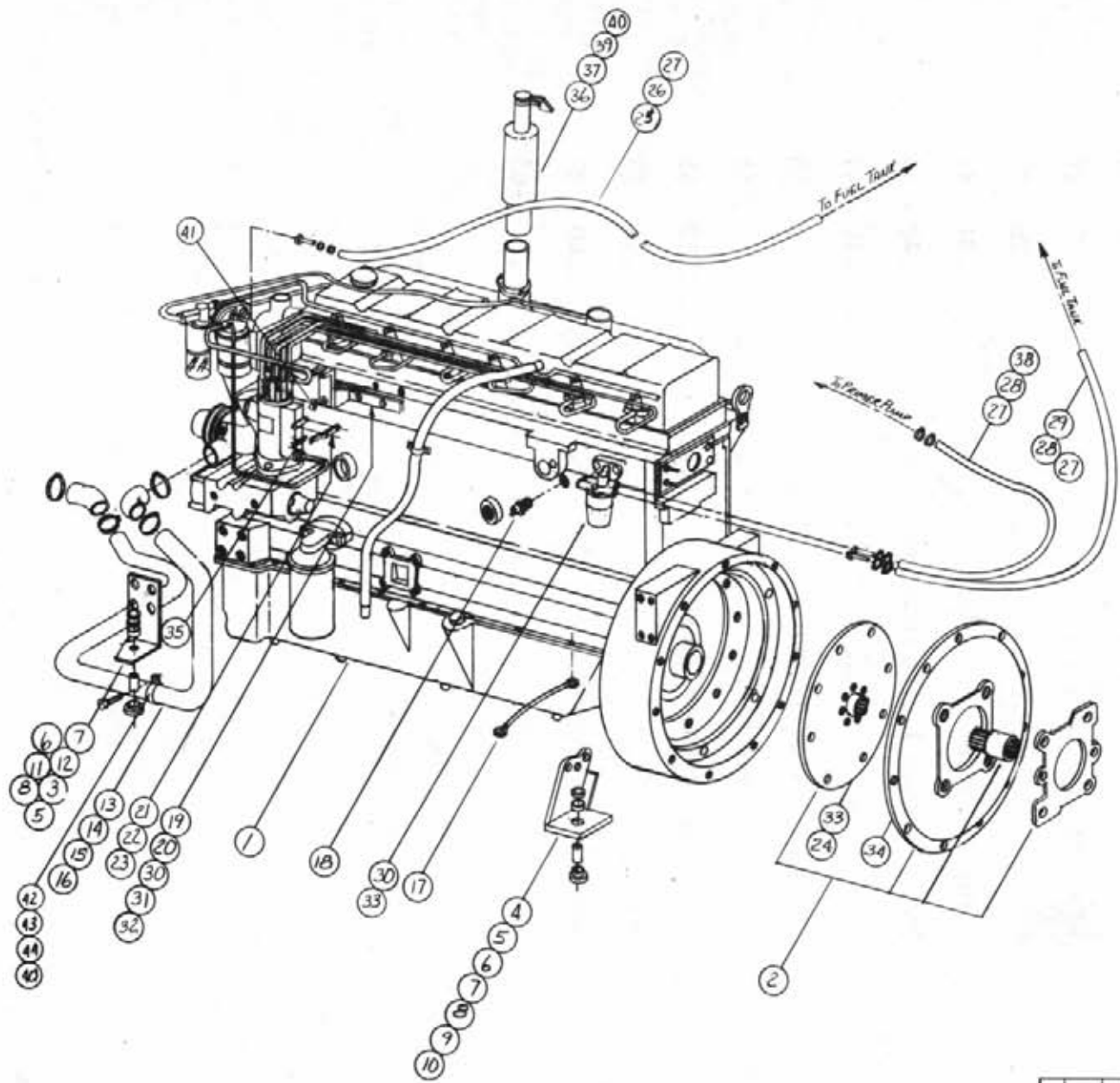
12-80 · 493073

THE FOLLOWING ABBREVIATIONS WILL BE USED

Adj -	Adjustment	Mic -	Micron
Adptr -	Adapter	MJIC -	Male J.I.C.
Agi -	Agitator	MOR -	Male O-Ring
AlHd -	Allen Head	MNPT -	Male NPT
Alt -	Alternator	MPS -	Male Pipe Straight Thread
Assy -	Assembly	Mt -	Mount
Aux -	Auxiliary	Mtg -	Mounting
Bkt -	Bracket	Mtr -	Motor
Br -	Branch	Neut -	Neutral
Brng -	Bearing	NPSM -	National Pipe Straight Mechanical
Bshng -	Bushing	NPT -	National Pipe Thread
Carr -	Carriage	OC -	Oil Cooler
CD -	Case Drain	OD -	Outside Diameter
Cl -	Close	Out -	Outlet
Conn -	Connector	Plt -	plate
Cont -	Control	Press -	Pressure
Cush -	Cushioned	Pwr -	Power
Cyl -	Cylinder	Rad -	Radiator
Dr -	Drain	Red -	Reducer
E1 -	Elbow	Ret -	Return
Exh -	Exhaust	Rt -	Right
Ext -	Extension	SAE -	Society of Automotive Engineers
Extrn -	External	SMV -	Slow Moving Vehicle
Fem -	Female	So1 -	Solution
FNPT -	Female N.P.T.	Speedo -	Speedometer
FOR -	Female O-Ring	Sp1 -	Spool
Ft -	Front	S.S. -	Stainless Steel
Ga -	Gauge	St -	Straight
GHT -	Garden Hose Thread	St E1 -	Street Elbow
GPM -	Gallons per Minute	Strg -	Steering
Gr -	Groove	Sund -	Sundstrand
Gr Zerk -	Grease Zerk	Sw -	Switch
Gr 8 -	Grease Eight	T -	Tee
Hyd -	Hydraulic	Tach -	Tachometer
Hydro -	Hydrostatic	Temp -	Temperature
ID -	Inside Diameter	Thd -	Thread
Ind -	Indicator	Throt -	Throttle
Instr -	Instrument	UNC -	Unified National Coarse
Lb -	Pound	UNF -	Unified National Fine
Lg -	Long	VFC -	Variable Flow Control
LH -	Left Hand	V1V -	Valve
LR -	Left Rear	w/ -	With
Lt -	Left	Wh1 -	Wheel
Lwr -	Lower	Weldm't -	Weldment
Man or Manif -	Manifold	2WD -	Two-wheel Drive
Med -	Medium	4WD -	Four-wheel Drive
		W1d or W1dm't -	

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40	914002	WASHER LOCK NUT
43	906072	3/4" x 3" FUEL TUBE
42	520123	3/4" CUSHION CLAMP
41	520119	3/4" CUSHION HOSE BAND
40	910002	3/4" HEX NUT
39	472195	27/32" x 3/4" U-BOLT
38	601141	27" FUEL LINE
37	314537	RAIN CAP
36	314554	MUFFLER
35	390486	TRAY CLAMP
34	900129	3/8" UNF 1" BOLT
33	900163	7/8" UNF 1" BOLT
32	914000	3/4" UNF LOCK NUT
31	900002	3/4" x 3/4" BOLT
30	920002	3/8" FEATHER WASHER
29	601142	36" FUEL LINE
28	314527	3/4" x 2" HOSE BAND
27	520120	MINI HOSE CLAMP
26	314552	1/4" x 3" HOSE BAND
25	601143	54" FUEL LINE
24	920502	3/8" LOCK WASHER
23	914027	3/4" x 3/2" LOCK NUT
22	903889	3/4" x 3/4" x 3/8" SCREW
21	314546	TRAY CLAMP RING
20	520118	3/4" CUSHION CLAMP
19	314520	TRAY CLAMP
18	314344	TEMP SENSOR
17	290051	12" GROUND CABLE
16	520068	#32 HOSE CLAMP
15	314549	LINE PRO. HOSE-CUT
14	314551	LINE WASH. BUSHING
13	314525	LINE PROTECTIVE PIPE
12	920505	3/8" LOCK WASHER
11	900333	3/8" UNF 1 1/2" BOLT
10	920504	1/2" LOCK WASHER
9	900264	1/2" UNF 1 1/2" BOLT
8	310631	1/4" FERRULE WASHER
7	310048	INSULATOR PRO. RING
6	310047	LOWER INSULATOR
5	310046	SCREW & SPACER
4	314513	LT. BLUE MOTOR M.T.
3	314507	LT. BLUE MOTOR M.T.
2	800454	SUSCEPTOR DRIVE
1	314317	PERKINS ENGINE

HAGIE
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CLARION, IOWA 50505

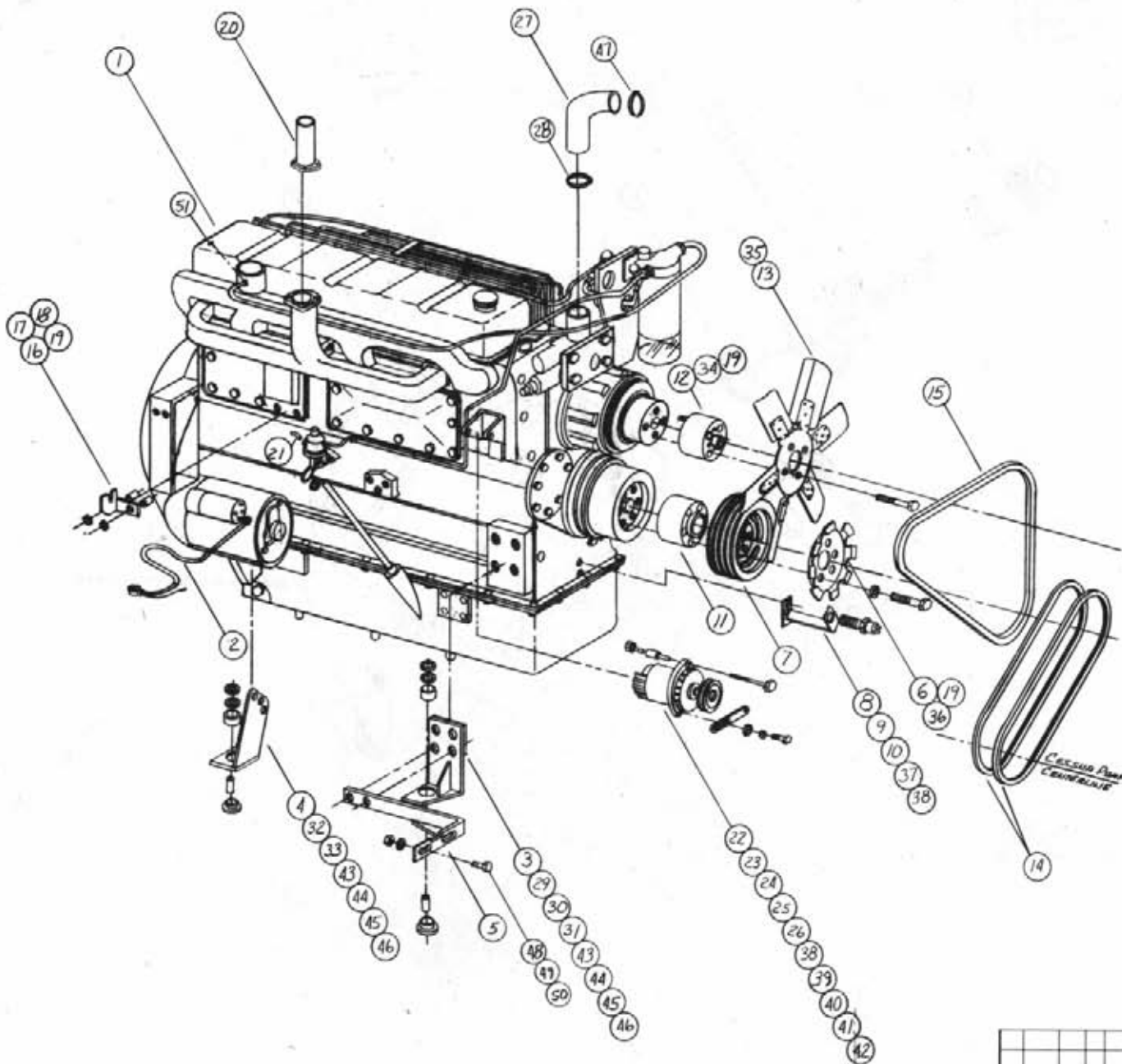
REMOVE ALL SHARP CORNERS & BURRS
TOLERANCES UNLESS OTHERWISE SPECIFIED

FRAC(TION) DECIMAL ANGLES

DESCRIPTION: **PERKINS DIESEL ENGINE RECY**
DRAWN BY: **L. GERMAN** SCALE: **NONE**
CHECKED BY: APPROVED BY: **L. GERMAN**

DATE: **12-12-78** DRAWING NUMBER: SHEET: **1** OF **1**

NO.	DATE	E.C.	BY	REVISION



NO	1	314559	INDUCTION PREHEATER
NO	1	473927	#6 X 7/8 HEX HD SCREW
NO	2	900132	7/8 DIA X 1 1/2 BOLT
NO	2	114004	7/8 DIA LOCKWASH
NO	2	920002	7/8 DIA FLAT WASHER
NO	1	520087	#22 HOSE CLAMP
NO	2	300016	SLEEVE / SPACER
NO	2	310047	LINE INSULATOR
NO	1	310048	INSULATOR PAD REST
NO	2	300631	1/4 KEYSER WASHER
NO	1	CONV W/ HOSELINE	7/8 DIA LOCKWASH
NO	1	CONV W/ HOSELINE	7/8 X 3 1/2 HEX BOLT
NO	1	CONV W/ HOSELINE	7/8 DIA FLAT WASHER
NO	1	CONV W/ HOSELINE	3/4 X 1" BOLT
NO	2	CONV W/ HOSELINE	3/4 DIA LOCKWASHER
NO	2	CONV W/ HOSELINE	1/2 DIA X 1" BOLT
NO	6	900108	7/8 X 3/2 BOLT
NO	4	900065	7/8 X 1" BOLT
NO	4	473260	7/8 DIA X 2 HOSE SCREW
NO	2	920504	1/2 LOCKWASHER
NO	2	100264	7/8 X 1 1/4 BOLT
NO	4	920505	3/8 LOCKWASHER
NO	2	900222	5/8 X 1 1/2 BOLT
NO	2	900325	5/8 X 2" BOLT
NO	1	520068	#22 HOSE CLAMP
NO	1	314547	TOP RAD. HOSE CUT
NO	1	314518	ALT. SPACER SHIRT
NO	1	314517	ALT. SPACER LONG
NO	1	314579	ALT. BELT MOUNTING PLATE
NO	1	141022	ALUMINUM PULLEY
NO	1	310793	SS AMP PULLEY W/DRIVE
NO	1	314524	HOSE BUSH PIPER
NO	1	314544	EXH. STACK W/HD
NO	1	920501	3/8 LOCKWASHER
NO	2	310562	BUSHING
NO	2	700101	3/4 DIA X 1 1/2 BOLT
NO	1	615289	HOSE CUT BIT
NO	1	140022	GATES BELT W/ACRO
NO	1	140035	3/4 X 3/4 X 1/4 BRASS
NO	1	317606	17" FAN BLADE
NO	1	314515	FAN PULLEY SPACER
NO	1	314516	COOLER SPACER
NO	1	473061	7/8 X 1 1/2 THIN WASH NUT
NO	1	291206	SPEEDO SENDER
NO	1	314557	TRAY SPACER AT W/HD
NO	1	140025	3/4 BUSH 4G. SENDER
NO	1	314564	TRAY PICK UP
NO	1	615277	CRACKING PUMP AT W/HD
NO	1	314509	EX. RAD. MOUNT W/HD
NO	1	314503	EX. FR. MOUNT W/HD
NO	1	290049	45" STARTER CABLE
NO	1	314317	PERKINS ENGINE
NO	NO		DESCRIPTION

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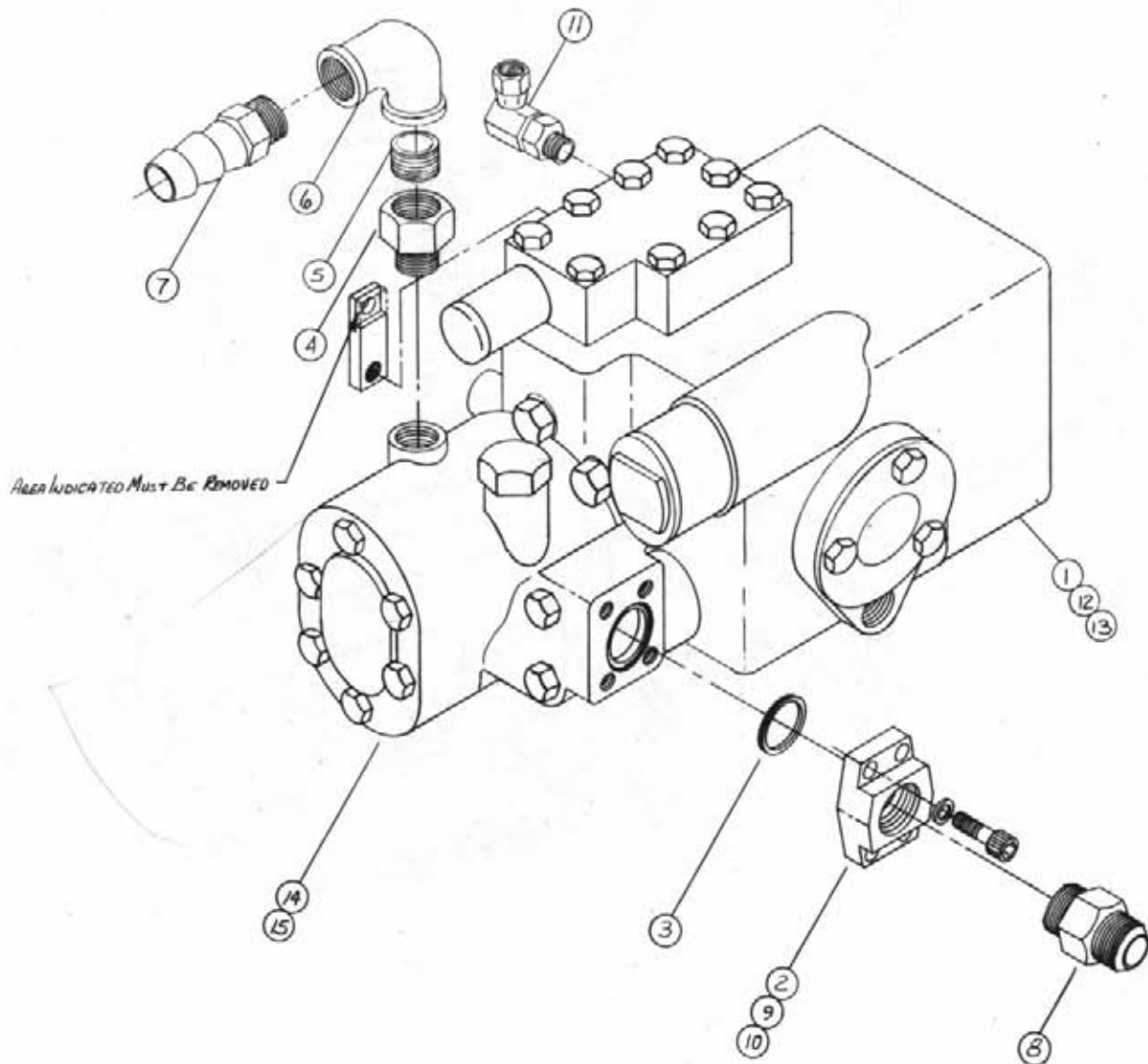
DESCRIPTION: **PERKINS DIESEL ENGINE ASSY**

DRAWN BY: **L. GERMAN** SCALE: **AS SHOWN**

CHECKED BY: APPROVED BY: **L. GERMAN**

DATE: **1-12-79** DRAWING NUMBER:

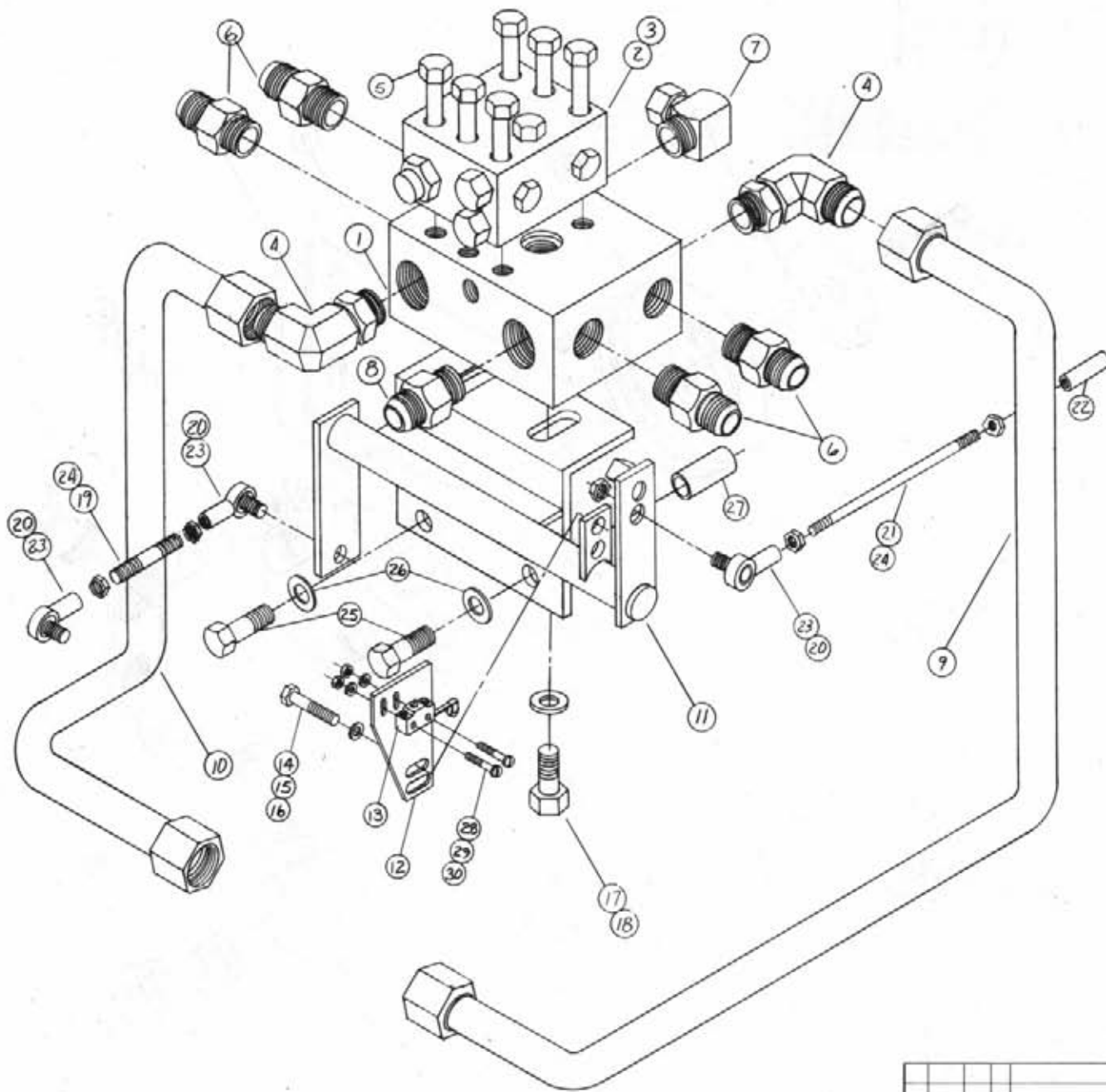
NO.	DATE	BY	REVISION



15	611022	CHARGE PUMP SHEET
14	611029	CHARGE PUMP
13	900265	1/2 UNCL. 1/2 HEX BOLT
12	920004	1/2 SAE FLAT WASHER
11	618187	3/8 PLUG 30° & WASH
10	618167	LOCK WASHER
9	472243	3/8" 1/8" ALUM. CAP SCREW
8	618186	1/8" HOLES IN THE HOUSING
7	712251	3/8 NPT 1/2" L. BOLT
6	504501	3/8 NPT 40" ELBOW
5	504702	3/8 COUPLER NIPPLE
4	618131	1/8" HOLES IN THE HOUSING
3	870219	O-RING
2	618176	1 NPT & BOLT FRAME
1	611054	CHARGE PUMP

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FRACTION	DECIMALS	HOLETS
DESCRIPTION	CHARGE PUMP ASSY	
DRAWN BY	L. GERRARD	
CHECKED BY	L. GERRARD	
DATE	12-12-78	REVISION

NO.	DATE	BY	REVISION



30	2	920011	#6 WASHER
29	2	910022	#6-32 NUT
28	2	473993	#6-32x1 1/8 SREW
27	2	615287	MANIFOLD SPACER
26	2	920002	3/8 SAE FLATWASHER
25	2	900170	3/8 UNF x 2 1/2 BOLT
24	4	910001	3/4 UNF HEX NUT
23	3	473718	3/4 UNF BALL JOINT
22	1	785021	HYDRO CONTROL VALVE
21	1	615272	CONT. ROD EXT.
20	3	914001	1/2 UNF LOCK NUT
19	1	615288	CONT. ROD-SHORT
18	2	920001	3/8 SAE FLATWASHER
17	2	900065	3/8 UNF x 1" BOLT
16	2	900002	1/2 UNF x 3/4 BOLT
15	2	914000	1/2 UNF LOCK NUT
14	2	920000	3/4 SAE FLATWASHER
13	1	293006	SWITCH
12	1	34568	NEUT. SW. M.T. PLT.
11	1	615350	MANIFOLD ATT. WED.
10	1	615213	HYD TUBE-SHORT
9	1	615211	HYD TUBE-LONG
8	1	618309	1/2 UNF x 78 MILIE
7	1	618100	1/2 UNF 90° 1/2 UNF
6	4	611127	1/2 UNF x 1 1/2 UNF
5	6	900075	3/8 UNF x 3 3/8 BOLT
4	2	618178	1/2 UNF 90° 1/2 UNF
3	1	611009	SEAL KIT
2	1	611013	RELIEF VALVE
1	1	615003	LG. HYD. MANIFOLD
BY: [Signature]		DESCRIPTION	

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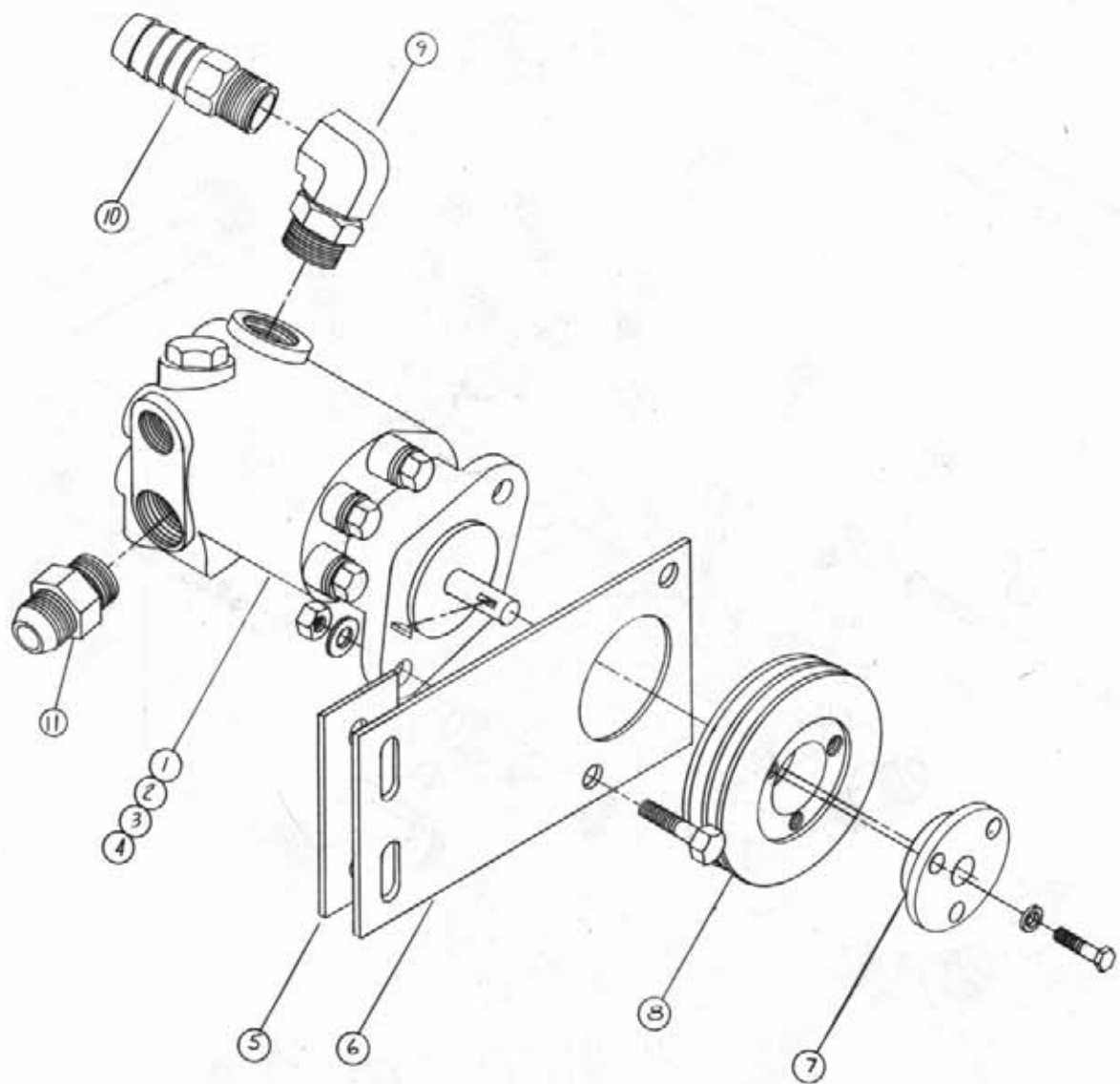
REMOVE ALL SHARP CORNERS & BURRS
TOLERANCES UNLESS OTHERWISE SPECIFIED

FRACTION - DECIMALS - ANGLES -

APPROVED BY: HYD. MANIFOLD & HYDROCONT. ASSY
DRAWN BY: L. GERMAN SCALE: NONE
CHECKED BY: APPROVED BY: L. GERMAN

DATE: 12-13-78 DRAWING NUMBER: _____

NO.	DATE	BY	REVISION

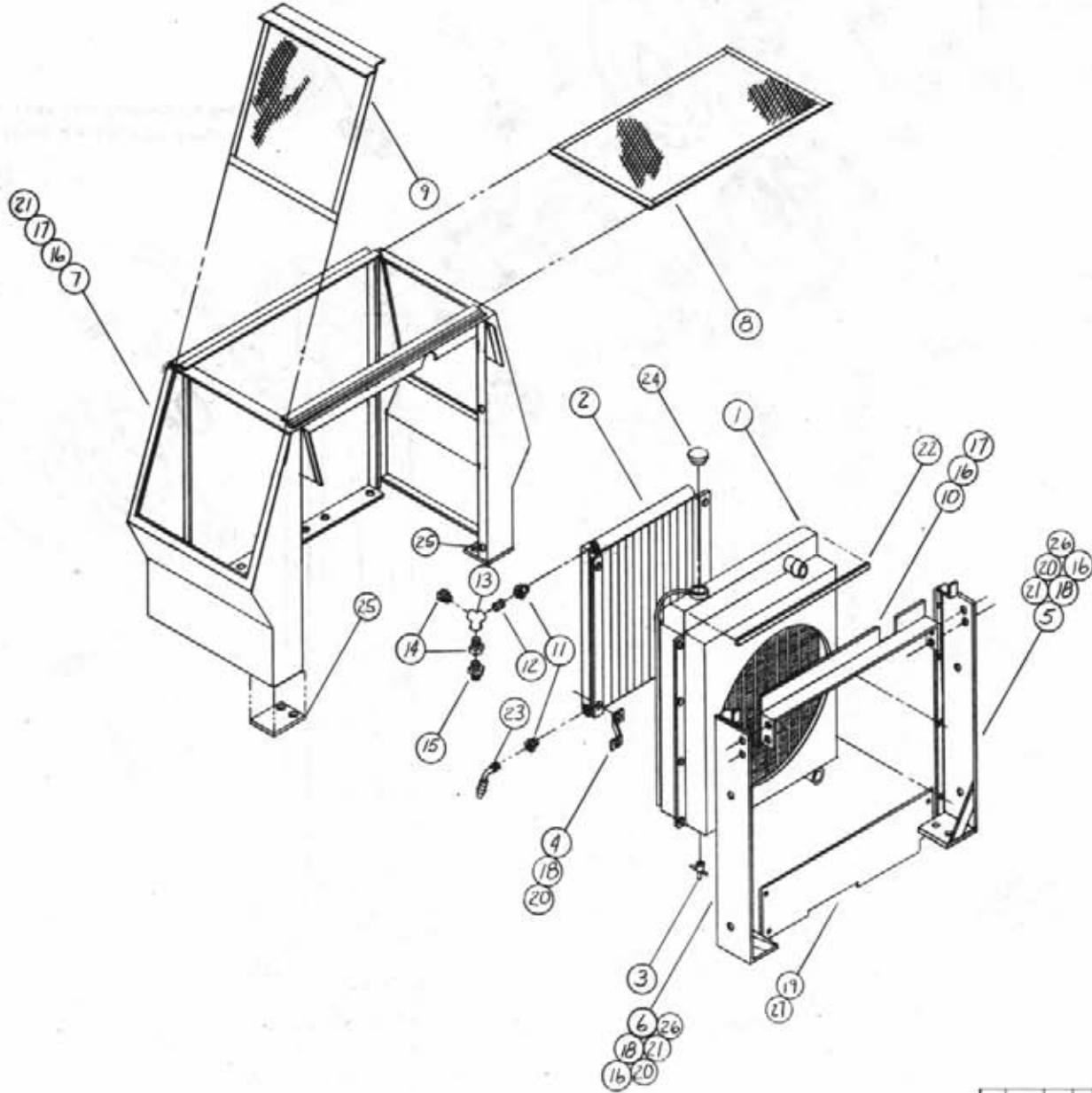


11	1	61126	3/8 MOR X 1/2 IN
10	1	712251	3/4 NPT x 1/2 HOSE END
9	1	618195	1/2 IN DIA - 10-24 TPI
8	1	141519	2 GROOVE SNAKE
7	1	149120	1/2 IN DIA x 1/2 IN THICK
6	1	615302	PUMP MTD. BITE
5	1	615307	PUMP SPACER/BITE
4	2	720003	1/2 IN SAE FLOW NUT
3	2	714004	1/2 IN SAE LOCK NUT
2	2	700131	1/2 IN DIA x 1/2 IN BOLT
1	1	610141	CEESMA AUX PUMP

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 CLARION, OHIO 43002
 REMOVE ALL SHARP CORNERS & BURRS
 TO FINISH (UNLESS OTHERWISE SPECIFIED)
 FRACTION: DECIMALS: ANGLES:

DESIGNER:	CEESMA AUX PUMP ASSEMBLY
DRAWN BY:	L. GERMAN
CHECKED BY:	M. J. E.
DATE:	12-13-78
NO. DATE:	C.B.Y.
REVISION:	

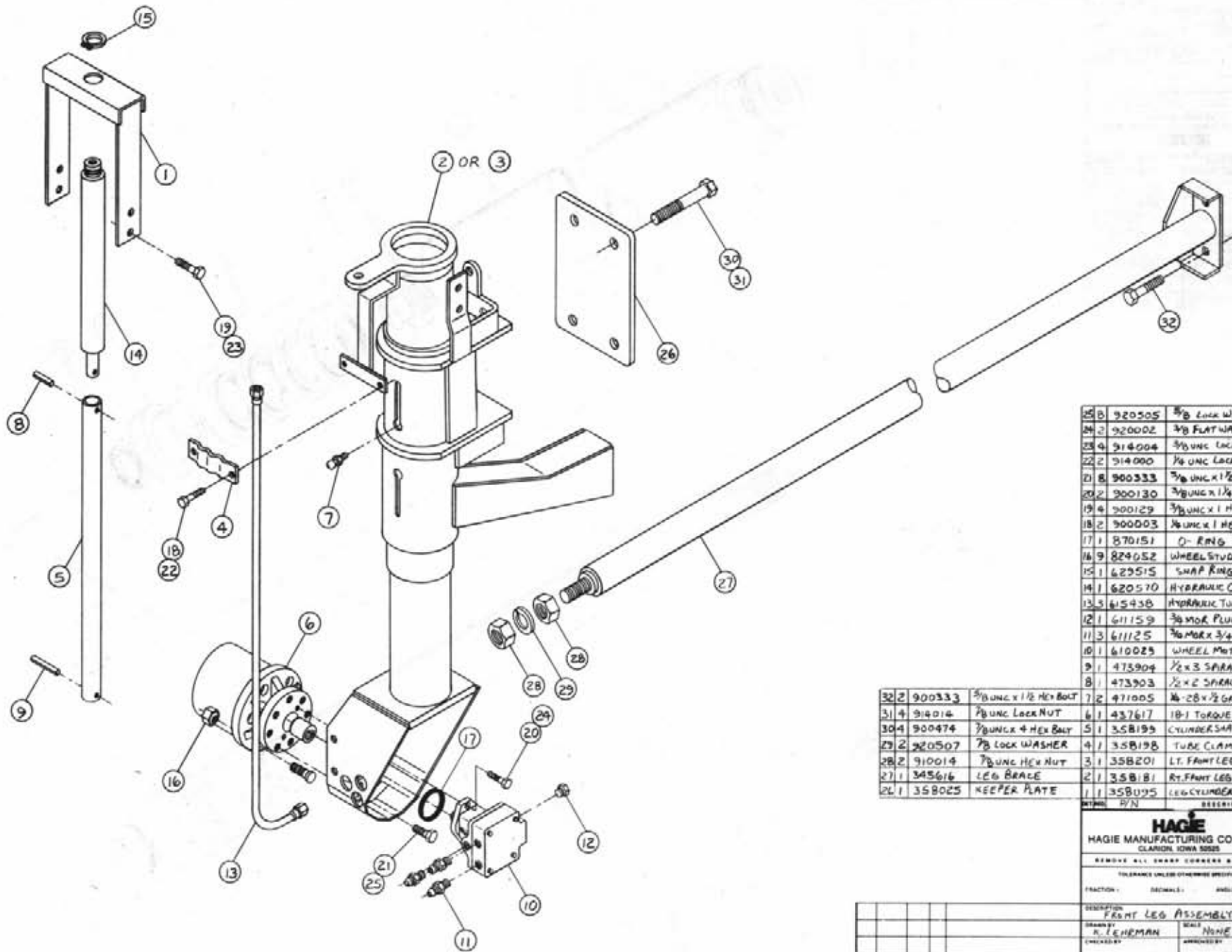
NO. DATE:	C.B.Y.	REVISION:	
DATE:	12-13-78	DRAWING NUMBER:	
SHEET:	OF		



27	1472349	1/4 x 1/4 x 4 TOR SCREW
26B	914002	3/16 UNC LOCK NUT
25C	659223	RISEK PLATE
24	319257	RADIATOR CAP
25	619625	1/4 INPT 90° RIBBED BUSH
22	193022	STEEL BRITITE x 27"
212B	920000	1/4 SAE FEATHERWASHER
202L	920001	1/4 SAE FEATHERWASHER
19	659242	BACK PLATE
1812	900064	3/8 DIA x 1/4 BOLT
1710	914000	1/4 UNC LOCK NUT
1610	900002	1/4 UNC x 1/4 BOLT
15	618177	1/2 INPT x 1/2 IN DIA
14	509210	1/4 x 1/2 INPT RIBBED BUSH
13	508211	1/4 INPT SIDE DRIVE BELT
12	508102	1/4 INPT CL. NIPPLE
11	505213	1/4 INPT 90° RIB. BUSH
10	314340	FILLER ANGLE
9	659098	TOP SCREEN W/LD
8	659099	TOP SCREEN W/LD
7	659236	AIR INTAKE W/LD
6	659245	LT. RADIATOR MT.
5	659243	RT. RADIATOR MT.
4	310458	OIL COOLER BRK W/LD
3	317559	DRAIN COCK
2	618088	OIL COOLER
1	317604	RADIATOR TUBING

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REMOVE ALL SHARP CORNERS & BURRS
TOLERANCES UNLESS OTHERWISE SPECIFIED

DESCRIPTION	SCALE
DRIVEN BY	DATE
CHECKED BY	APPROVED BY
DATE	DRAWING NUMBER
NO. DATE E.C. BY	REVISION



25	8	920505	3/8 LOCK WASHER
24	2	920002	3/8 FLAT WASHER
23	4	914004	3/8 UNC LOCK NUT
22	2	914000	1/4 UNC LOCK NUT
21	8	900333	3/8 UNC X 1/2 BOLT
20	2	900130	3/8 UNC X 1/4 BOLT
19	4	900129	3/8 UNC X 1 HEX BOLT
18	2	900003	3/8 UNC X 1 HEX BOLT
17	1	870151	O-RING
16	9	824052	WHEEL STUD NUT
15	1	629515	SWAP RING
14	1	620570	HYDRAULIC CYLINDER
13	3	615438	HYDRAULIC TUBE ASSY
12	1	611159	3/8 MOR PLUG
11	3	611125	3/8 MOR 3/4 M.I.C.
10	1	610025	WHEEL MOTOR
9	1	473904	1/2 X 3 SPIRAL PIN
8	1	473903	1/2 X 2 SPIRAL PIN
7	2	471005	1/4-28 X 1/2 GRACETER
6	1	437617	18-1 TORQUE ARM
5	1	358199	CYLINDER SHAFT EXT.
4	1	358198	TUBE CLAMP
3	1	358201	LT. FRONT LEG WLD.
2	1	358181	RT. FRONT LEG WLD.
1	1	358025	LEG CYLINDER MOUNT

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REMOVE ALL SHARP CORNERS & BURRS

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FRACTION: DECIMALS: ANGLES:

DESCRIPTION: **FRONT LEG ASSEMBLY**

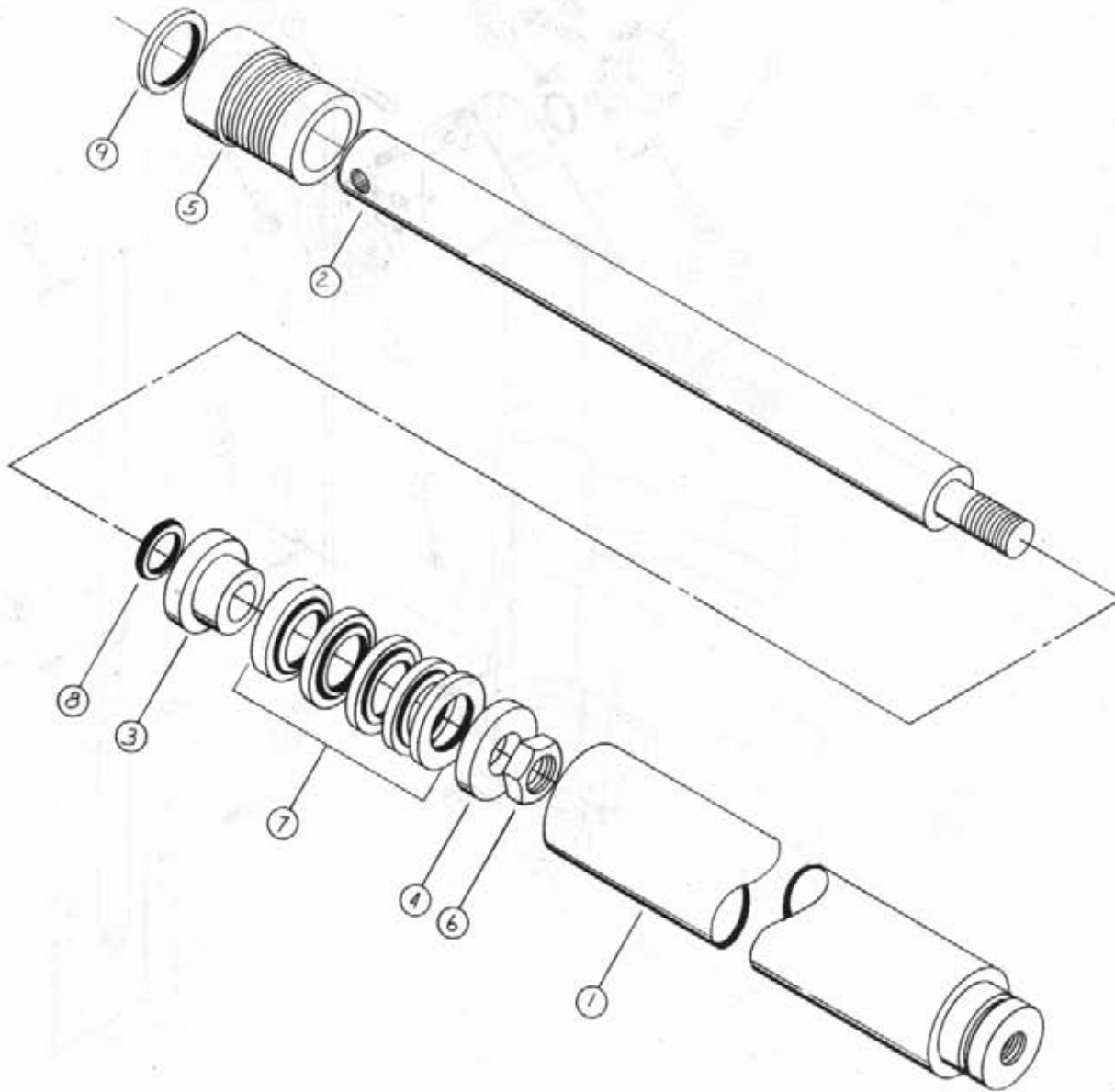
DRAWN BY: **R. TEHRMAN** SCALE: **NONE**

CHECKED BY: APPROVED BY:

DATE: **5-29-80** DRAWING NUMBER:

NO. DATE C. BY REVISION

SHEET 20



ITEM NO.	QTY	DESCRIPTION
9	1	ROD WIPER
8	1	O-RING
7	1	YOE PACK
6	1	LOCK NUT
5	1	BEARING HEAD
4	1	RETAINER RING
3	1	PISTON
2	1	ROD
1	1	TUBE WELDMT

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REMOVE ALL SHARP CORNERS & BURRS

TOLERANCES UNLESS OTHERWISE SPECIFIED

FACTORY: DECIMALS: ANGLES:

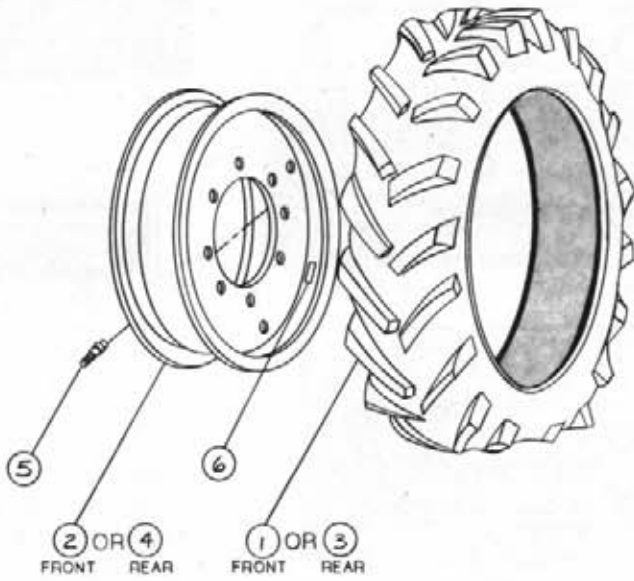
SECTION: FRONT LEG CYLINDER ASSY

DRAWN BY: L. GERMAN SCALE: NONE

CHECKED BY: APPROVED: L. GERMAN

DATE: 1-9-79 DRAWING NUMBER:

NO.	DATE	BY	REVISION



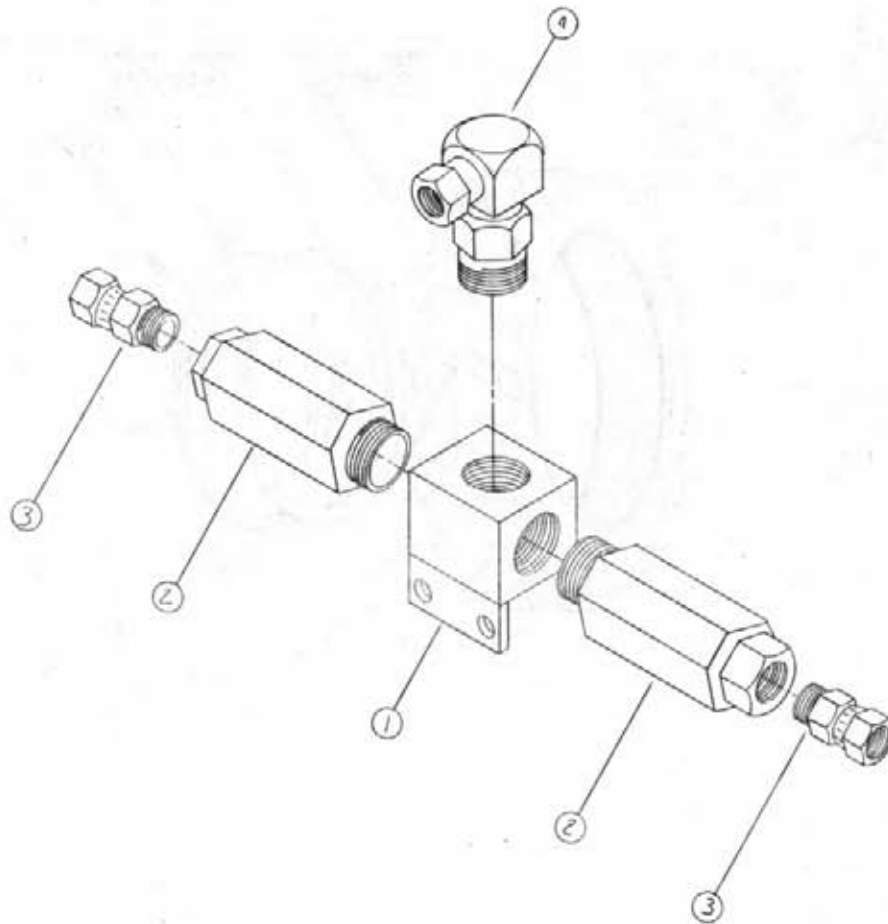
6	650985	W/ BOLT TIGHTEN PEGAL
5	821252	VALVE STEM
4	820609	28" RIM WLD
3	820001	12.9x28TRACTURE TIRE
2	820600	24" RIM WLD
1	820604	11.2x24 TRACTOR TIRE
REF. PIN		DESCRIPTION

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REMOVE ALL SHARP CORNERS & BURRS

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FUNCTION:	DETAILS:	ANGLES:
DESCRIPTION: TIRE & RIM ASSEMBLY		
DRAWN BY: KLEHRMAN	SCALE: NONE	
CHECKED BY:	APPROVED BY:	
DATE: 6-3-80	DRAWING NUMBER:	
NO. DATE E.C. BY	REVISION	SHEET OF

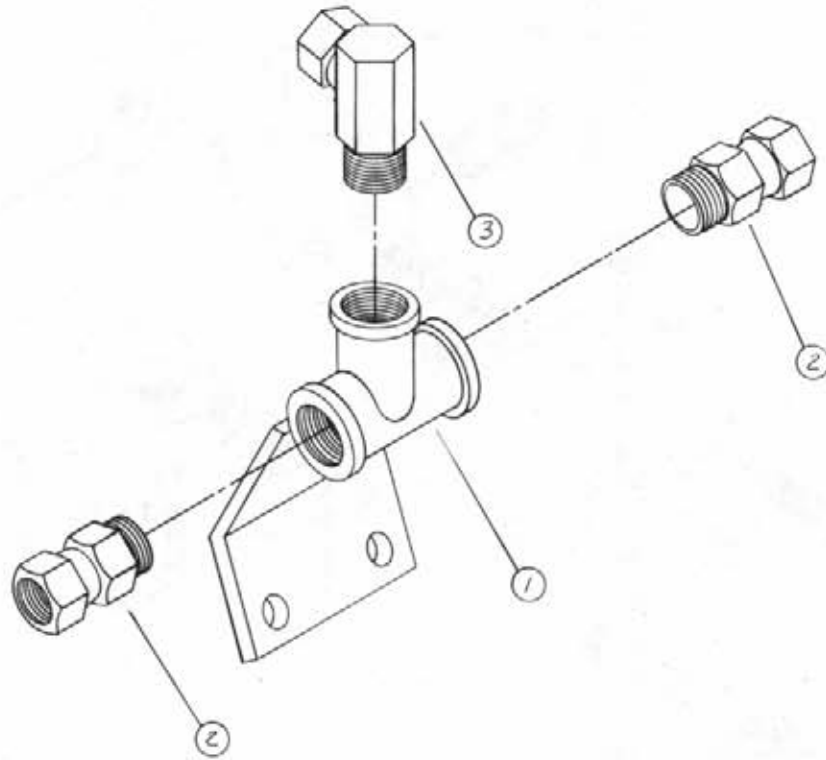


4	618100	1/8" NPT x 3/4" NPT
3	619011	1/8" NPT x 1/8" NPT
2	610028	1/8" NPT x 1/8" NPT
1	615015	1/8" NPT x 1/8" NPT
QTY		DESCRIPTION

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REMOVE ALL SHARP EDGES & BURRS
TOLERANCE UNLESS OTHERWISE SPECIFIED
FRACTION DECIMALS ANGLES

DESCRIPTION: *2WD MAINTENANCE*
DRAWN BY: *L. GERMAN* MALL
CHECKED BY: *HOWE* APPROVED BY: *L. GERMAN*
DATE: *7-6-79* DRAWING NUMBER

NO DATE	C. BY	REVISION	SHEET	OF



3	618062	1/2" WT. 90° FLANGE
2	618197	1/2" WT. 1/2" NIPPLE
1	615270	400 H. PRESS T.W.D.
BY: <i>HL</i>		DESCRIPTION:

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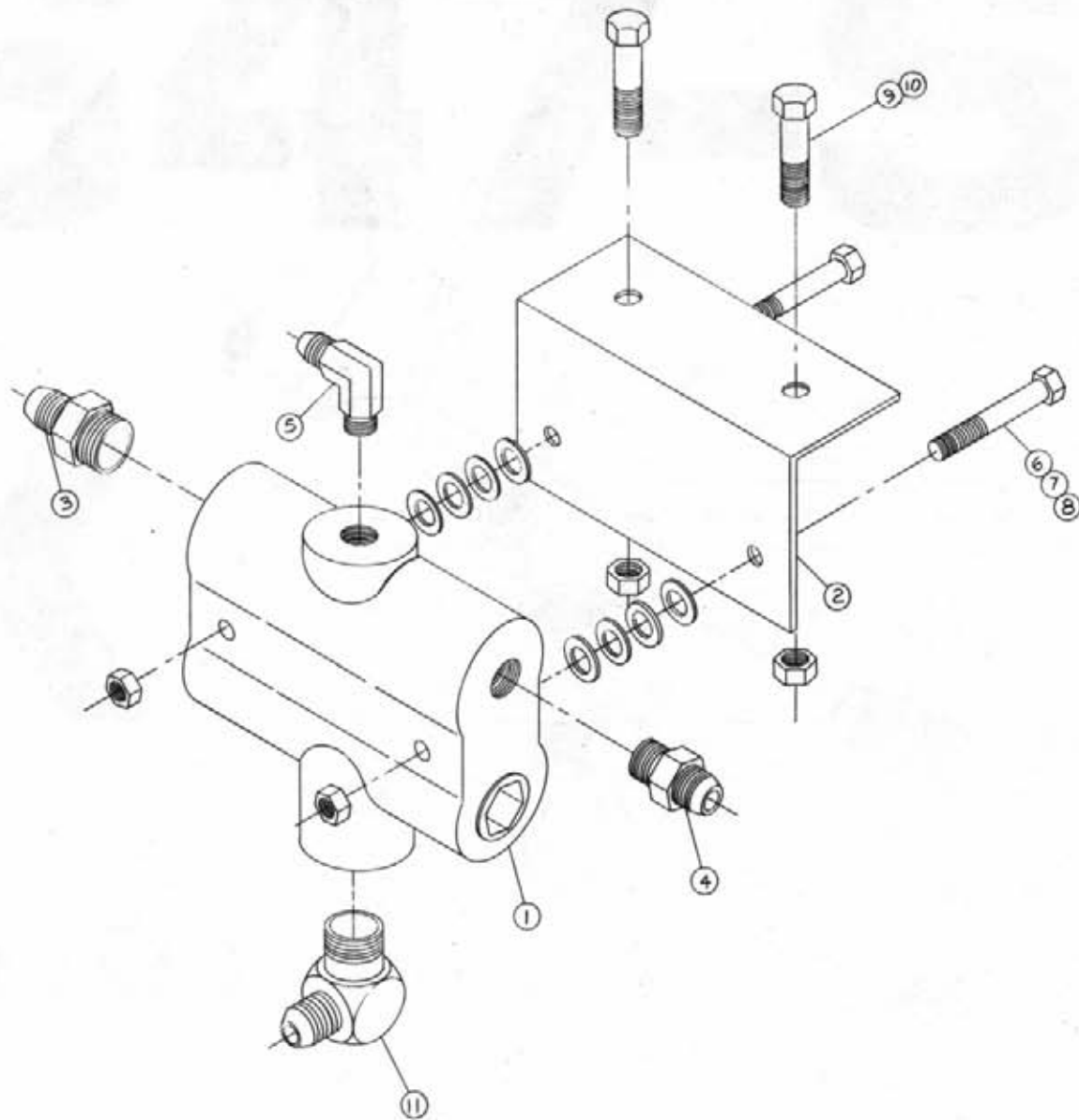
FRACTION: DECIMAL: ANGLES:

DESCRIPTION: *4 WHEEL DRIVE H. PRESSURE T. RAY*

DRAWN BY: *L. GOODMAN* CHECKED BY: *L. GOODMAN*

DATE: *12-19-78* DRAWING NUMBER: SHEET OF:

NO DATE E.C. BY	REVISION	SHEET OF



11	618156	3/8 MNPT - 90° 3/8 M JIC
10	914004	3/8 UNC LOCK NUT
9	900132	3/8 UNC X 1 1/2 HEX BOLT
8	920000	1/2 SAE FLAT WASHER
7	914000	1/2 UNC LOCK NUT
6	900023	1/2 UNC X 2 1/2 HEX BOLT
5	618015	3/8 MNPT X 90° 3/8 M JIC
4	618435	3/8 MNPT X 3/8 M JIC
3	618059	3/8 MNPT X 3/8 M JIC
2	615340	FLW DIVIDER MOUNT
1	607509	FLW DIVIDER

QTY P/N DESCRIPTION

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REMOVE ALL SHARP CORNERS & BURRS

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FRACTION DECIMALS ANGLES

DESCRIPTION

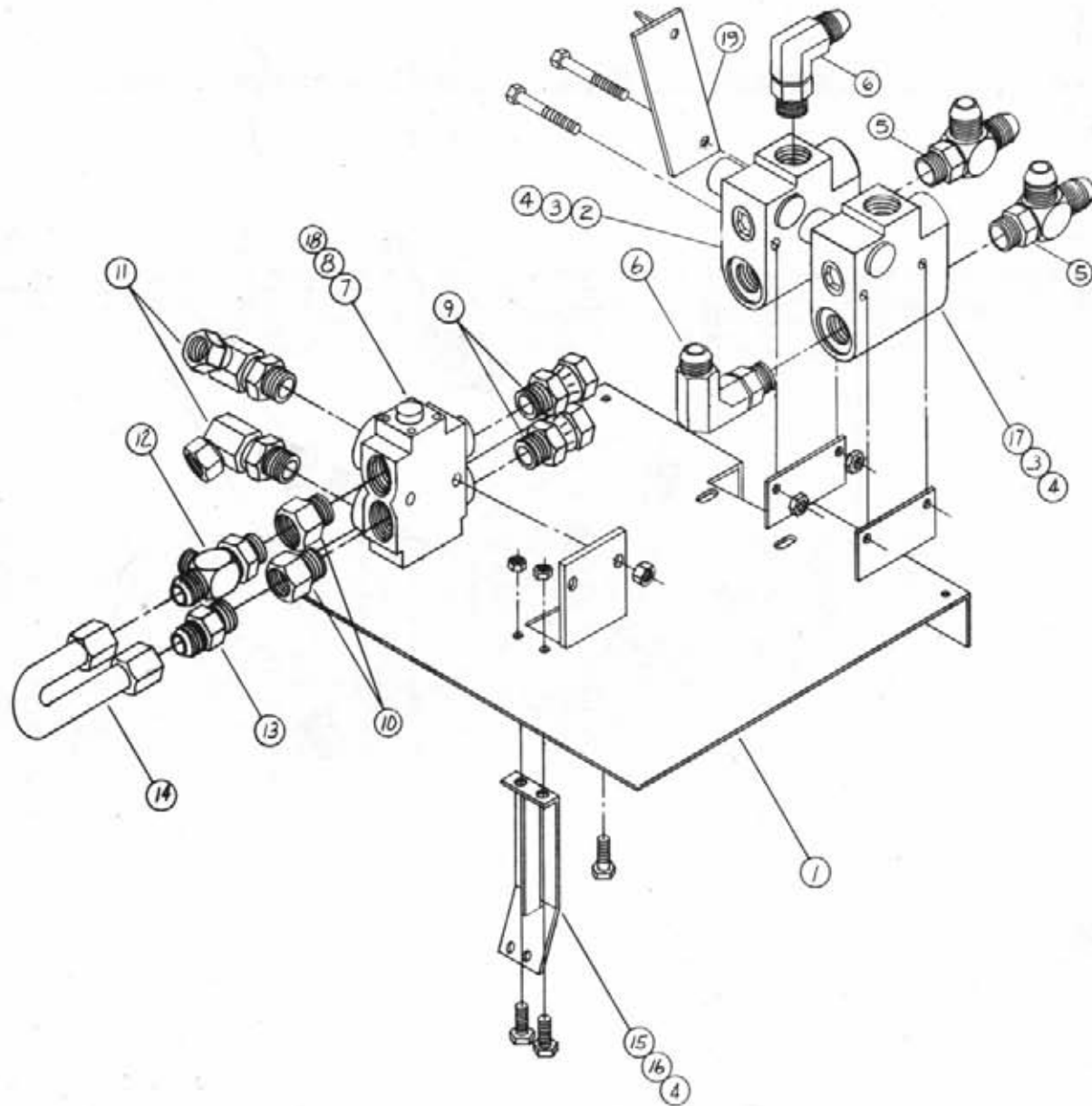
FLOW DIVIDER ASSEMBLY

DRAWN BY K. LEHRMAN SCALE NONE

CHECKED BY APPROVED BY

DATE 1-2-79 DRAWING NUMBER

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19	1	615353	VFC CONTROL STOP
18	2	914004	3/8 LINE LOCK NUT
17	1	606827	FLOW DIVIDER O-R
16	C	900000	VALVE X 2 1/2 BOLT
15	1	615221	AND COUPLER BLOWER
14	1	618198	AND U-TUBE
13	1	611126	3/8 MAX X 7/8 MAX O-R
12	1	618287	3/8 MAX X 7/8 MAX O-R
11	2	618100	1 1/4 MAX X 10-72 UNF
10	2	618132	1 1/4 MAX X 7/8 FDR
9	2	618095	1 1/4 MAX X 7/8 UNF
8	2	900135	3/8 UNF X 2 1/2 BOLT
7	1	606003	GREEN AND VALVE
6	2	611128	3/8 MAX X 7/8 MAX O-R
5	2	618130	1 1/4 MAX X 7/8 UNF T
4	6	914000	3/4 LINE LOCK NUT
3	4	900008	3/4 UNF X 2 1/2 BOLT
2	1	606818	SOLUTION VFC
1	1	615315	VALVE MFG PLATE
QTY		DESCRIPTION	

HAGIE
HAGIE MANUFACTURING COMPANY
CLARION, IOWA 50525

REMOVE ALL SHARP CORNERS & BURRS

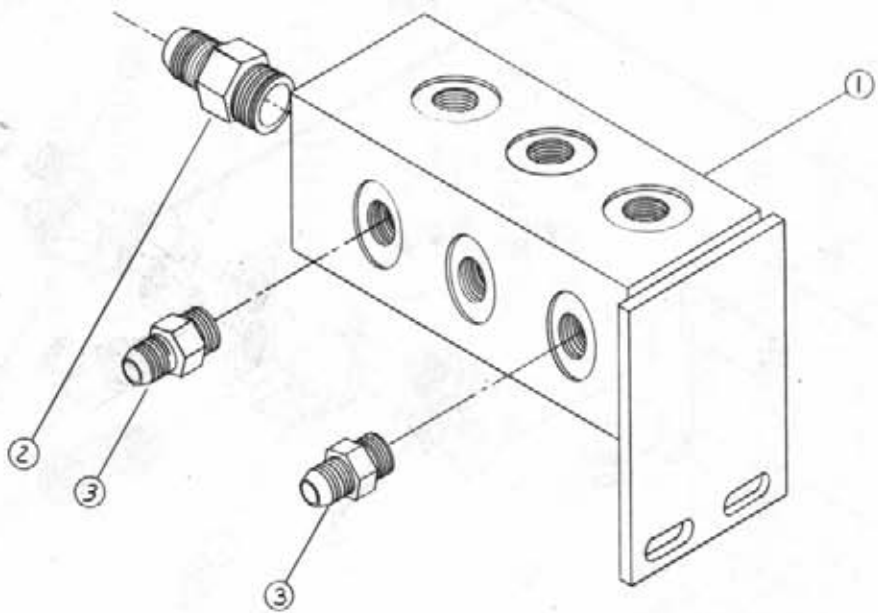
TOLERANCES UNLESS OTHERWISE SPECIFIED

FRACTION	DECIMALS	ANGLES

DESCRIPTION: VALVE PLATE ASSEMBLY
DRAWN BY: L. GERMAN
CHECKED BY: L. GERMAN
DATE: 1-5-79

NO.	DATE	BY	REVISION

NO. DATE E.C. BY REVISION



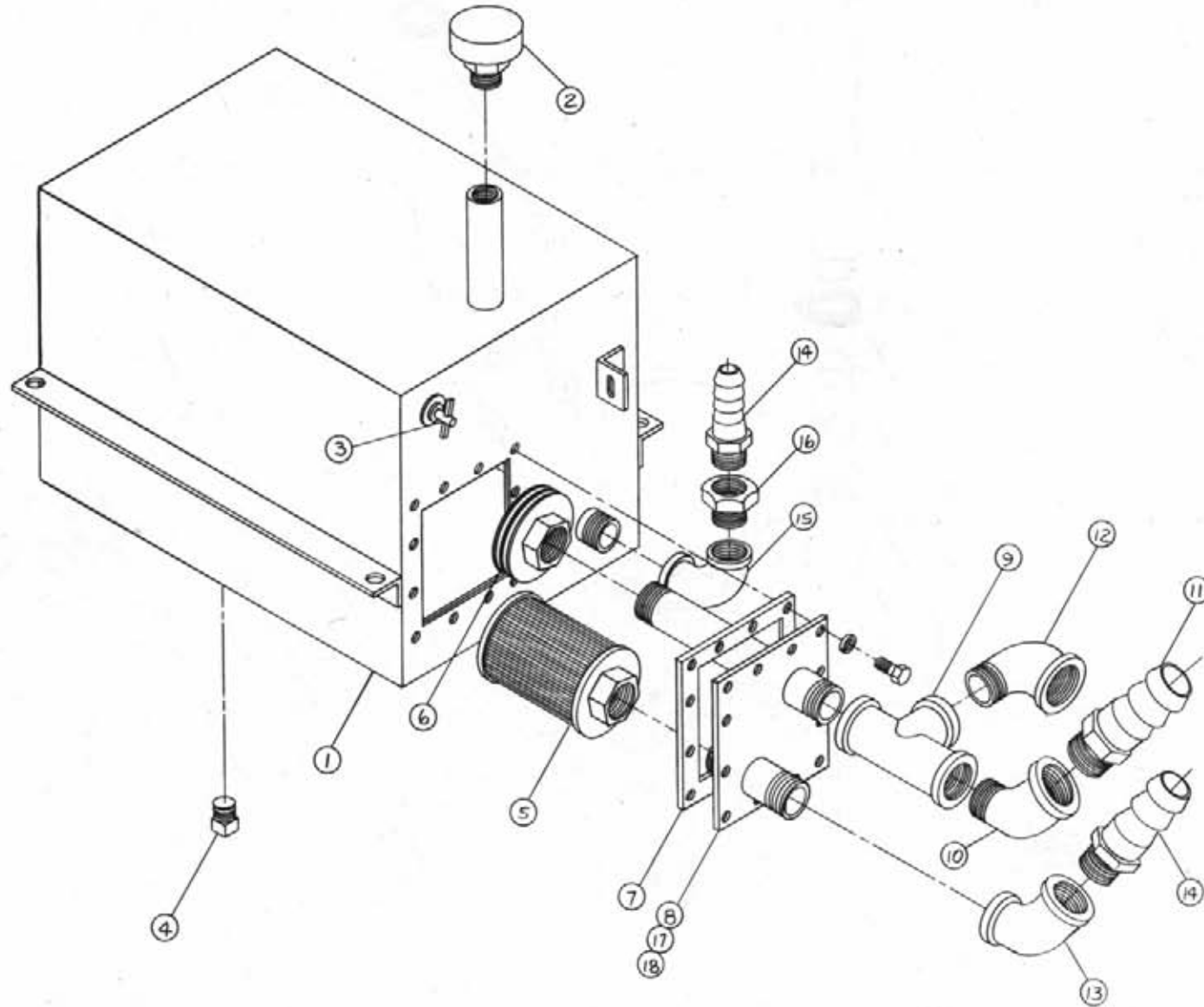
32	6/18/76	Thru hole thru m. 116
21	6/11/77	Thru hole thru m. 116
11	6/5/66	MANIFOLD W/LD
BY	7/4	DESCRIPTION

HAGIE
HAGIE MANUFACTURING COMPANY
 CLARION, IOWA 50525
 REMOVE ALL SHARP EDGES & BURRS
 TOLERANCES UNLESS OTHERWISE SPECIFIED
 FRACTION DECIMAL ANGLE

DESCRIPTION: RETURN MANIFOLD ASSEMBLY
 DRAWN BY: L. GERMAN SCALE: NONE
 CHECKED BY: APPROVED BY: L. GERMAN
 DATE: 1-4-79 ORIGINAL NUMBER:

NO.	DATE	E.C. BY	REVISION

SHEET 02



18	12	900064	3/16 UNC x 3/4 BOLT
17	12	920001	3/16 SAE FLAT WASHER
16	1	506005	1" x 1/4 REDUCER BUSH
15	1	506303	1 1/4 NPT-90° PIPE ELBOW
14	2	719560	1" NPT x 1" HOSE BARB
13	1	506301	1" NPT-90° PIPE ELBOW
12	1	505200	1" NPT-90° STREET EL.
11	1	719331	1" NPT x 3/4 HOSE BARB
10	1	505110	1" NPT 45° STREET EL.
9	1	505101	1" NPT PIPE TEE
8	1	760629	REVEIVER PLATE WLD.
7	1	763039	MOUNTING GASKET
6	1	605603	OIL DIFFUSER
5	1	605600	FILTER
4	1	501102	3/4 NPT PIPE PLUG
3	1	319559	DRAIN COCK
2	1	437476	FILLER CAP
1	1	760617	OIL TANK UELDEMENT
PART NO.		DESCRIPTION	

HAGIE
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CLARION, IOWA 50525

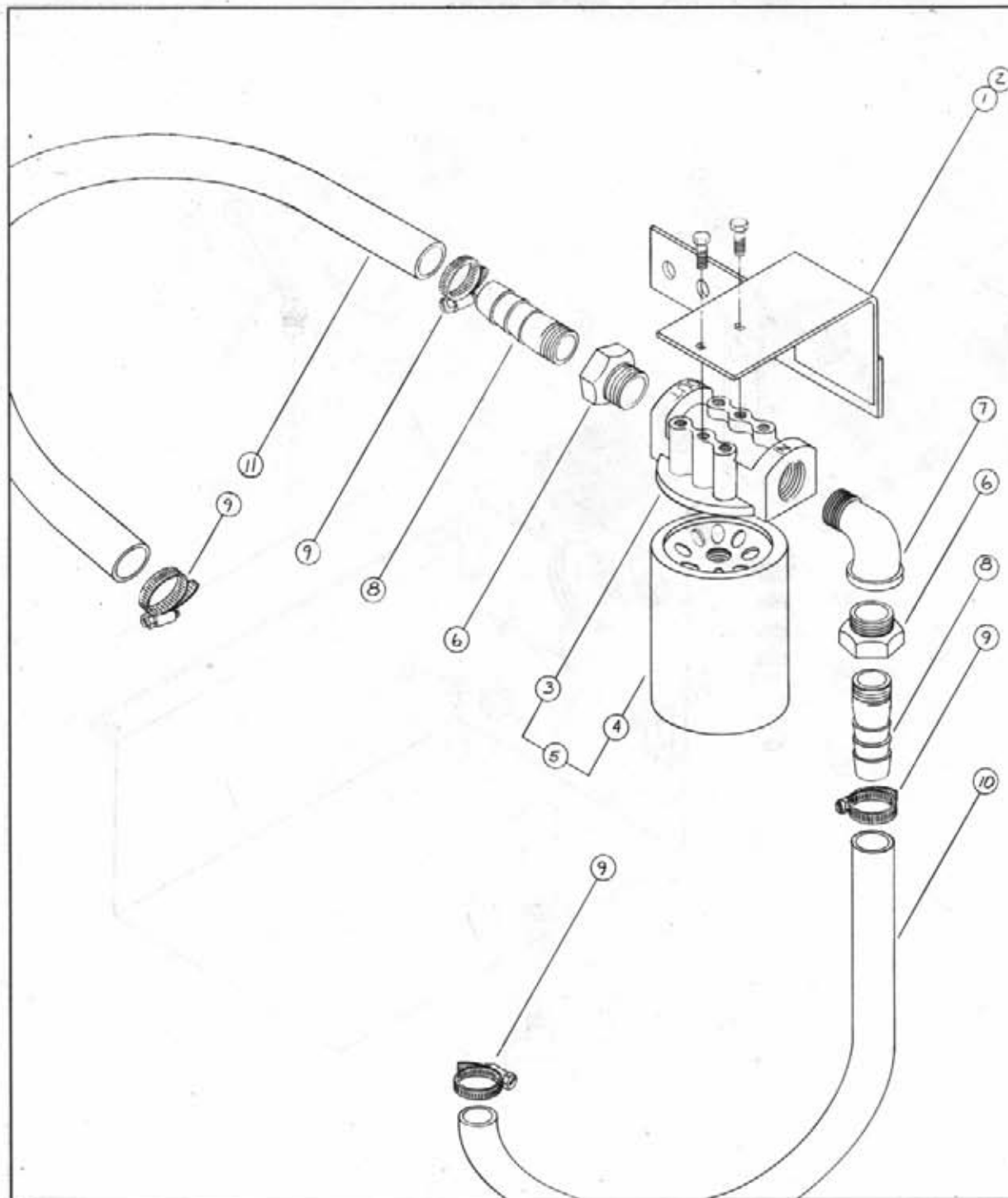
REMOVE ALL SHARP CORNERS & BURRS
TOLERANCE UNLESS OTHERWISE SPECIFIED

FRACTION: DECIMALS: ANGLES:

DESCRIPTION: OIL TANK ASSEMBLY
DRAWN BY: E. LEHMAN MADE BY: H. HINE
CHECKED BY: APPROVED BY:

DATE: 5-23-60 DRAWING NUMBER:

NO DATE E.C.B.Y.	REVISION	SHEET	OF
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11	601116	Hose-1 1/2 x 27' Long
10	601115	Hose-1 1/2 x 22' Long
7	520087	#20 Hose Clamp
8	714560	1/2" x 1" Hose Barb
7	506410	1/2" x 1" 90° STEEL
6	506005	1/2" x 1" Nut
5	605601	10 MIC FILTER + BASE
4	605602	10 MIC FILTER ONLY
3	605604	FILTER BASE ONLY
2	900064	3/4" x 1/4" BOLT
1	615321	FILTER BRACKET
WASHER	9/16"	DESCRIPTION

HAGIE
HAGIE MANUFACTURING COMPANY
CLARION, IOWA 50525

REMOVE ALL SHARP CORNERS & BURRS
TOLERANCES UNLESS OTHERWISE SPECIFIED

FRACTION DECIMALS ANGLES

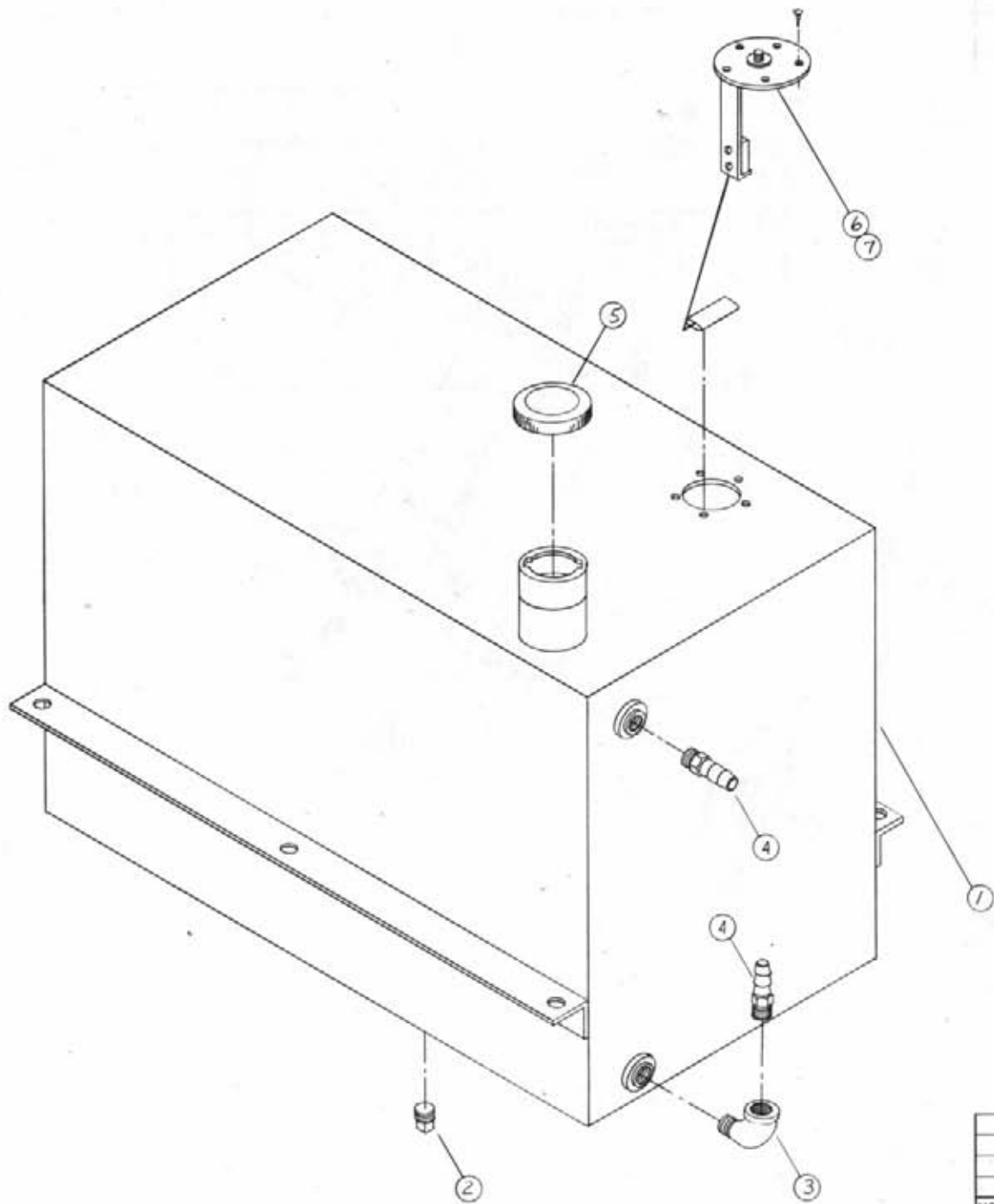
DESCRIPTION: FILTER ASY-10 MICRON-90GPM

DRAWN BY: L. GERMAN SCALE: NONE

CHECKED BY: APPROVED BY:

DATE: 12-15-79 DRAWING NUMBER:

NO.	DATE	E.C. BY	REVISION

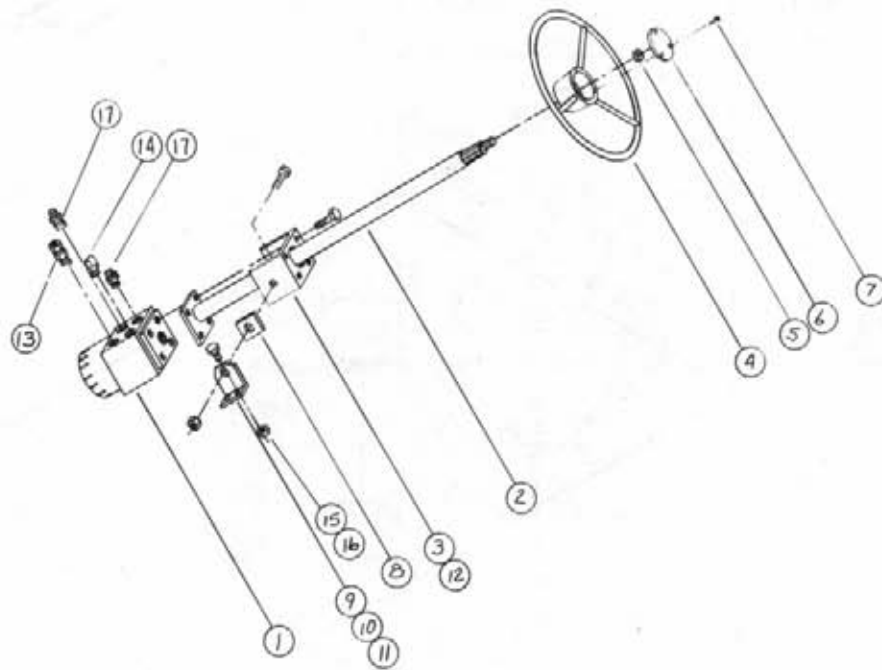


QTY	PART NO.	DESCRIPTION
7	473902	18" x 24" METAL SCREEN
6	291428	FUEL SENDER
5	761200	FUEL CAP
4	711002	1/4" NPT x 1/4" HOSE END
3	501450	1/4" NPT 90° ST. EL.
2	501102	1/4" NPT PIPE PLUG
1	760627	FUEL TANK W/ID.

HAGIE
HAGIE MANUFACTURING COMPANY
CLARION, IOWA 50525
REMOVE ALL SHARP CORNERS & BURRS
TOLERANCES UNLESS OTHERWISE SPECIFIED

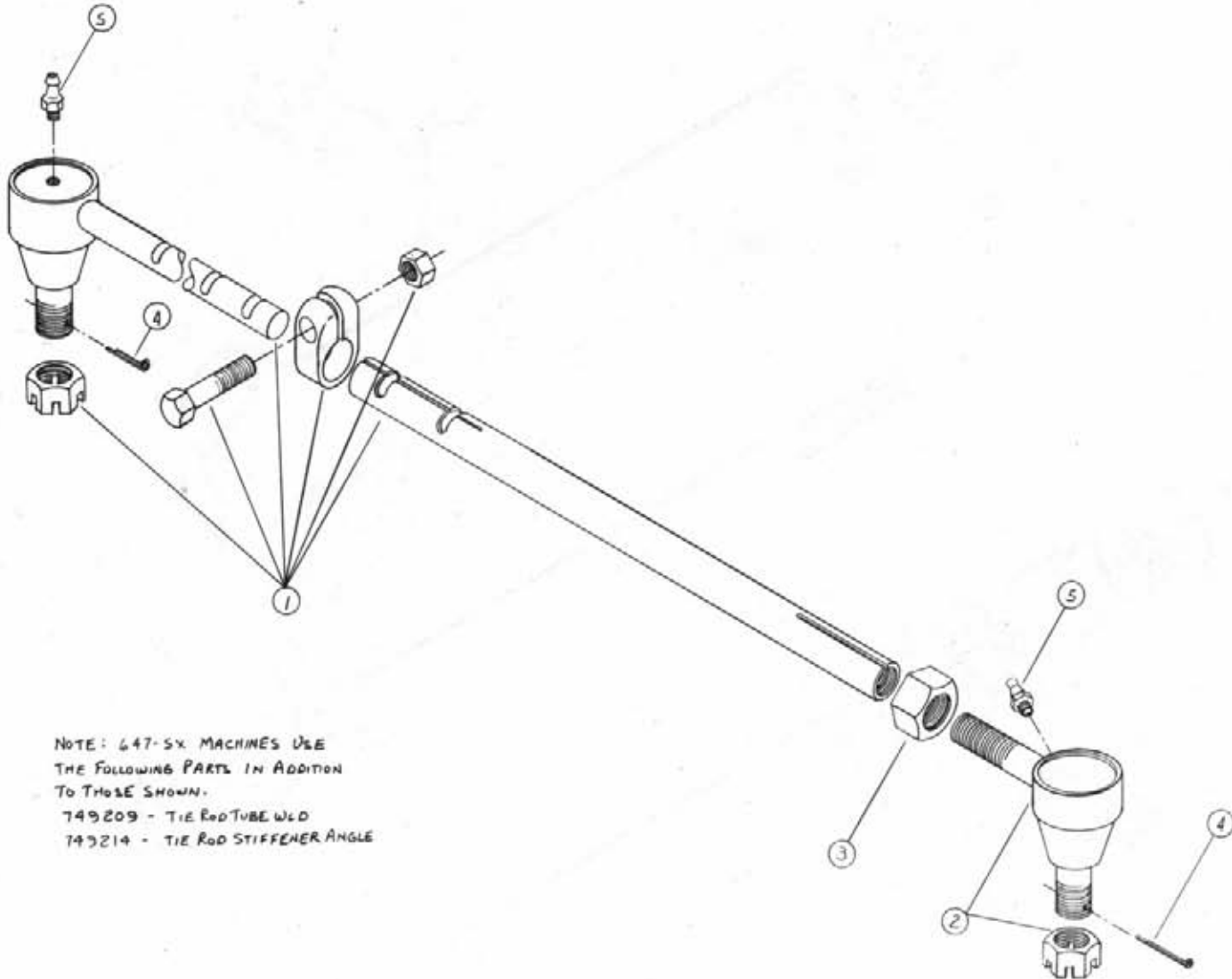
DESCRIPTION	DATE	BY
FUEL TANK ASSEMBLY	12-7-78	L. GERMAN
DRIVEN BY		
APPROVED BY		

NO.	DATE	E.C.	BY	REVISION



17	2	618109	3/4 MO R x 3/4 P.M.I.C.
16	2	914002	5/16 UNF LOCK NUT
15	2	900065	3/4 UNF x 1" BOLT
14	1	618128	3/4 MO R - 45° - 28 UNF
13	1	618098	3/4 MO R x 28 UNF
12	4	900130	3/8 UNF x 1 1/4 BOLT
11	2	900269	1/2 UNF x 1 1/4 BOLT
10	2	914008	1/2 UNF LOCK NUT
9	1	749130	STG. MTR. SIDE MT.
8	1	310814	MOUNTING PLD.
7	3	742200	COVER SCREW
6	1	742100	STG. WHL. COVER
5	1	411018	STG. WHL. NUT
4	1	742000	STG. WHL.
3	1	749131	STG. MTR. MOUNT
2	1	749128	STG. COLUMN
1	1	747150	STG. MOTOR

HAGIE		
HAGIE MANUFACTURING COMPANY CLARION, IOWA 50535		
REMOVE ALL SHARP CORNERS & BURRS		
TOLERANCE UNLESS OTHERWISE SPECIFIED		
FRACTION	DECIMALS	ANGLES
DESCRIPTION: STEERING COLUMN ASSEMBLY		
DRAWN BY: L. GERMAN	SCALE: NONE	
CHECKED BY:	APPROVED BY: L. GERMAN	
DATE: 1-16-79	DRAWING NUMBER:	
NO. DATE E.C. BY	REVISION	SHEET OF



NOTE: 647-SX MACHINES USE
THE FOLLOWING PARTS IN ADDITION
TO THOSE SHOWN.
749209 - TIE ROD TUBE W/LD
749214 - TIE ROD STIFFENER ANGLE

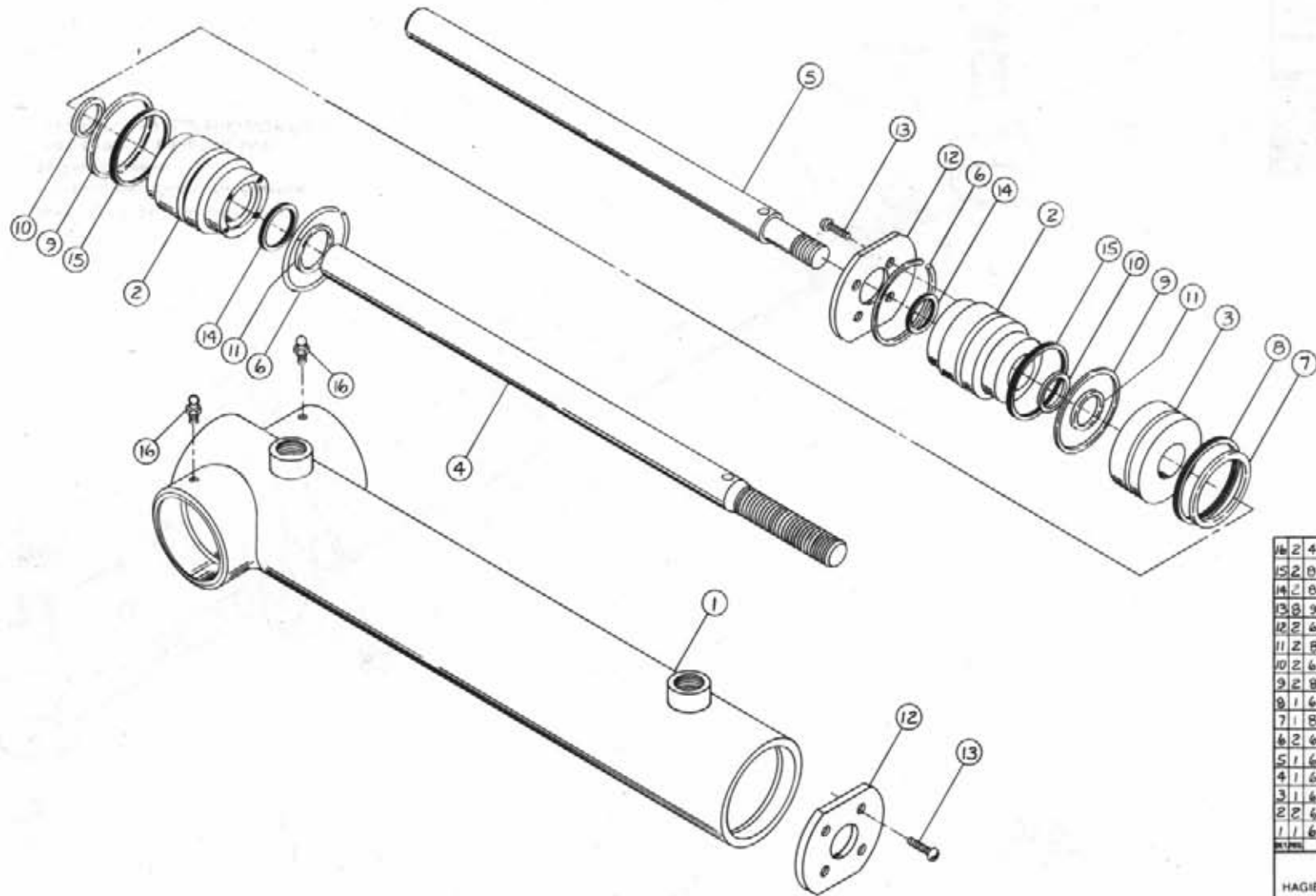
QTY	NO.	DESCRIPTION
5	2 471021	5/8" NPT GRINDERS LOCK
4	2 470038	1/2" x 1 3/4" SOCKET PIN
3	1 740426	TIE ROD LOCK NUT
2	1 740413	SOCKET ASSY
1	1 747169	TIE ROD ASSY

HAGIE
HAGIE MANUFACTURING COMPANY
CLARION, IOWA 50525
REMOVE ALL SHARP CORNERS & BURRS
TOLERANCE UNLESS OTHERWISE SPECIFIED

DESCRIPTION	SCALE
TIE ROD ASSEMBLY	1/2" = 1"
DRAWN BY: L. GERMAN	APPROVED BY: L. GERMAN
CHECKED BY:	
DATE: 1-9-73	DRAWING NUMBER:

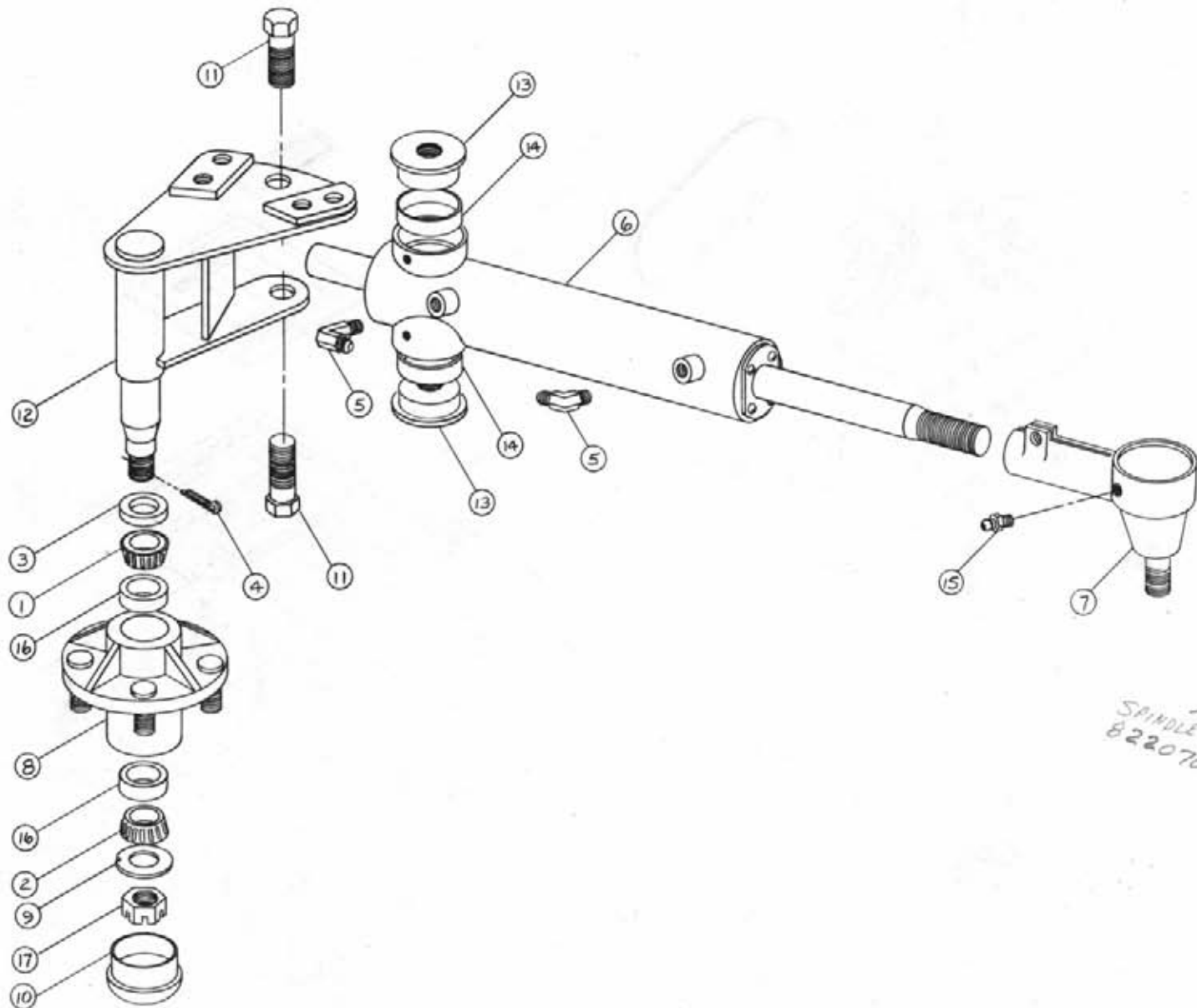
NO.	DATE	C.	BY	REVISION

SHEET 10



16	2	471005	1/4 20x1/2 GRADE ZEAR
15	2	890224	BACK UP WASHER
14	2	890216	BACK UP WASHER
13	8	903883	#10-32x1/2 SCREW
12	2	620257	RETAINER PLATE
11	2	870216	O-RING
10	2	629001	WIPER SEAL
9	2	870224	O-RING
8	1	629615	SLIPPER RING
7	1	870129	O-RING
6	2	629524	RETAINER RING
5	1	620256	FOLLOWER RAM
4	1	620155	DRIVE RAM
3	1	620254	PISTON
2	2	620253	GLAND
1	1	620153	TUBE WELDMENT

NAME		P/N		DESCRIPTION	
HAGIE					
HAGIE MANUFACTURING COMPANY CLARION, IOWA 50535					
REMOVE ALL SHARP CORNERS & BURRS					
TOLERANCES UNLESS OTHERWISE SPECIFIED					
FRACTION		DECIMALS		ANGLES	
DESCRIPTION STEERING CYLINDER ASSEMBLY					
DRAWN BY K. LEARMAN		SCALE NONE			
CHECKED BY		APPROVED BY			
DATE 5-20-80		DRAWING NUMBER			
NO. DATE E.C. BY		REVISION		SHEET OF	



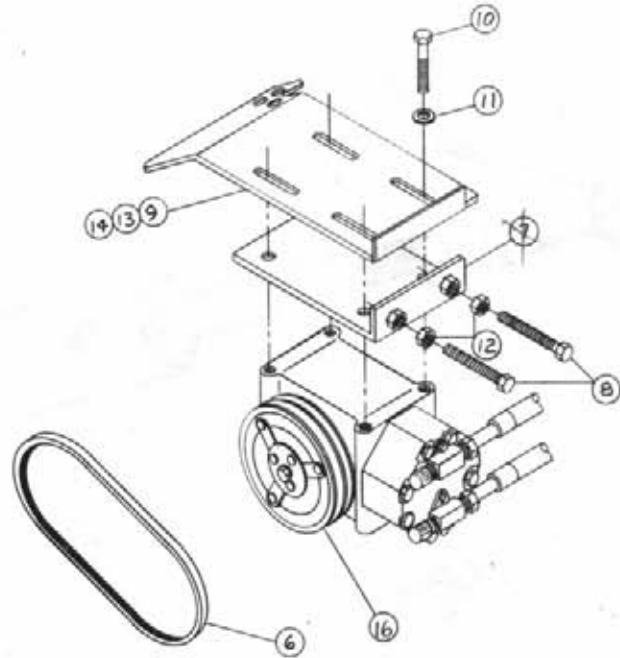
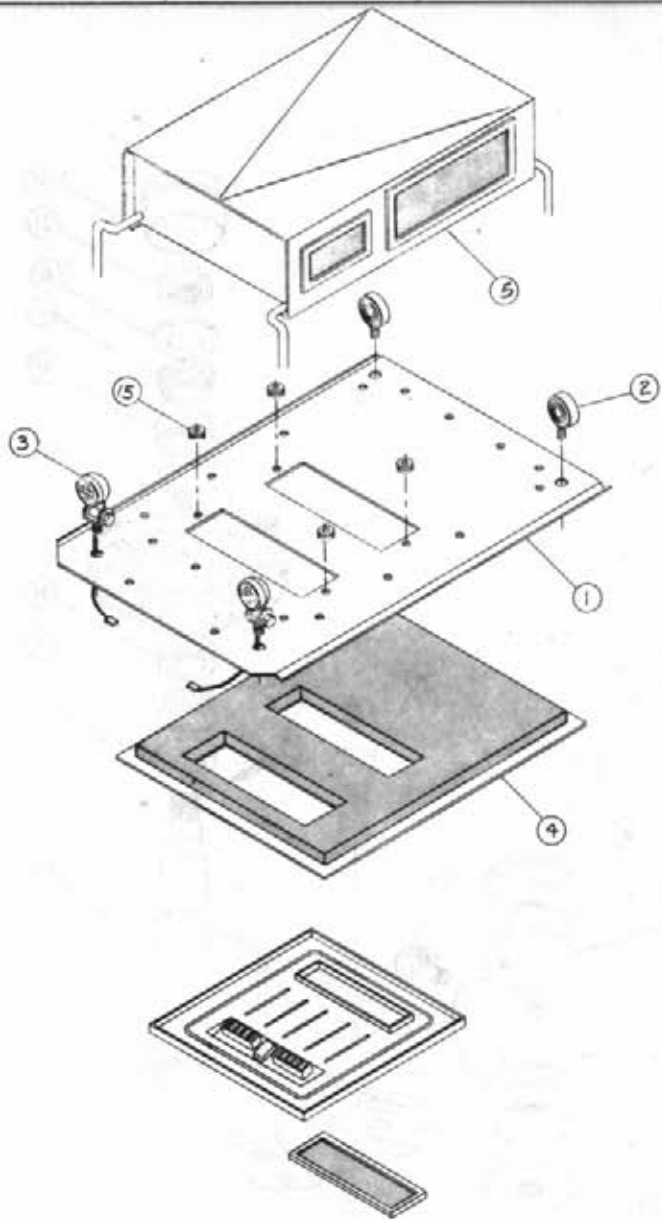
SPINDLE
822070

17	1	822040	SPINDLE NUT
16	2	7528	BEARING CUP
15	1	471021	GREASE ZEAR
14	2	749199	BRONZE PIVOT BUSHING
13	2	749198	PIVOT INNER BEARING
12	1	749195	PIVOT WELDMENT
11	2	900900	3/4 UNC X 1 1/4 HEX BOLT
10	1	822060	HUB CAP
9	1	822031	SPINDLE WASHER
8	1	822010	HUB WITH CUPS
7	1	749156	FEMALE SOCKET ASST
6	1	620152	STEERING CYLINDER
5	2	611122	1/4 NPT-90° 3/8 MUNC
4	1	47200B	COTTER PIN
3	1	129010	GREASE SEAL
2	1	125015	OUTER BEARING CONE
1	1	125010	INNER BEARING CONE
SYMBOL		P/N	DESCRIPTION

HAGIE
HAGIE MANUFACTURING COMPANY
CLARION, IOWA 50535
REMOVE ALL SHARP CORNERS & BURRS

TOLERANCE UNLESS OTHERWISE SPECIFIED
FRACTION DECIMAL ANGLE

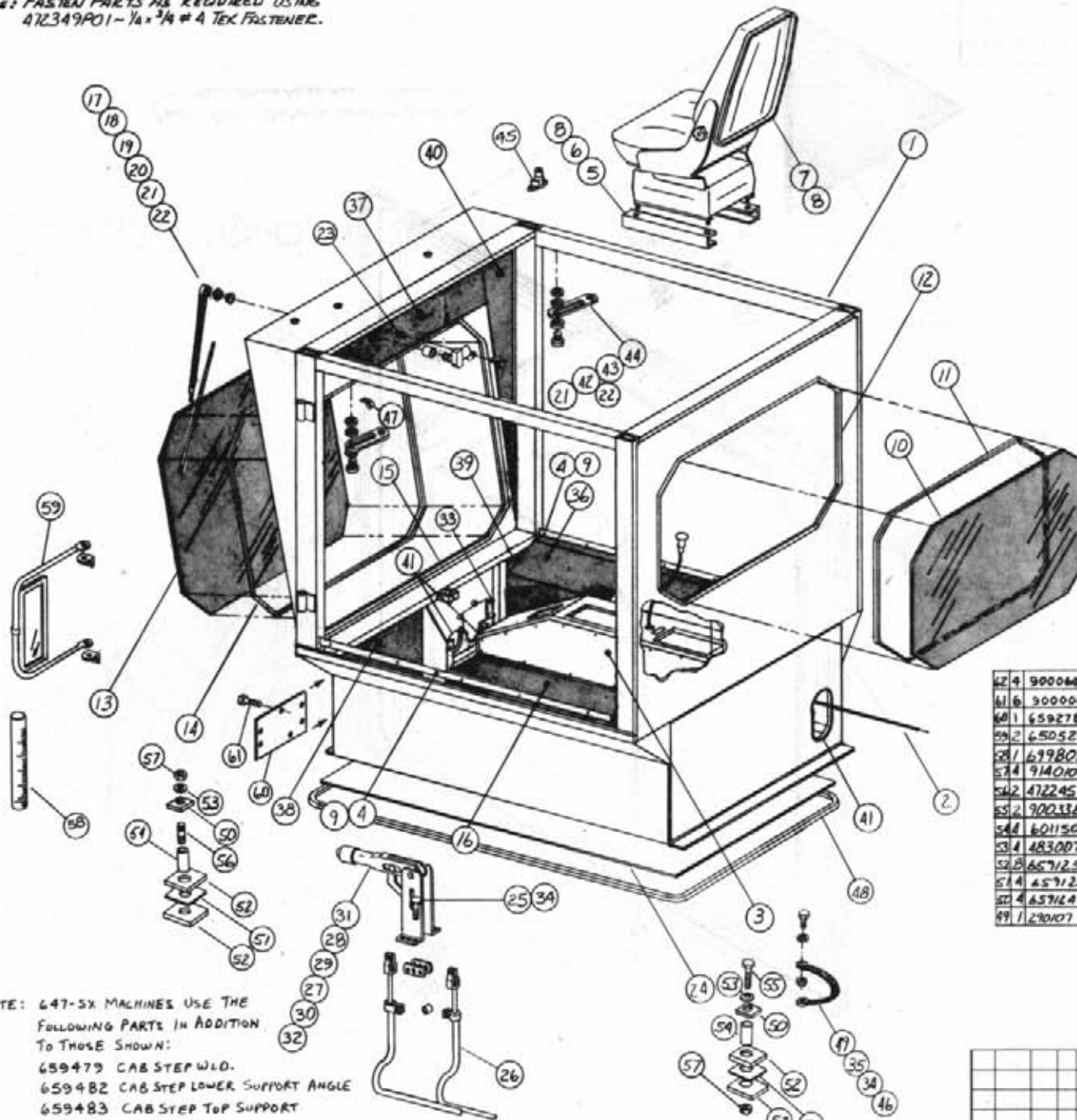
DESCRIPTION	STEERING HUB ASSEMBLY	
DRAWN BY	K. LEHRMAN	SCALE NONE
CHECKED BY		APPROVED BY
DATE	5-22-80	DRAWING NUMBER
NO. DATE E.C. BY	REVISION	SHEET OF



16	1	247003	2 CURVE ELECTRIC CUTTER
15	4	470070	3/8 ID GAMMET
14	6	320005	3/8 SAE FLAT WASHER
13	3	900335	3/8 UNC X 2 BOLT
12	2	910004	3/8 UNC HEX NUT
11	4	920002	3/8 SAE FLAT WASHER
10	4	900130	3/8 UNC X 1 1/4 BOLT
9	1	652215	PUMP MOUNT WLD
8	2	906136	3/8 X 3 FINE TRD. BOLT
7	1	657176	PUMP ADJUSTMENT WLD.
6	1	147029	3V 450 BELT
5	1	657182	AIR CONDITNER
4	1	659273	CAB ROOF FOAM
3	2	291293	HEADLIGHT ASSY
2	2	291201	FLASHING LIGHT
1	1	659274	CAB ROOF

PART NO.		DESCRIPTION
HAGIE		
HAGIE MANUFACTURING COMPANY CLARION, IOWA 50525		
REMOVE ALL SHARP CORNERS & BURRS		
TOLERANCES UNLESS OTHERWISE SPECIFIED		
FRAC TION	DECIMALS	ANGLES
DESCRIPTION	CAB ROOF ASSEMBLY	
DRAWN BY	F. LEHRMAN	
CHECKED BY	NONE	
DATE	12-15-78	DESIGNED BY
NO DATE E.C. BY		REVISION
DATE	OF	

NOTE: FASTEN PARTS AS REQUIRED USING
472349P01 - 1/4" x 3/4" # 4 TEK FASTENER.



NOTE: 647-SX MACHINES USE THE
FOLLOWING PARTS IN ADDITION
TO THOSE SHOWN:
659479 CAB STEP WLD.
659482 CAB STEP LOWER SUPPORT ANGLE
659483 CAB STEP TOP SUPPORT

48	172002	NUMBER STEP INCH
47	520119	1/2" CUSHION CLAMP
46	910001	3/8" CAB FASTENER
45	659113	FOAM - L.F. FOOT
44	659111	FOAM - L.F. FENDER
43	659110	FOAM - L.W. BACK
42	659105	FOAM - WINGS PLATE
41	659104	FOAM - FT. ROOF
40	290412	DIMMER SWITCH
39	920002	3/8" SIDE FRAMEWORK
38	659159	DOOR CATCH WELD
37	470024	PLASTIC KNOB
36	193016	JURY TRIM 270"
35	659114	FOAM - R.F. FOOT
34	659103	FOAM - CHARGE
33	659106	FOAM - L.F. FENDER
32	659107	FOAM - UNDER FRONT
31	659112	FOAM - L.F. FENDER
30	900065	WASHER BOLT
29	914002	3/8" UNC LOCK NUT
28	470006	3/8" UNC NUTSERT
27	200464	FRONT BOW SPRINGER
26	826108	BOW LOWER RISE
25	826112	SPACER - BRACE
24	826111	CUTTER PIN
23	826110	CLEVIS PIN
22	826109	LEVER CLIP
21	826154	BOW CABLE - 12"
20	900064	3/8" UNC X 3/4" HEX BOLT
19	659375	FLOOR PLATE
18	200019	SPACER
17	914000	3/8" UNC LOCK NUT
16	700005	WASHER 1 1/4" BOLT
15	200027	WASHER SPACER
14	658009	WASHER WORM
13	658013	LARGE RIM
12	659049	WIPER BLADE - 16"
11	659115	FLOOR MAT
10	173018	WEATHER STRIP 116"
9	900066	3/8" UNC X 3/4" HEX BOLT
8	900000	1/2" X 20 X 1/2" HEX BOLT
7	659278	VALVE COIL
6	650524	REAR VIEW MIRROR
5	699801	CALCULATION TUBE
4	914010	3/8" UNC LOCK NUT
3	472245	3/8" UNC X 5" STUD
2	900338	3/8" UNC X 5" BOLT
1	601150	HOSE - CAB MTC
0	483007	LOCKER - 3/8" DIA
61	659125	MTC - PAD - LARGE
60	659123	MOUNT BASE SWIV
59	659124	MTC - PAD - SMALL
58	290107	8" GROUND STRAP
57	172001	FILLER STRIP 116"
56	659047	FT. WINDSHIELD
55	193018	WEATHER STRIP 76"
54	172001	FILLER STRIP 76"
53	659046	REAR WINDOW
52	485052	FR + 78" PAD BOLT
51	914004	3/8" UNC LOCK NUT
50	330012	SEAT
49	900133	3/8" X 1/4" HEX BOLT
48	900125	SEAT MT. CHANNEL
47	659201	FUEL CHARGER
46	659042	CHARGE SIDE COVER
45	785048	CHOKE CABLE
44	659275	CAB WELDMENT

62	4	900066	3/8" UNC X 3/4" HEX BOLT
61	6	900000	1/2" X 20 X 1/2" HEX BOLT
60	7	659278	VALVE COIL
59	8	650524	REAR VIEW MIRROR
58	9	699801	CALCULATION TUBE
57	10	914010	3/8" UNC LOCK NUT
56	11	472245	3/8" UNC X 5" STUD
55	12	900338	3/8" UNC X 5" BOLT
54	13	601150	HOSE - CAB MTC
53	14	483007	LOCKER - 3/8" DIA
52	15	659125	MTC - PAD - LARGE
51	16	659123	MOUNT BASE SWIV
50	17	659124	MTC - PAD - SMALL
49	18	290107	8" GROUND STRAP
48	19	172001	FILLER STRIP 116"
47	20	659047	FT. WINDSHIELD
46	21	193018	WEATHER STRIP 76"
45	22	172001	FILLER STRIP 76"
44	23	659046	REAR WINDOW
43	24	485052	FR + 78" PAD BOLT
42	25	914004	3/8" UNC LOCK NUT
41	26	330012	SEAT
40	27	900133	3/8" X 1/4" HEX BOLT
39	28	900125	SEAT MT. CHANNEL
38	29	659201	FUEL CHARGER
37	30	659042	CHARGE SIDE COVER
36	31	785048	CHOKE CABLE
35	32	659275	CAB WELDMENT

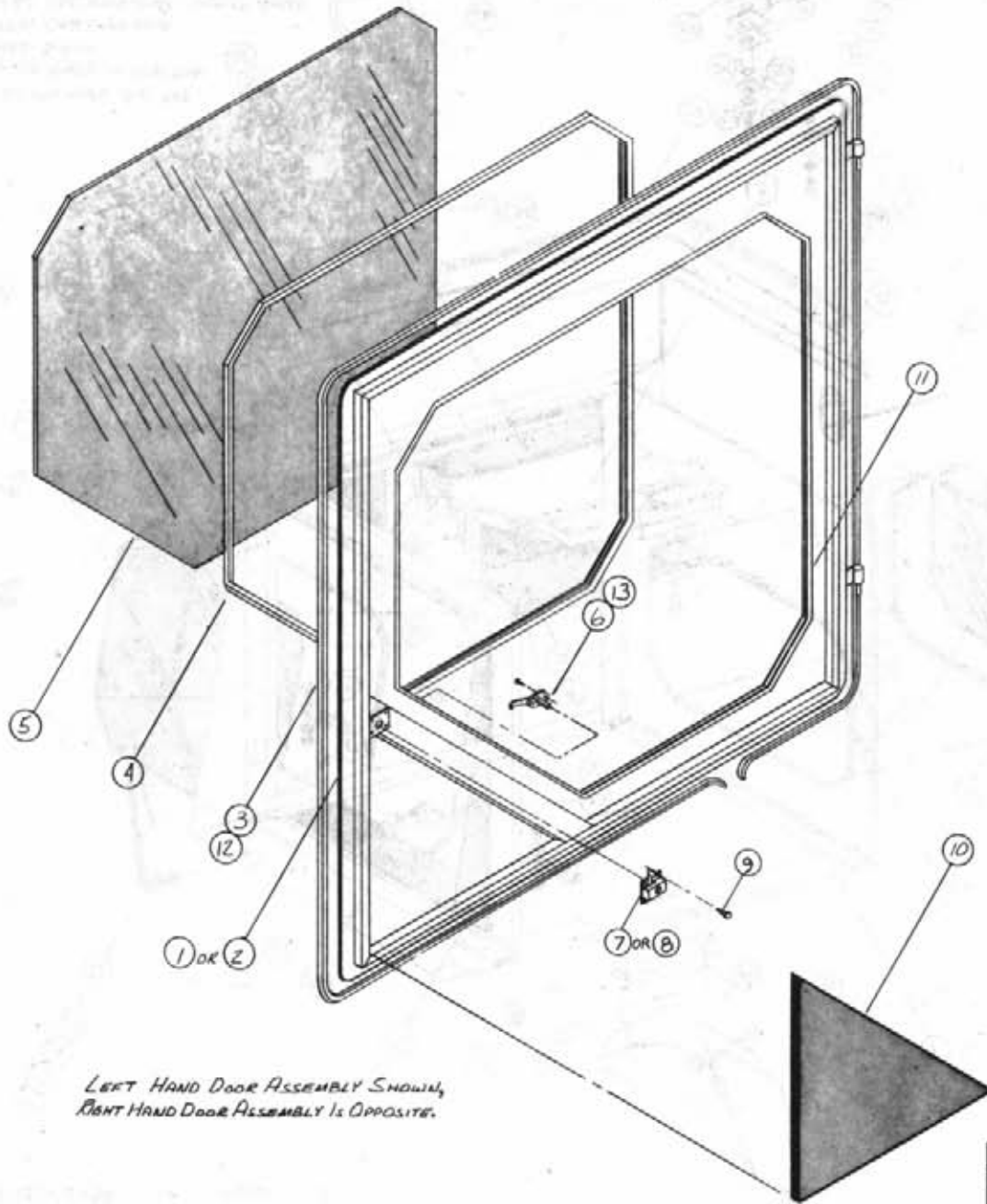
HAGIE
HAGIE MANUFACTURING COMPANY
CLARION, IOWA 50505

REWORKS ALL SHARP CORNERS & BURRS
TOLERANCES UNLESS OTHERWISE SPECIFIED

FRACTION - DECIMAL - ANGLES -

DESCRIPTION: PARTIAL CAB ASSEMBLY
DRAWN BY: L. GERMAN
CHECKED BY: [Signature]
DATE: 12-15-78
SHEET: 1 OF 1

NO.	DATE	E.C.	BY	REVISION



LEFT HAND DOOR ASSEMBLY SHOWN,
RIGHT HAND DOOR ASSEMBLY IS OPPOSITE.

QTY	PART NO.	DESCRIPTION
12	473902	#8x1/2 SCREW
12	485052	1/8x7/8 HD RIVET
11	193048	2 M. WEATHERSTRIP
10	1657108	CAB DOOR FOAM
9	492582	#10x1/4 #2 TEK
8	1650522	L. DOOR LOCK
7	1650521	R. DOOR LOCK
6	1650523	DOOR HANDLE
5	1659048	SIDE WINDOW
4	192001	FLOORSTEP 106"
3	173028	CONSOLE 141"
2	1657053	L. DOOR W/O
1	1657052	R. DOOR W/O

HAGIE
HAGIE MANUFACTURING COMPANY
CLARION, IOWA 50502

REMOVE ALL SHARP CORNERS & BURRS
TOLERANCE UNLESS OTHERWISE SPECIFIED

FACTORY: □ CHECKED: □ ASSEMBLY: □

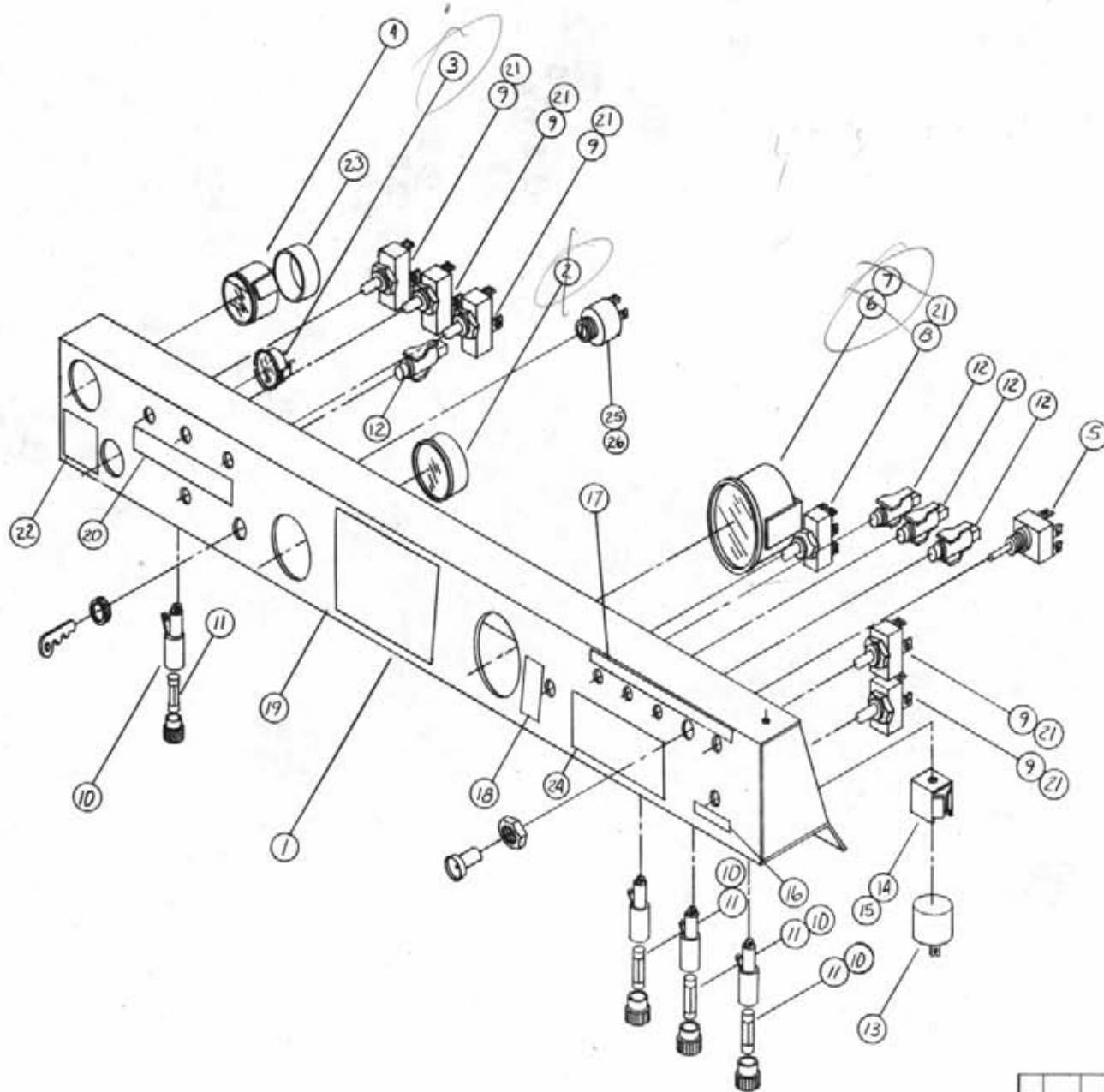
DESCRIPTION: L. & R. CAB DOOR ASSEMBLY

DRAWN BY: L. GERMAN TITLE: DRG

CHECKED BY: L. GERMAN APPROVED BY: L. GERMAN

DATE: 12-15-78 SERIAL NUMBER: _____

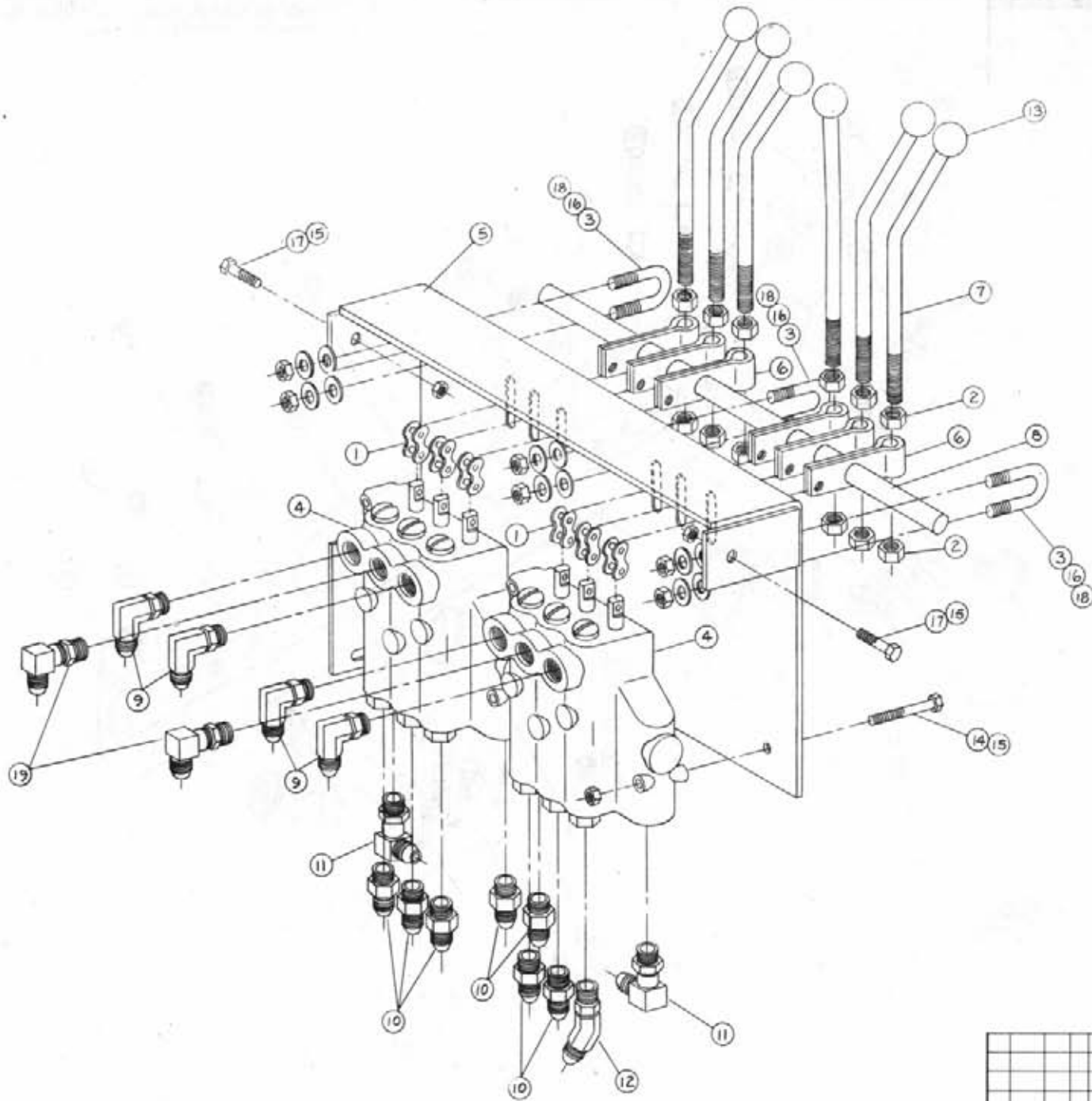
NO.	DATE	BY	REVISION



26	4	903836	#8-32x.68 SCREW
25	1	316075	IGNITION SWITCH
24	1	650893	DECEL - DIAL/STRET
23	1	670009	FLUE TIMER SPACER
22	1	650843	DECEL - RING ARM
21	6	970001	RUBBER BOOT NUT
20	1	650973	DECEL - DECEL CHUCK
19	1	650974	DECEL - CHUCK CHUCK
18	1	650937	DECEL - PIN/ARM
17	1	650873	DECEL - HO LIGHTS
16	1	650977	DECEL - FLASHER
15	1	485052	1/8" X 8 PIP NUT
14	1	973916	FLASHER HOLDER
13	1	973917	FLASHER SAE 536
12	4	370318	INDICATOR LIGHT
11	4	298004	20 AMP FUSE
10	4	298011	FUSE HOLDER
9	5	298016	TOGGLE SWITCH
8	1	291204	RPM MPH SWITCH
7	1	650935	DECEL - SPEEDOMETER
6	7	679000	SPEEDOMETER
5	1	290046	LIGHT SWITCH
4	1	670011	FLUE TIMER
3	1	290401	FUEL GAUGE
2	1	291203	HOUR METER
1	1	659014	INST. PANEL WELD

HAGIE	
HAGIE MANUFACTURING COMPANY CLARION, IOWA 50525	
REMOVE ALL SHARP CORNERS & BURRS	
TOLERANCES UNLESS OTHERWISE SPECIFIED	
FRAC TION	DECIMALS
1/16	.0625
1/8	.125
3/16	.1875
1/4	.25
5/16	.3125
3/8	.375
7/16	.4375
1/2	.5
9/16	.5625
5/8	.625
11/16	.6875
3/4	.75
13/16	.8125
7/8	.875
15/16	.9375
1	1.0

DESCRIPTION	INSTRUMENT PANEL ASSY	
DRAWN BY	L. German	SCALE
CHECKED BY		APPROVED BY
DATE	12-15-78	DRAWING NUMBER
NO DATE E.C. BY	REVISION	SHEET OF



19	2	618440	3/8 UNC X 3/4 EXT LONG MISC
18	2	920002	3/8 SAE WASHER
17	3	300002	1/4 UNC X 3/4 HEX BOLT
16	6	15805	3/8 UNF HEX NUT
15	7	914000	1/8 UNC LOCK NUT
14	4	300007	1/8 UNC X 2 HEX BOLT GAS
13	6	785007	KNOB
12	1	618425	3/8 MOR X 45R 3/8 MISC
11	2	618424	3/8 MOR X 30R 3/8 LG MISC
10	7	618126	3/8 MOR X 3/8 JIC ADAPTER
9	4	618119	3/8 MOR X 30R 3/8 JIC
8	1	615338	VALVE HANDLE PIVT PIN
7	6	615337	VALVE HANDLE
6	6	615336	VALVE HANDLE LINK
5	1	615332	VALVE MT WLD
4	2	606585	3 SPOOL VALVE
3	3	470088	3/8 UNF U-BOLT
2	2	470087	3/8 UNC W/LOC NUT
1	6	221001	CONN LINK CLIP
P/N		DESCRIPTION	

HAGIE
HAGIE MANUFACTURING COMPANY
CLARION, IOWA 50525

REMOVE ALL SHARP CORNERS & BURRS
TOLERANCE UNLESS OTHERWISE SPECIFIED

FRACTION: DECIMAL: ANGLES:

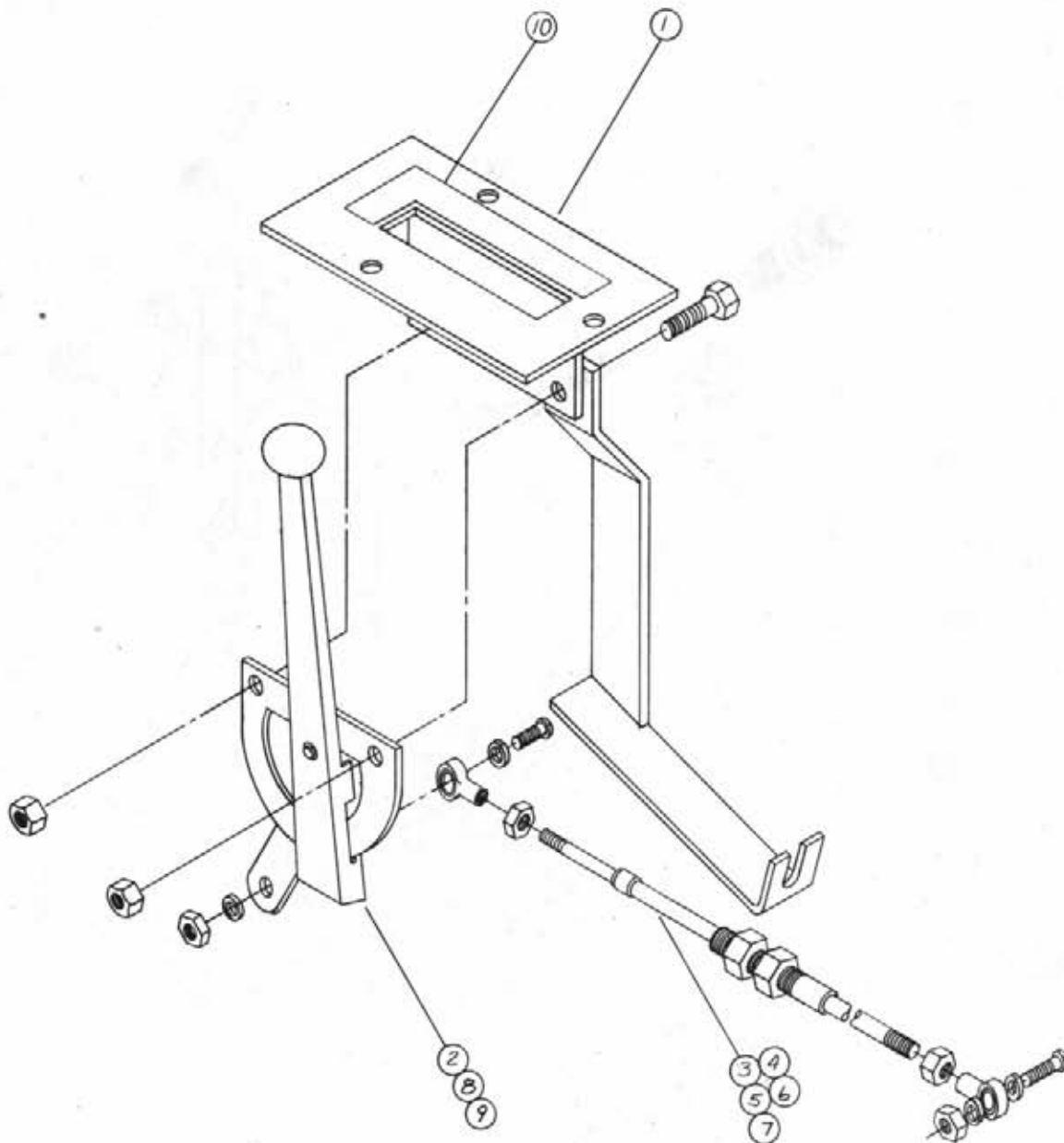
DESCRIPTION: **2-3 SPOOL VALVE ASSEMBLY**

DESIGNED BY: **K. LEHMAN** DATE: NONE

CHECKED BY: APPROVED BY:

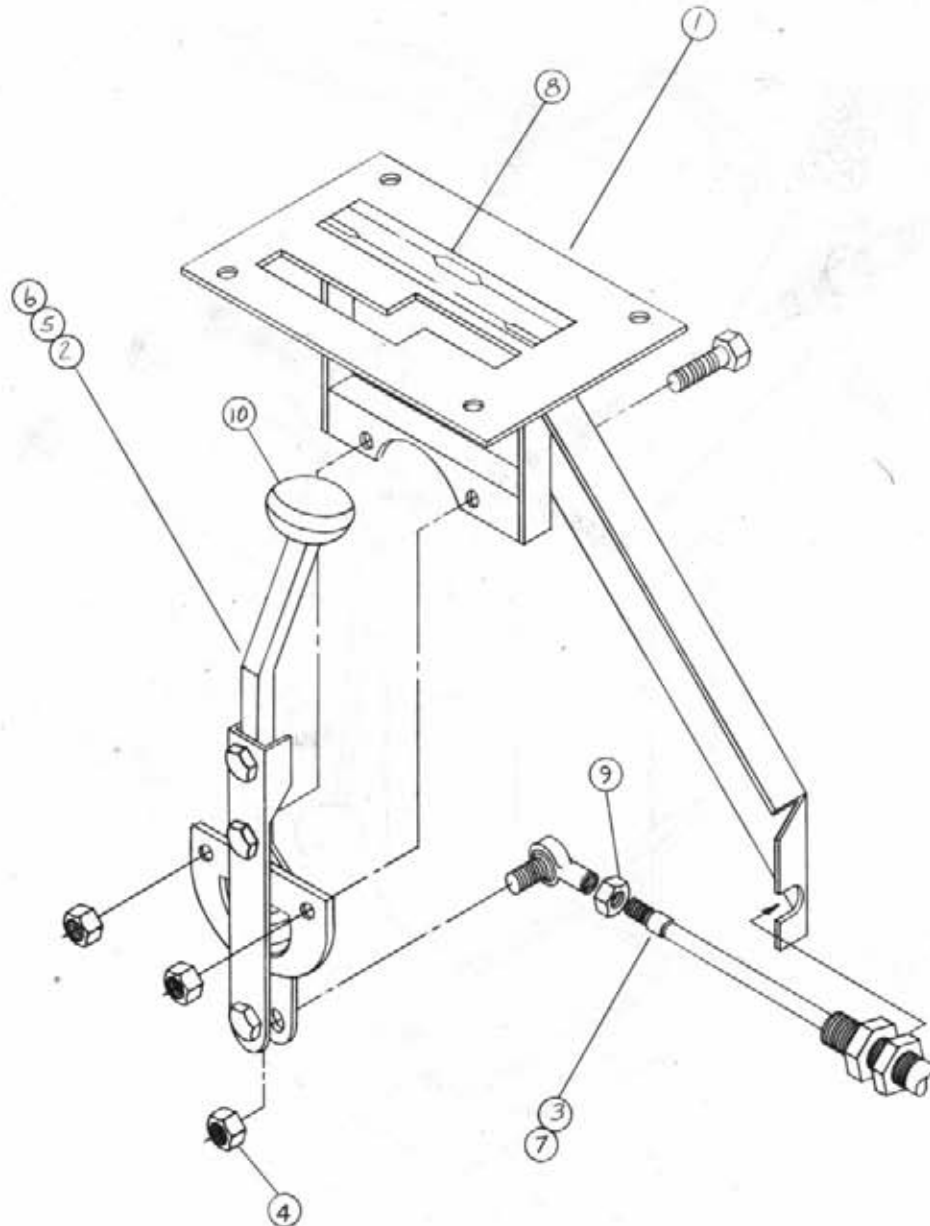
DATE: **12-5-78** DRAWING NUMBER:

NO DATE C.B.Y. REVISION SHEET OF



11	3	910027	#10-32 HEX NUT
10	1	650967	TRIDRIVE DECAL
9	2	914002	1/4 UNC LOCK NUT
8	2	900002	1/4 UNC x 1/4 BOLT
7	4	721010	#10 LOCK WASHERS
6	4	914027	#10-32 LOCK NUT
5	1	903889	#10-32 x 3/8 STAINLESS BOLT
4	2	873721	#10-32 FINE PITCH LOCK NUT
3	1	185017	10 1/4\"/>
2	1	285005	CONTROL HEAD
1	1	657118	TRIDRIVE CONTROL HEAD
MATERIAL		924	DESCRIPTION

HAGIE		
HAGIE MANUFACTURING COMPANY CLARION, IOWA 50525		
REMOVE ALL SHARP CORNERS & BURRS		
TOLERANCES UNLESS OTHERWISE SPECIFIED		
FINISH	DIMENSIONS	WELDS
VERIFICATION: <i>TRIDRIVE CONTROL ASSEMBLY</i> DRAWN BY: <i>L. GEHRMANN</i> CHECKED BY: <i>NONE</i> DESIGNED BY: APPROVED BY: <i>L. GEHRMANN</i>		
DATE: <i>12-16-78</i>	DRAWING NUMBER	
NODATEE.C.B.Y.	REVISION	SHEET OF

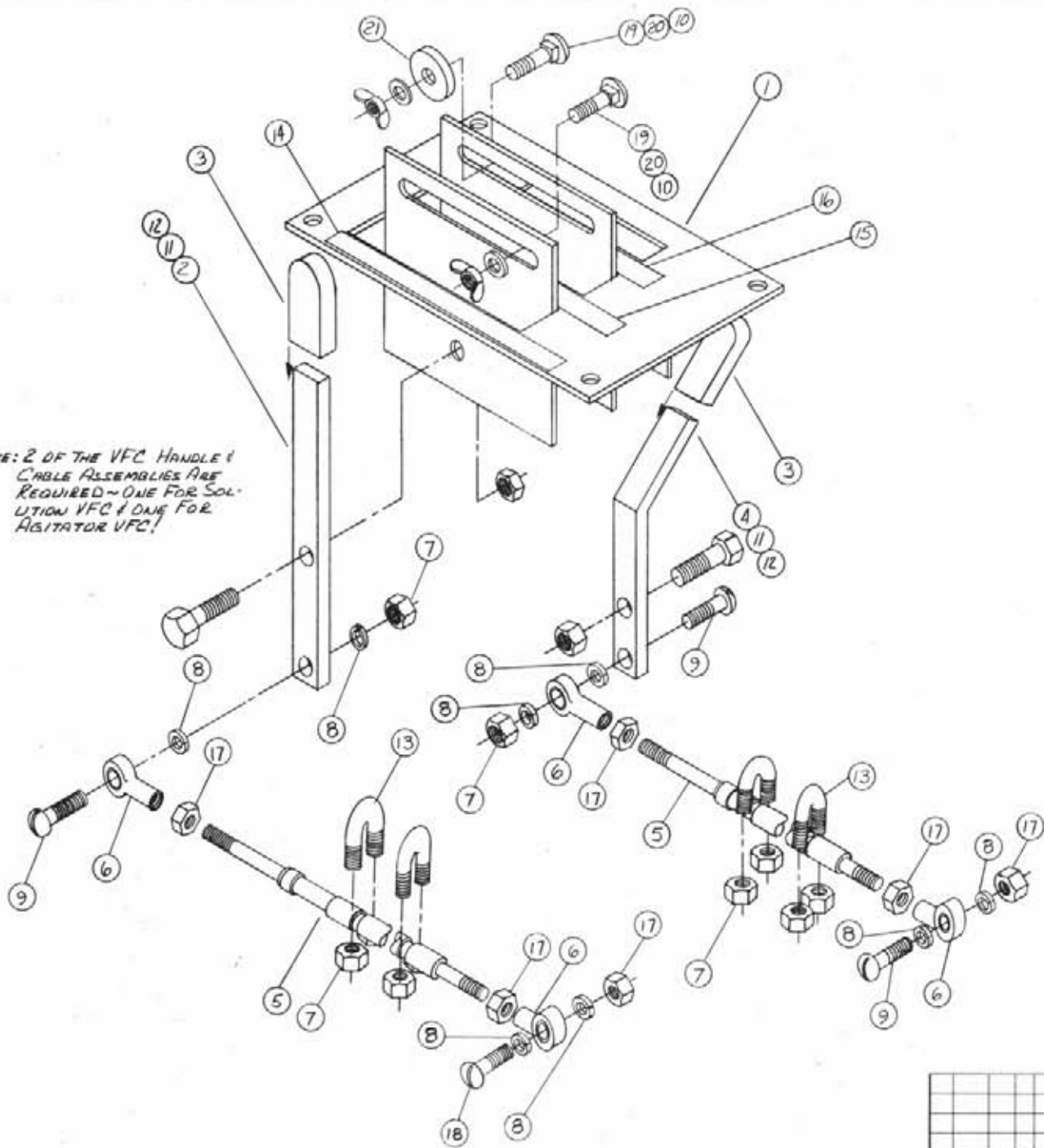


10	1	785008	KNOB
9	1	910001	3/8 UNF HEX NUT
8	1	650968	DRILL HEAD PINE
7	1	413918	1/4 - 28 DRILL BIT
6	2	900003	3/4 UNF 1" BOLT
5	2	914000	1/4 UNF LOCK NUT
4	1	914001	1/4 UNF LOCK NUT
3	1	785016	102" CONTROL CABLE
2	1	785020	CONTROL HEAD
1	1	659027	CONTROL HANDLE

<p>HAGIE HAGIE MANUFACTURING COMPANY CLAYTON, IOWA 50540</p>	
<p>REMOVE ALL SHARP CORNERS & BURRS</p>	
<p>TOLERANCES UNLESS OTHERWISE SPECIFIED</p>	
<p>FRACTION</p>	<p>DECIMALS</p>
<p>DESCRIPTION: <i>HYDROSTATIC CONT. ASSY</i></p>	<p>ANGLE</p>
<p>DRAWN BY: <i>LESERMAN</i></p>	<p>SCALE: <i>NONE</i></p>
<p>CHECKED BY:</p>	<p>APPROVED BY:</p>
<p>DATE: <i>12-16-78</i></p>	<p>DRAWING NUMBER:</p>
<p>NO. DATE E.C. BY</p>	<p>REVISION</p>
<p>SHEET</p>	<p>OF</p>

NO.	DATE	E.C.	BY	REVISION

NOTE: 2 OF THE VFC HANDLE & CABLE ASSEMBLIES ARE REQUIRED - ONE FOR SOLUTION VFC & ONE FOR AGITATOR VFC!



21	483057	Decal
20	901064	5/16" X 3/8" CARR. BOLT
19	473900	5/16" WING NUT
18	903889	#10-32 X 3/8" S. CREW
17	910027	#10-32 HEX NUT
16	650971	DECAL-4WD
15	650970	DECAL-AGITATOR
14	650969	DECAL-SHEAR PRESS
13	185019	U-BOLT
12	914000	1/4" WIDE LOCK NUT
11	900002	1/4" WIDE BOLT
10	920002	7/8" X 1/4" FLAT WASHER
9	903873	#10-32 1/4" SCREW
8	921010	#10 LOCK WASHER
7	914027	#10-32 LOCK NUT
6	473921	#10-32 FEM BALL JOINT
5	785015	3/4" CONTROL CABLE
4	657074	4WD HANDLE
3	249003	VINYL HAND GRIP
2	657073	VFC HANDLE
1	659069	CONTROL M. ASSEMBLY

HAGIE
HAGIE MANUFACTURING COMPANY
CLARION, IOWA 50525

REMOVE ALL SHARP EDGES & BURRS

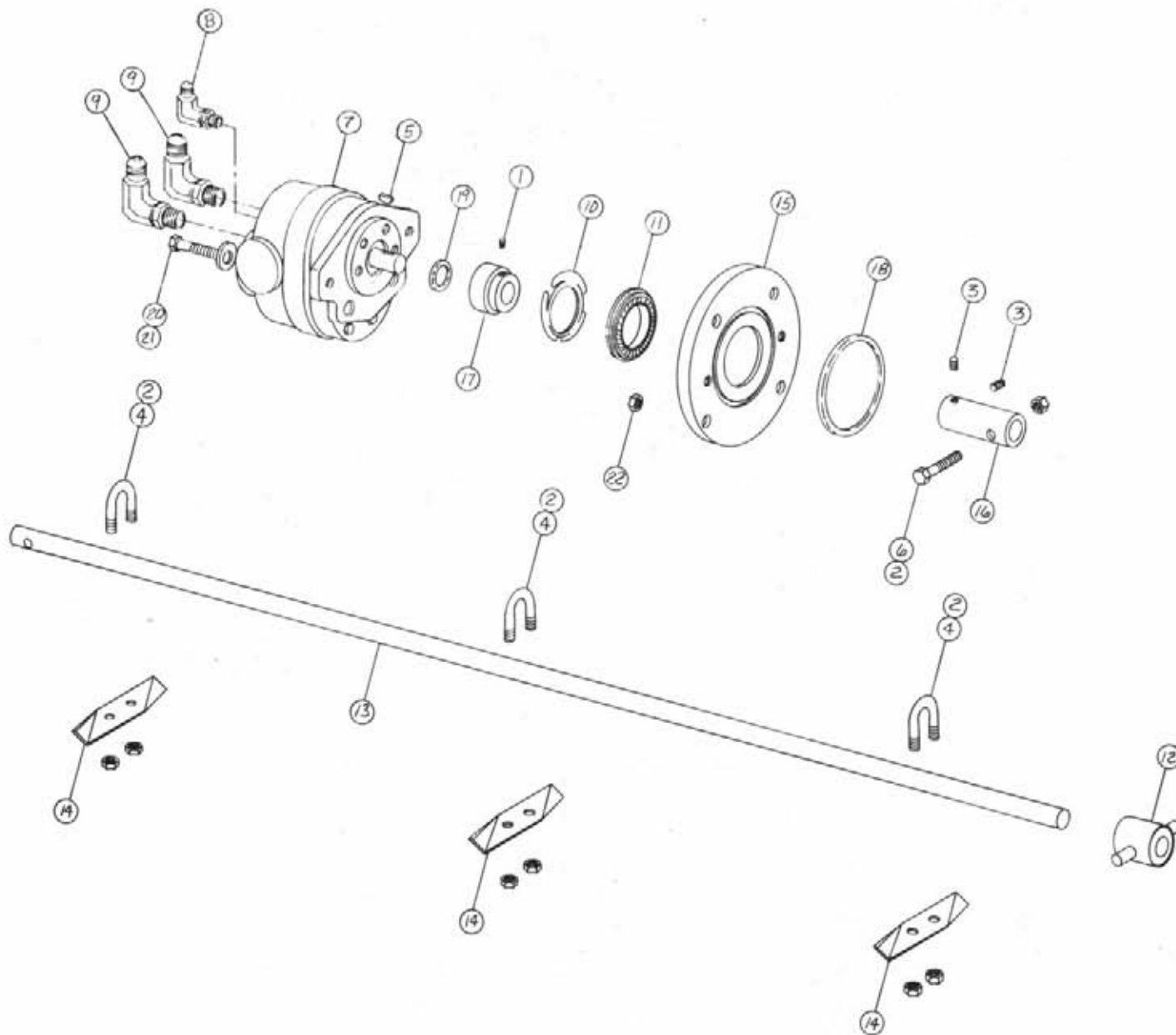
TOLERANCE UNLESS OTHERWISE SPECIFIED

FRACTION	DECIMAL	MILL

DESCRIPTION: VFC 4WD CONTROL ASSEMBLY
DRAWN BY: L. GERMAN
CHECKED BY: []
DATE: 1-12-79
SHEET: 2 OF []

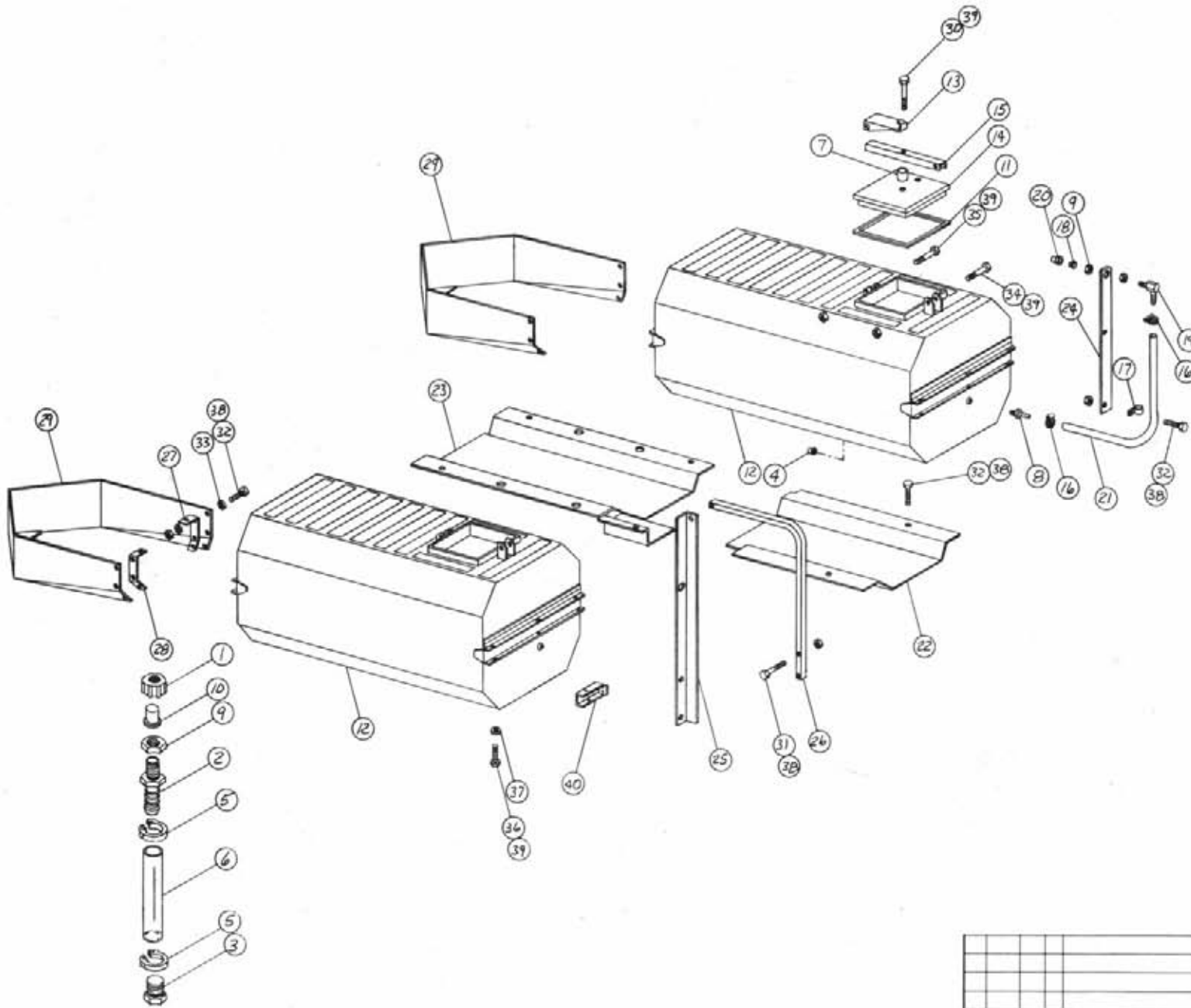
APPROVED BY: []
SCALE: NONE

NO. DATE E.C. BY REVISION



22	914004	3/8 UNC LOCK NUT
21	920002	3/8 SAE FLAT WASHER
30	900130	3/8 UNC x 1/4 HEX BOLT
19	870503	VITON O-RING
18	870502	VITON O-RING
17	763085	BEARINGS
16	763073	MOTOR COUPLER
15	763072	MOTOR MOUNT PLATE
14	763027	IMPELLER BLADE
13	763026	AGITATOR SHAFT
12	760554	TANK GLAND SEAL
11	629617	ROTARY FLANGE SEAL
10	629526	SPACER SHAFT WASHER
9	618241	3/8 DIA - 90° 3/8 CONE
8	618119	3/8 DIA - 90° 3/8 CONE
7	610044	BARNES MOTOR
6	473810	1/2 x 2 1/2 SS CAP SCREW
5	472003	1/4 WOODRUFF KEY
4	470072	1/2 UNC SS U-BOLT
3	470090	3/8 - 18 SET SCREW
2	470089	1/4 UNC SS LOCK NUT
1	470083	3/8 - 32 SET SCREW

HAGIE	
HAGIE MANUFACTURING COMPANY CLARION, IOWA 50525	
REMOVE ALL SHARP CORNERS & BURRS	
TOLERANCE UNLESS OTHERWISE SPECIFIED	
FRACTION:	DECIMALS: ANGLES:
DESCRIPTION:	AGITATOR ASSEMBLY
DESIGNED BY:	T. MARKER
CHECKED BY:	
DATE:	5-21-80
DRAWING NUMBER:	
NO. DATE: E. C. BY:	REVISION
SHEET:	OF



341139	TANK EXT. CHAM. W/O.
914009	1/2 UNC LOCK NUT
919000	1/2 UNC LOCK NUT
920002	3/8 FLAT WASHER
900131	1/2 UNC x 1 1/2 HEX BOLT
900138	1/2 UNC x 2 1/2 HEX BOLT
900139	1/2 UNC x 2 1/4 HEX BOLT
920000	1/2 FLAT WASHER
900002	1/2 UNC x 1/4 HEX BOLT
900004	1/2 UNC x 1 1/4 HEX BOLT
900170	3/8 UNC x 2 1/4 HEX BOLT
659377	LT. ST. TANK SHIELD
659374	LT. RT. TANK SHIELD
659373	RT. RT. TANK SHIELD
659368	LT. LOWER HANDLE
659366	RT. LOWER HANDLE
659176	FRONT BELLY PAN
659195	REAR BELLY PAN
601239	1/2 x 57 SWIFT HANDLE
738866	1/2 CAP NUT
737856	1/2 COMPRESSION WEDGE
731109	NYLON TIP
520117	CUSHION HOSE CLAMP
520069	1/2 HOSE CLAMP
763166	TANK LID CHAMFER
763164	SWAY TANK LID
763163	SWAY TANK HANDLE
763157	TANK WELDMENT
760651	TANK LID GASKET
738859	NYLON SADDLE RING
737858	1/2 NUT
714350	3/4 NPT x 1/2 HOSE BARB
601231	3/4 x 2 HOSE
601216	VENT HOSE
520003	1/2 UNF SWAY CLAMP
506203	1/4 NPT RING CAP
500007	1/2 NYLON HEX BOLT
500006	1/2 NYLON HEX BOLT
500005	3/8 NYLON SWAY NUT

FORM: P/M

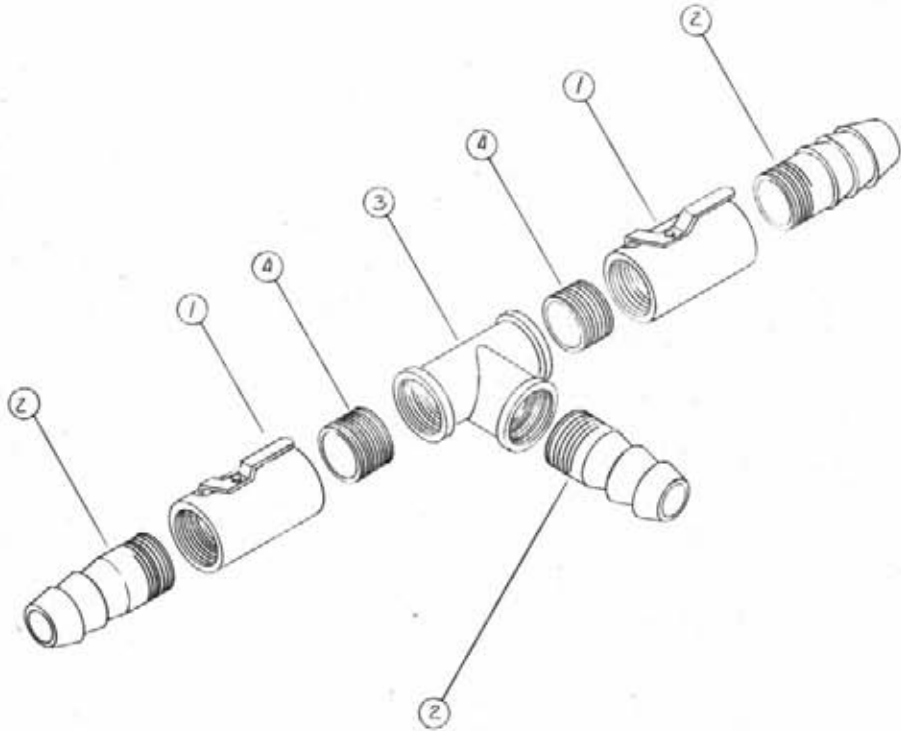
HAGE
HAGE MANUFACTURING COMPANY
CLARKSON, OHIO 43085

REMOVE ALL SHARP CORNERS & BURRS
TOLERANCES UNLESS OTHERWISE SPECIFIED

FRACTION: DECIMAL: ANGLES:

DESIGN: SOLUTION TANKS
DRAWN BY: J. MAREK DATE: NONE
CHECKED BY: APPROVED BY:

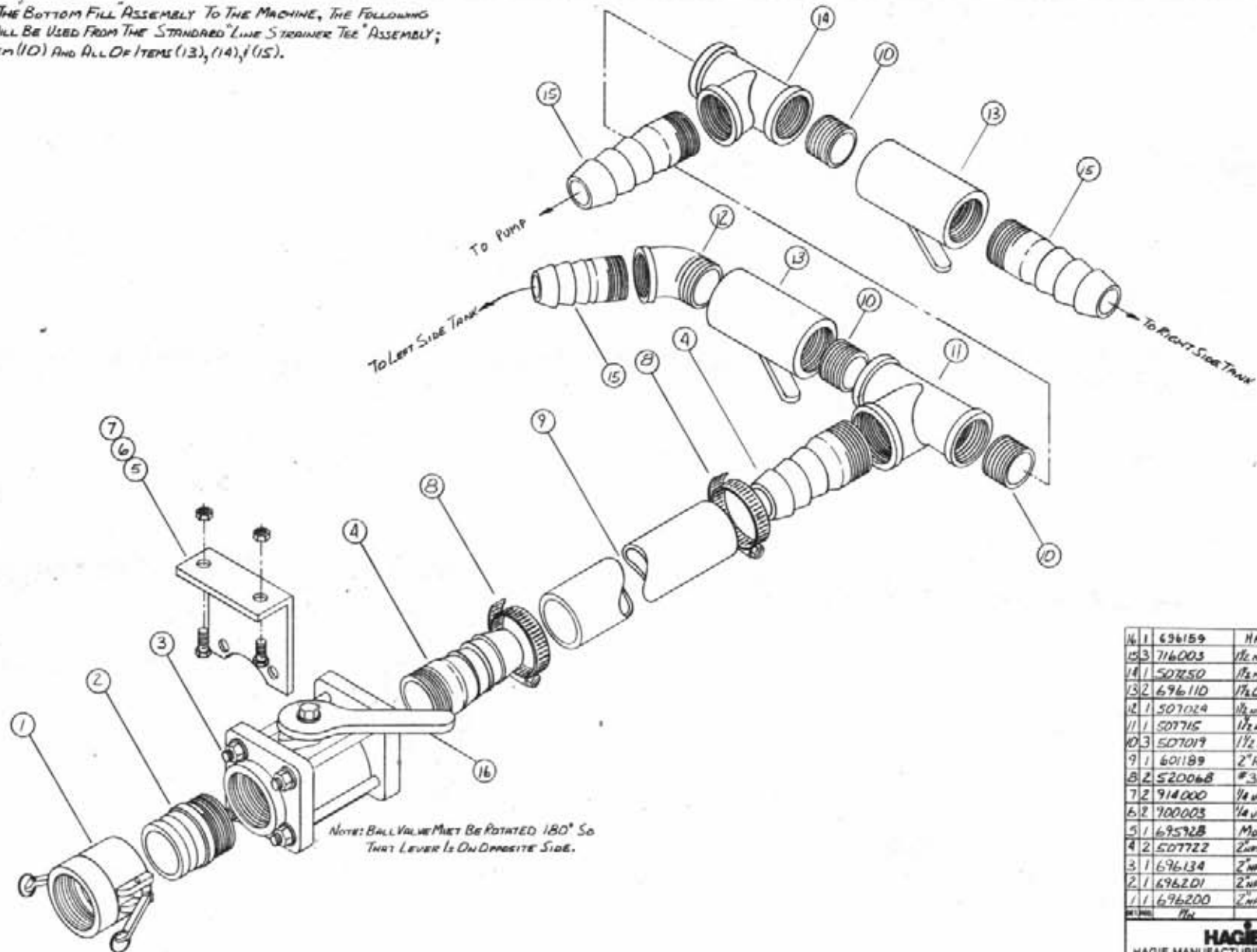
DATE: 5-22-80 DRAWING NUMBER:
NO. DATE: C.B.Y. REVISION SHEET: 35



4	507019	1/2 NPT CL. NUT
3	507250	1/2 NPT PIPE TEE
2	716003	1/2 NPT 1/2" HOSE END
1	696110	CONTINUOUS VALVE

HAGIE	
HAGIE MANUFACTURING COMPANY CLARK, IOWA 50525	
REMOVE ALL SHARP CORNERS & BURRS	
TOLERANCE UNLESS OTHERWISE SPECIFIED	
FRAC TION	DECIMALS ANGLES
DESCRIPTION SOLUTION TEE ASSEMBLY	
DRAWN BY L. GERMAN	SCALE NONE
CHECKED BY	APPROVED BY L. GERMAN
DATE 1-16-79	DRAWING NUMBER
NO. DATE E.C. BY	REVISION
SHEET	OF

Notes: To Add THE BOTTOM FILL ASSEMBLY TO THE MACHINE, THE FOLLOWING ITEMS WILL BE USED FROM THE STANDARD "LINE STRAINER TEE" ASSEMBLY; 2 of Item (10) AND ALL OF ITEMS (13), (14), (15).



16	1	696159	HANDLE
15	3	716003	1/2" NPT x 1/2" HOSE BARB
14	1	507250	1/2" NPT FINE TEE
13	2	696110	1/2" CONN. VALVE
12	1	507024	1/2" NPT 45° ST. EL.
11	1	507715	1/2" NPT RHW ZPT BR
10	3	507019	1/2" NPT CL. NIPPLE
9	1	601189	2" HOLES x 2 1/4" LONG
8	2	520068	#32 HOSE CLAMP
7	2	914000	1/4" UNC LOCK NUT
6	2	700003	1/4" UNC x 1" BOLT
5	1	695928	MOUNTING ANGLE
4	2	507722	2" DIA. 2" HOSE BARB
3	1	696134	2" NPT BALL VALVE
2	1	696201	2" NPT MALE COUPLER
1	1	696200	2" NPT FEMALE ROVER

HAGIE
HAGIE MANUFACTURING COMPANY
CLAYTON, INDIANA 46033

REMOVE ALL SHARP EDGES & BURRS
TOLERANCE UNLESS OTHERWISE SPECIFIED

FRACTION: DECIMALS: ANGLES:

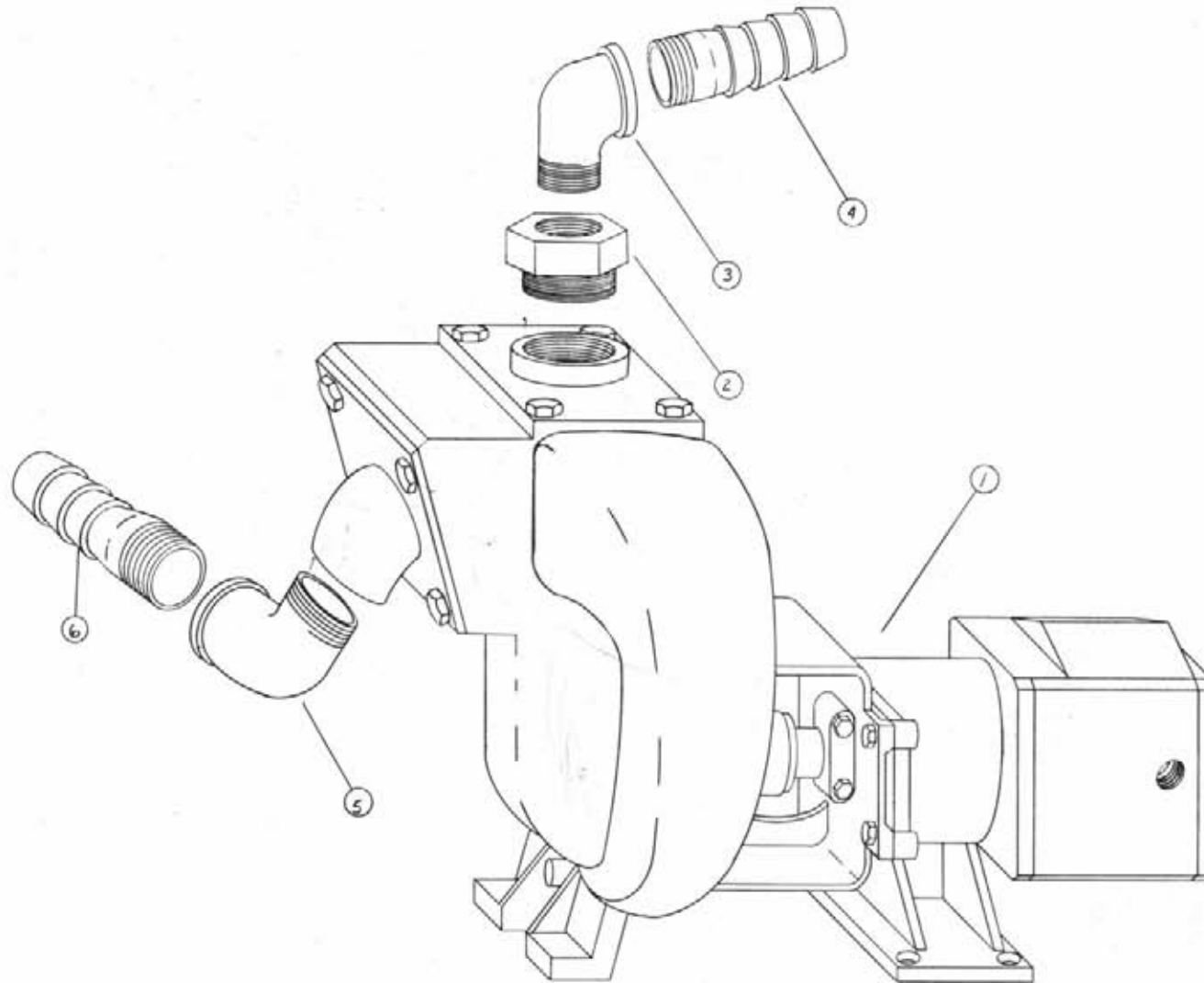
DESCRIPTION: **2 1/2" BOTTOM FILL ASSEMBLY OPTION**

DRAWN BY: **L. GERMAN** SEAL: **NONE**

CHECKED BY: APPROVED BY: **L. GERMAN**

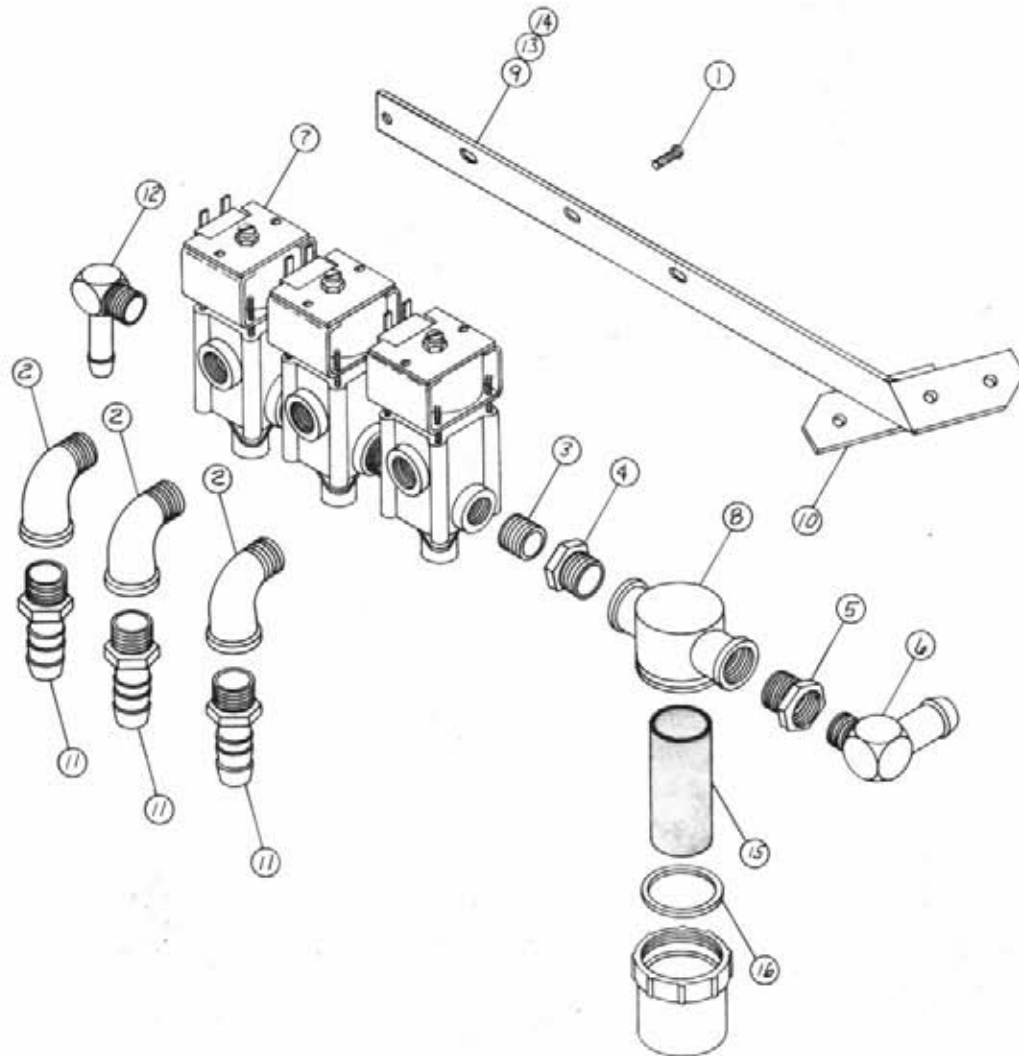
DATE: **1-17-79** DRAWING NUMBER:

NO. DATE E.C. BY REVISION SHEET OF



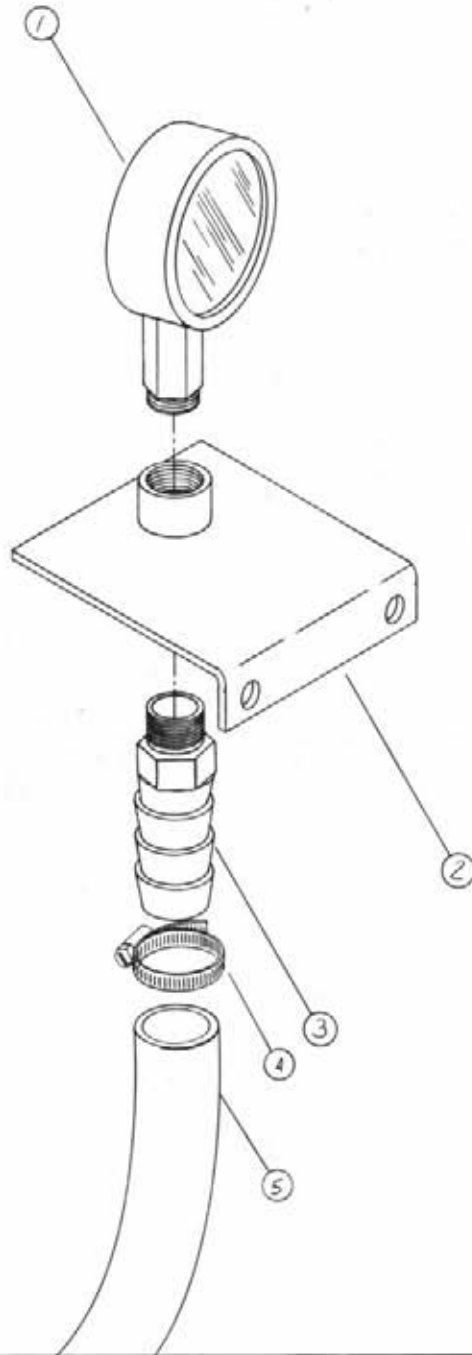
QC	1	695939	Pump Seal Assembly
NS	1	695905	FLAPPER ASSEMBLY
ES	1	716003	1/2" HOSE AT 90° SW. EL.
ES	1	507018	1/2" NUT 90° SW. EL.
ES	1	714560	1/2" HOSE BARB
ES	1	505200	1/2" NUT 90° SW. EL.
ES	1	507010	1/2" HOSE BARB
ES	1	690053	SOLOTRON PUMP

<p align="center">HAGIE HAGIE MANUFACTURING COMPANY CLARION, IOWA 50505</p>		
<p align="center">REMOVE ALL SHARP CORNERS & BURRS</p>		
<p align="center">TOLERANCE UNLESS OTHERWISE SPECIFIED</p>		
FUNCTION:	DECIMALS:	ANGLES:
DESCRIPTION:	SOLOTRON PUMP SEAL	
DRAWN BY:	SCALE:	DATE:
CHECKED BY:	APPROVED BY:	DATE:
DATE:	9/12/78	DRAWING NUMBER:
NO. DATE:	C. BY:	REVISION:
SHEET:	OF:	



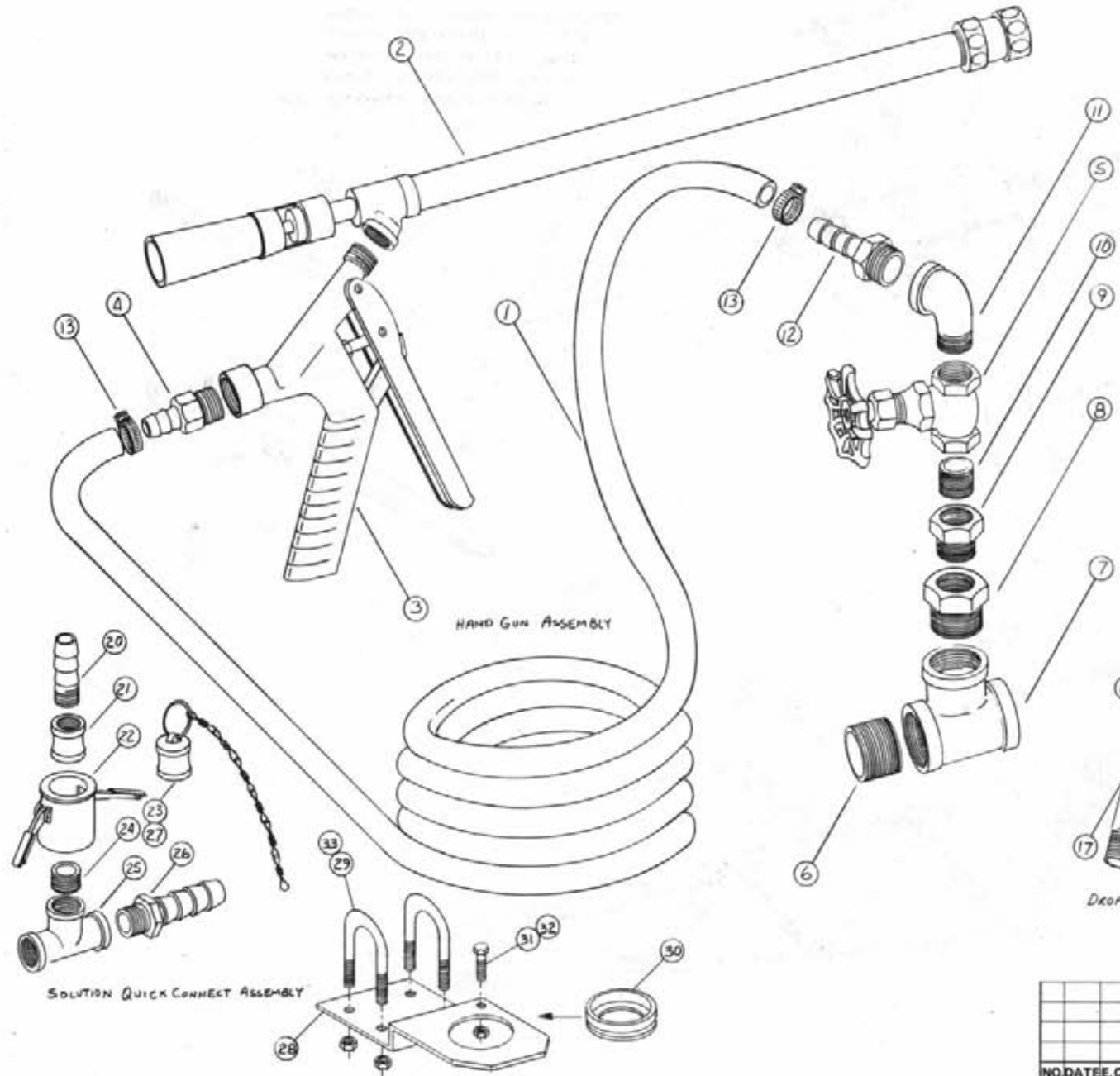
46	690067	GASKET
45	690068	90 DEGREE ELBOW
44	919000	1/4 UNF LOCK NUT
43	900006	1/2 UNF x 1 1/2 HEX BOLT
42	716004	3/8 NPT 90 DEGREE ELBOW
41	712940	1/2 NPT x 3/4 HEX BOLT
40	690264	KEYS
39	690263	SOLENOID SPRINGER MT.
38	690060	LINE SPRINGER
37	690019	SOLENOID VALVE
36	618138	1/4 NPT x 90 DEGREE ELBOW
35	504005	1/4 NPT x 90 DEGREE ELBOW
34	506000	1/4 NPT x 90 DEGREE ELBOW
33	504702	1/4 CLOSE NUT
32	503400	90 DEGREE STREET ELBOW
31	472199	10-24 x 1/2 CLEW

<p>HAGIE HAGIE MANUFACTURING COMPANY CLARION, IOWA 50535</p>		
<p>REMOVE ALL SHARP CORNERS & BURRS</p>		
<p>TOLERANCE UNLESS OTHERWISE SPECIFIED</p>		
FUNCTION	ISSUALS	AWLBY
<p>DESCRIPTION SOLUTION SOLENOID ASSEMBLY</p>		
DRAWN BY	SCALE	NAME
T. MARKER		None
CHECKED BY	APPROVED BY	
DATE	DRAWING NUMBER	
5-24-80		
NODATEE.C.BY	REVISION	
SHEET	OF	



5	1	601165	Hose - 2 x 1/4"
4	1	520070	P/B Hose Clamp
3	1	712320	1/4 nut x 1/2 Hex Bolt
2	1	695924	Sol. Gauge Mt.
1	1	695955	100 LB Gauge
QTY		DESCRIPTION	

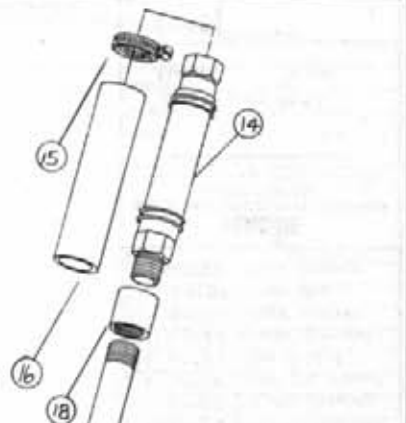
HAGIE		
HAGIE MANUFACTURING COMPANY CLARION, IOWA 50525		
REMOVE ALL SHARP CORNERS & BURRS		
TOLERANCE UNLESS OTHERWISE SPECIFIED		
FRACTION	DECIMAL	ANGLES
DESCRIPTION	SCALE	APPROVED
SOLUTION GAUGE ASSY	NONE	L. GERMAN
DRAWN BY	CHECKED BY	DATE
L. GERMAN	L. GERMAN	12-16-78
NO DATE, C. BY		REVISION
SHEET		OF



HAND GUN ASSEMBLY

SOLUTION QUICK CONNECT ASSEMBLY

DROP KIT ASSEMBLY



33	914002	5/8 UNC LOCK NUT
32	914000	5/8 UNC LOCK NUT
31	900002	1/4 UNC X 3/8 HEX BOLT
30	160015	1 1/2 ID. GROMMET
29	470094	5/8 UNC X 1 1/2 U-BOLT
28	160987	FEEDER TEE FITTING
27	160986	CHAIN
26	714350	3/4 NPT X 1/2 HOSE BARB
25	504756	3/4 NPT TEE
24	504702	3/4 NPT CL. NIPPLE
23	676204	PLUG
22	676203	FEM. COUPLER
21	676202	FEM. ADAPTER
20	713220	3/4 NPT X 1/2 HOSE BARB
19	501618	1/2 NPT X 3/8 NIPPLE
18	501212	HAND COVERING
17	739702	FEM. NOZZLE BOOT
16	601178	DROP STRAPENER
15	520087	#20 HOSE CLAMP
14	720079	FLEX COUPLER/PLUG
13	520069	#6 HOSE CLAMP
12	713230	1/2 NPT X 1/2 HOSE BARB
11	502410	3/8 NPT 90° STEEL
10	502700	3/8 NPT CL. NIPPLE
9	504000	3/4 X 1/2 RED. BUSHING
8	505213	1" X 3/4 FEM. BUSHING
7	505201	1" NPT FEM. TEE
6	505201	1" NPT CL. NIPPLE
5	679301	3/8 NPT VALVE
4	716200	3/4 GUT X 1/2 HOSE BARB
3	679002	TRIGGER ADAPTER
2	679000	HAND GUN
1	601171	3/8 X 200" HOSE

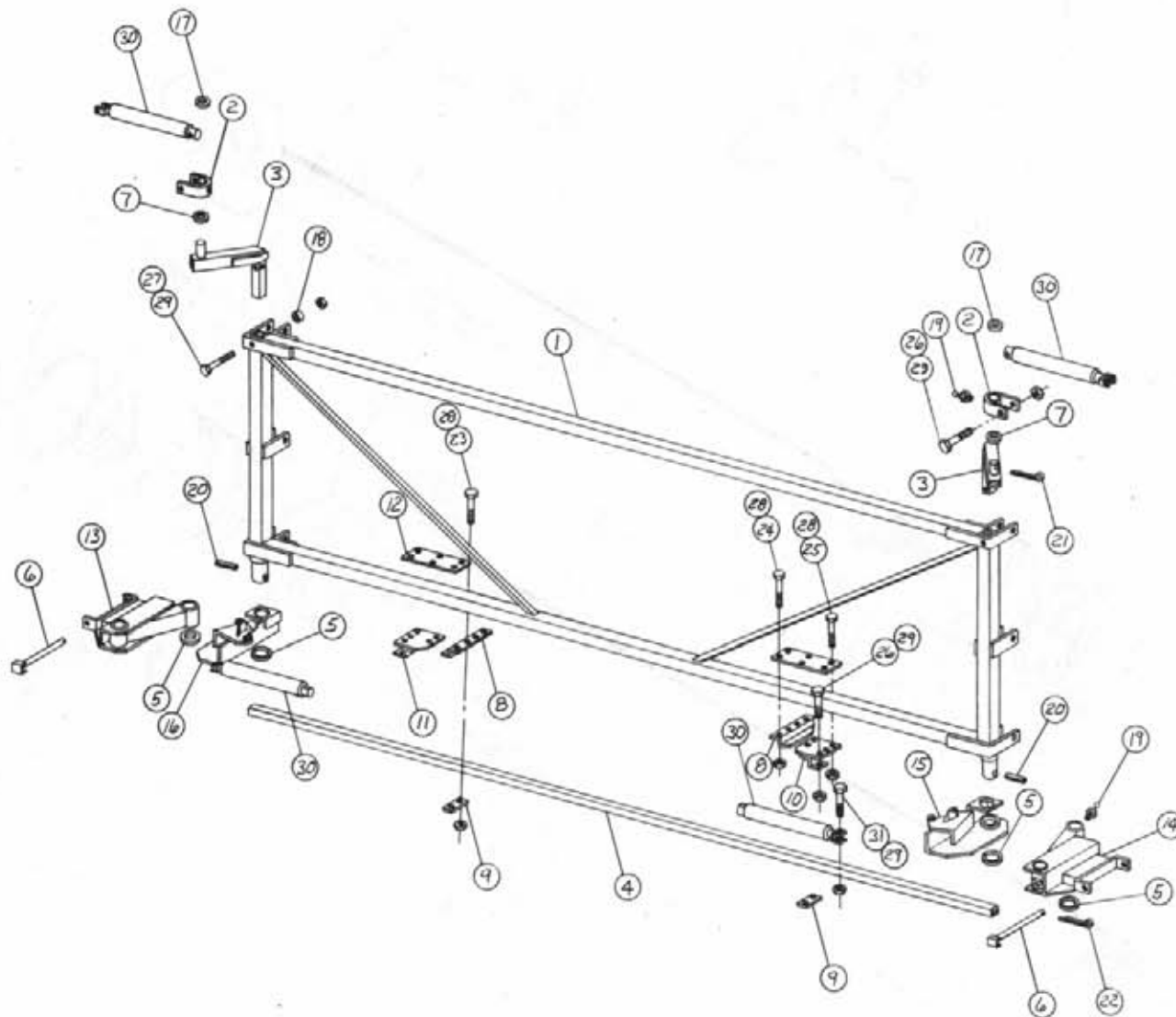
HAGIE
HAGIE MANUFACTURING COMPANY
CLARION, IOWA 50525

REMOVE ALL SHARP CORNERS & BURRS
TOLERANCES UNLESS OTHERWISE SPECIFIED

FRACTION:	DECIMAL:	INCHES:

DESCRIPTION: SOLUTION SYSTEM COMPONENTS
DRAWN BY: L. GERMAN
CHECKED BY: NONE
DATE: 7/4/78
ISSUED: 10/1

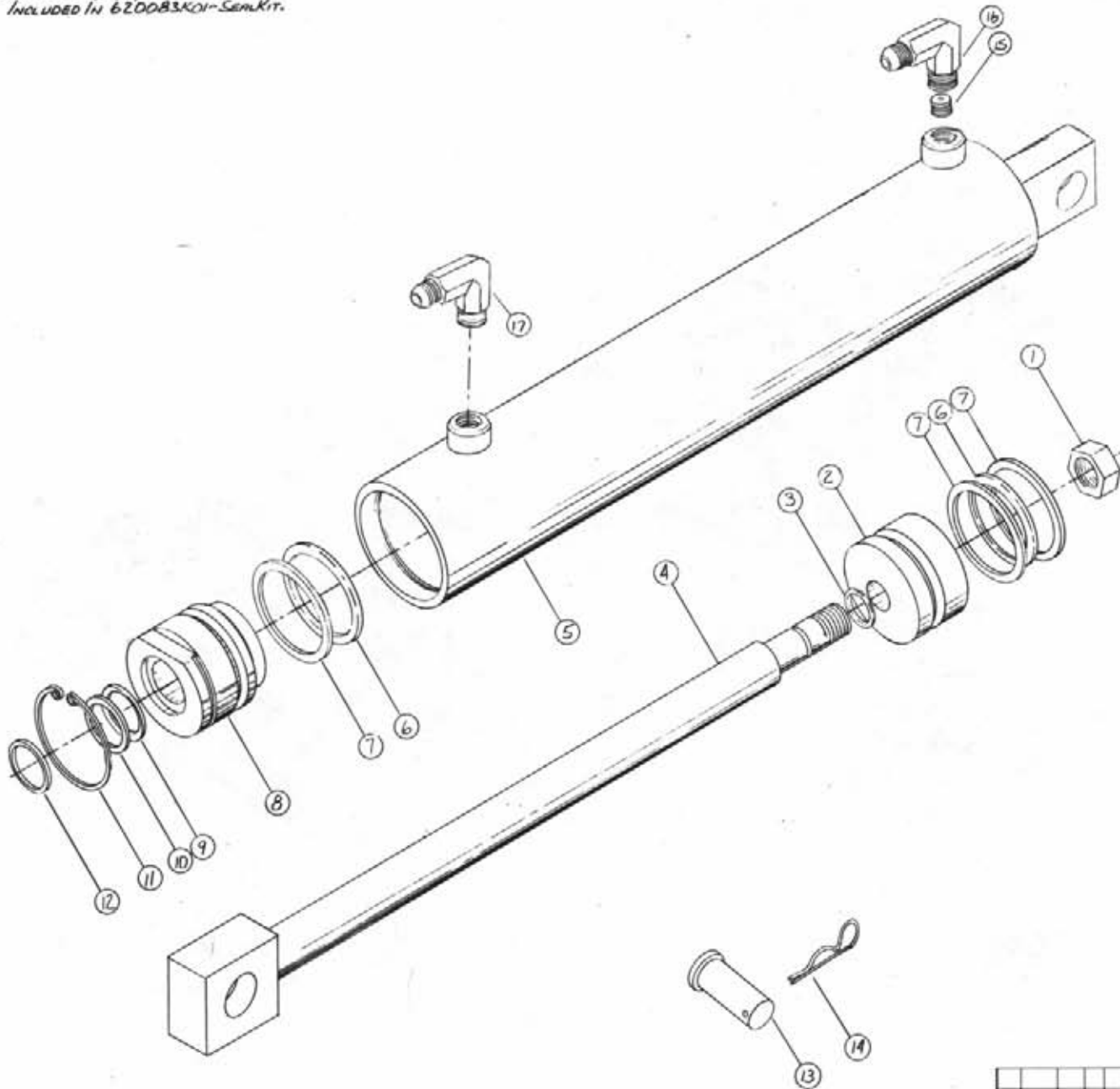
NO.	DATE	E.C.	BY	REVISION



31	900267	1/2 UNC x 2 HEX BOLT
30	620056	FOR LEVER CYL
29	714008	1/2 UNC LOCK NUT
28	914002	3/4 UNC LOCK NUT
27	900272	1/2 UNC x 3/4 HEX BOLT
26	900268	1/2 UNC x 2 1/2 HEX BOLT
25	900072	3/4 UNC x 3 HEX BOLT
24	900071	3/4 UNC x 2 1/4 HEX BOLT
23	900068	3/4 UNC x 1 1/4 HEX BOLT
22	475009	1/4 x 1 1/2 CUTTER PIN
21	475003	1/4 x 1 CUTTER PIN
20	473909	SPIRAL PIN
19	471006	GRIPPLE ZERK
18	390513	BUSHING
17	200004	WASHER
16	160976	LT BREAK-AWAY MT
15	160969	LT BREAK-AWAY MT
14	160966	LT BREAK-AWAY
13	160956	RT BREAK-AWAY
12	160945	FOLD CYL MT KEEPER
11	160944	RT FOLD CYL MOUNT
10	160941	LT FOLD CYL MOUNT
9	160939	KEEPER
8	160936	NOZZLE TUBE HANDLE
7	160925	BUSHING
6	160777	HINGE PIN
5	160732	WASHER
4	160185	NOZZLE MTD TUBE
3	160147	LEVEL CYL MOUNT
2	160144	LEVEL CYL PNEUT
1	160135	TRANSON W/O

HAGIE	
HAGIE MANUFACTURING COMPANY	
CLARION, IOWA 50505	
REMOVE ALL SHARP CORNERS & BURRS	
TOLERANCES UNLESS OTHERWISE SPECIFIED	
FRACTION	DECIMALS
	ANGLES
DESCRIPTION	
TRANSON ASSEMBLY	
DRAWN BY	SCALE
MARKER	NONE
CHECKED BY	APPROVED BY
DATE	DRAWING NUMBER
5-20-80	
NO DATE E.C. BY	REVISION
SHEET	OF

NOTE: ITEMS 3, 6, 7, 9, 10, & 12 ARE INCLUDED IN 6200B3KIT-SEALKIT.



17	1	611122	Tant 90° Tee
16	1	44033B	RESTRICTOR ELBOW
15	1	614366	RESTRICTOR
14	1	611016	ROD PIN
13	1	41223B	PICKER PIN
12	1	629003	ROD LIPER
11	1	629505	SWAMP RING
10	1	890214	BACK UP WASHER
9	1	870214	O-RING
8	1	620082	GLAND
7	3	890326	BACK UP WASHER
6	2	870326	O-RING
5	1	620498	TUBE WHORL
4	1	620505	SWEAT WHORL
3	1	870113	O-RING
2	1	620081	PISTON
1	1	422277	LOCK NUT
TOTAL		21	DESCRIPTION

HAGIE
HAGIE MANUFACTURING COMPANY
CLAYTON, IOWA 50525

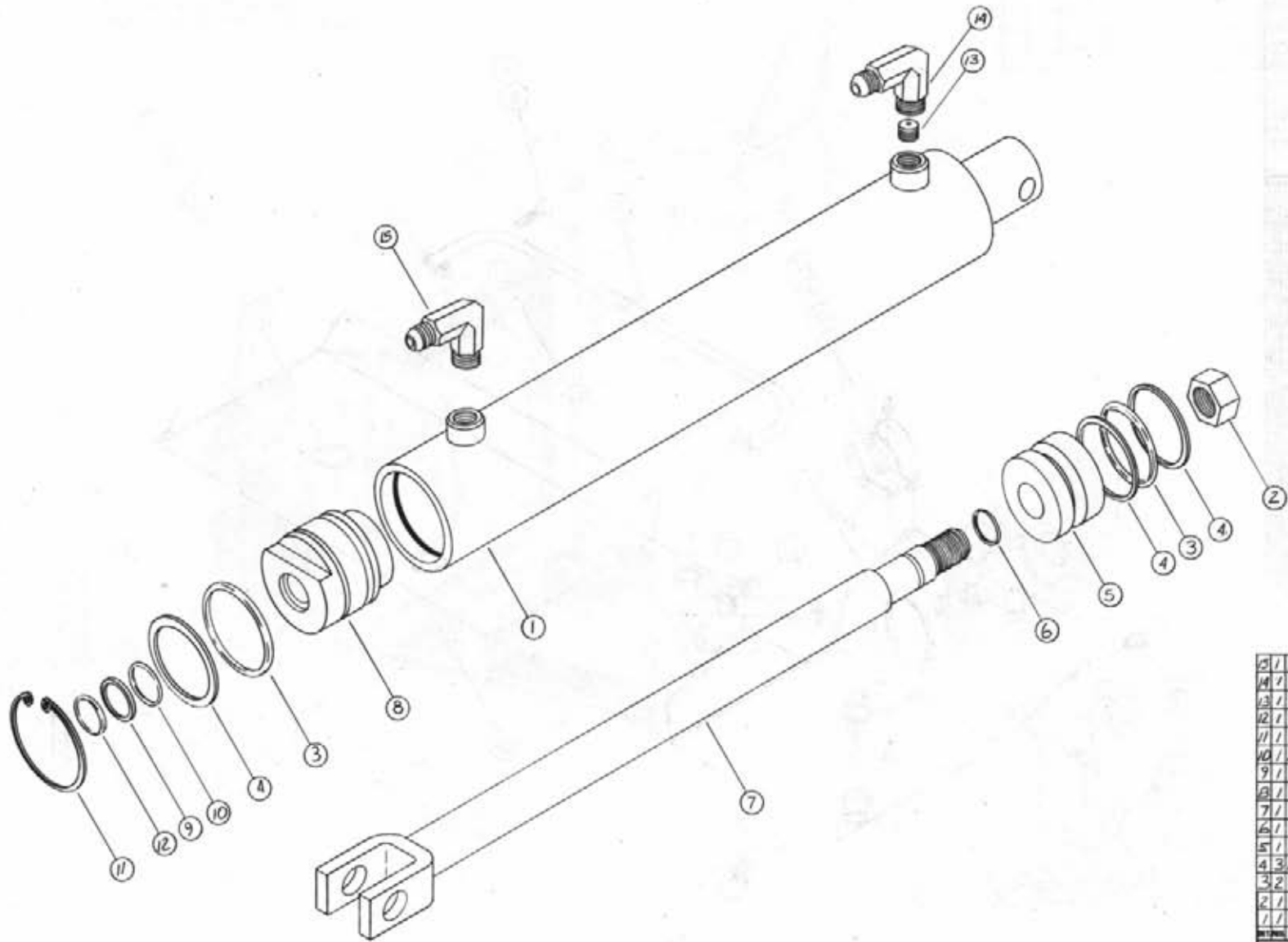
REMOVE ALL SHARP CORNERS & BURRS

TOLERANCES UNLESS OTHERWISE SPECIFIED

FRACTION	DECIMAL	ANGLES

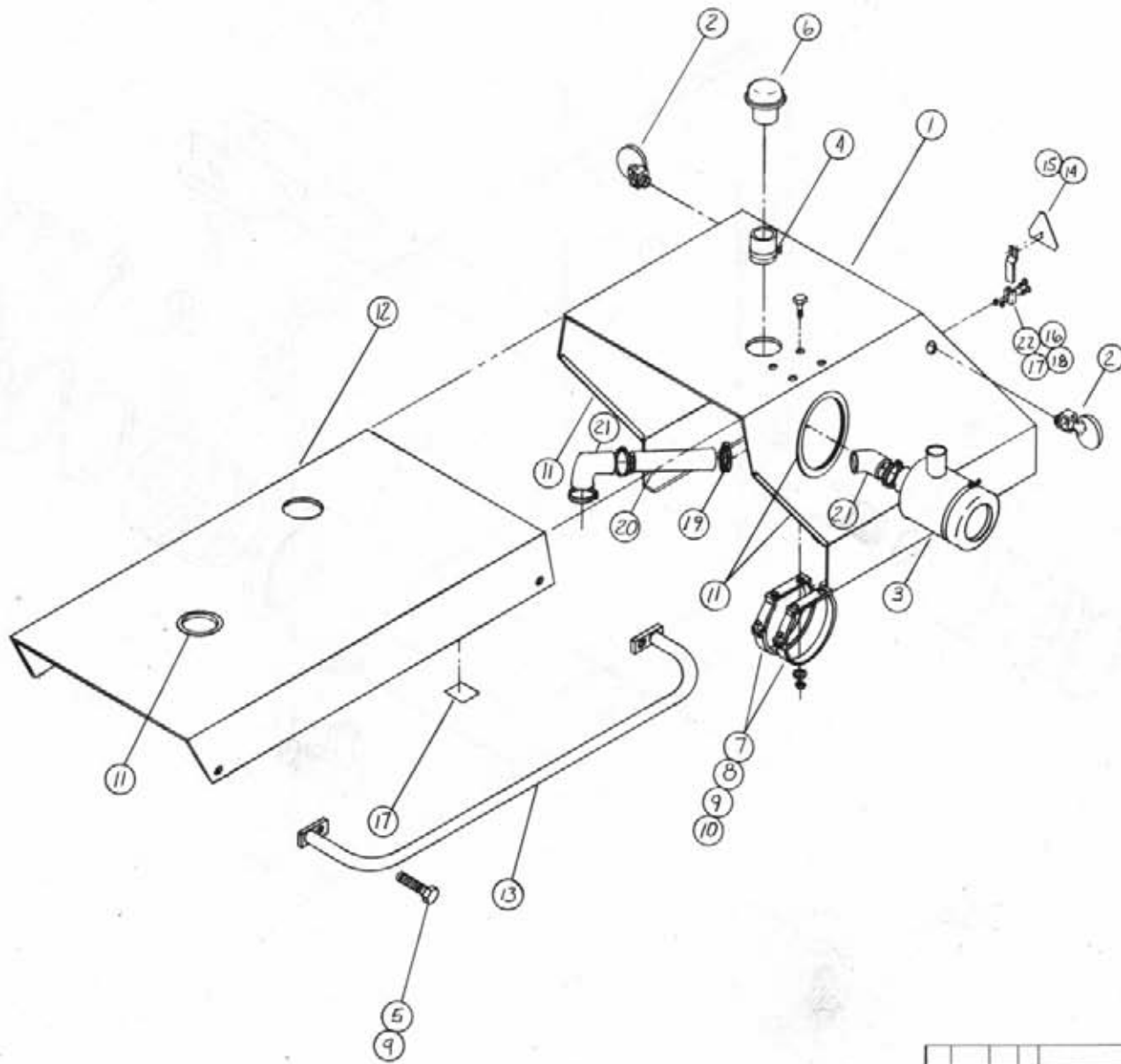
DESCRIPTION: CYLINDER ASST. BOOM LIFT
DRAWN BY: L. Gerwin
CHECKED BY:
DATE: 9-7-78
SCALE: None

NO.	DATE	E.C.	BY	REVISION



5	1 611122	1/4 IN. 90° ELBOW
14	1 440338	RESTRICTOR ELBOW
13	1 618366	RESTRICTOR O-RING
12	1 629003	ROD WIPER
11	1 629505	SNAP RING
10	1 870214	O-RING
9	1 870214	BACK-UP RING
8	1 620082	GLAND
7	1 620093	SHAFT WELDNT
6	1 870113	O-RING
5	1 620081	PISTON
4	3 870326	BACK-UP WAFER
3	2 870326	O-RING
2	1 472297	1/4 IN. LOCK NUT
1	1 620053	TUBE WELDNT
NO.	REV.	DESCRIPTION

HAGIE		
HAGIE MANUFACTURING COMPANY CLARION, IOWA 50525		
REMOVE ALL SHARP EDGES & BURRS		
TOLERANCES UNLESS OTHERWISE SPECIFIED		
FRACTION	DECIMALS	ANGLES
DESCRIPTION	SCALE	
LEVEL 1 FOLD CYLINDER ASSY	1/8" = 1"	
DRAWN BY	CHECKED BY	APPROVED BY
L. GERMAN		
DATE	DRAWING NUMBER	
9-19-78		
NO. DATE E.C. BY	REVISION	SHEET OF



22	1	812251	MIG SOCKET
21	2	314534	5" 30" FLAP W/ER
20	1	714532	AIR SCREEN FITTING
19	4	520056	WHEEL MOUNT CLAMP
18	2	901064	3/16" 3/4" CARB. BOLT
17	2	914002	3/16" LOCK NUT
16	2	920001	3/16" BAR FITTING W/ER
15	1	472250	S.M.V. SPADE
14	1	472249	S.M.V. SIGNAL
13	1	659378	R. END HOOD HINGE PIN
12	1	659214	FUEL HOOD LOCK
11	1	173016	JIFFY TIE 1/4"
10	4	920000	3/8" MC FLUTTER W/ER
9	6	914000	3/8" LOCK NUT
8	4	900004	1/2" 1/4" BOLT
7	2	314536	AIR CLEANER BAND
6	1	314529	REFOOTER CAP
5	2	900002	1/2" 1/4" BOLT
4	1	314531	AIR STACK CUT
3	1	314528	AIR CLEANER
2	2	271506	HANDLE LIGHT
1	1	659231	REAR COVER W/ER

NO. _____

DESCRIPTION _____

HAGIE
HAGIE MANUFACTURING COMPANY
CLARION, IOWA 50525

REMOVE ALL SHARP CORNERS & BURRS

TOLERANCES UNLESS OTHERWISE SPECIFIED

FRACTION	DECIMAL	ANGLE

IDENTIFICATION: **REAR COVER (ENGINE HOOD) ASSY**

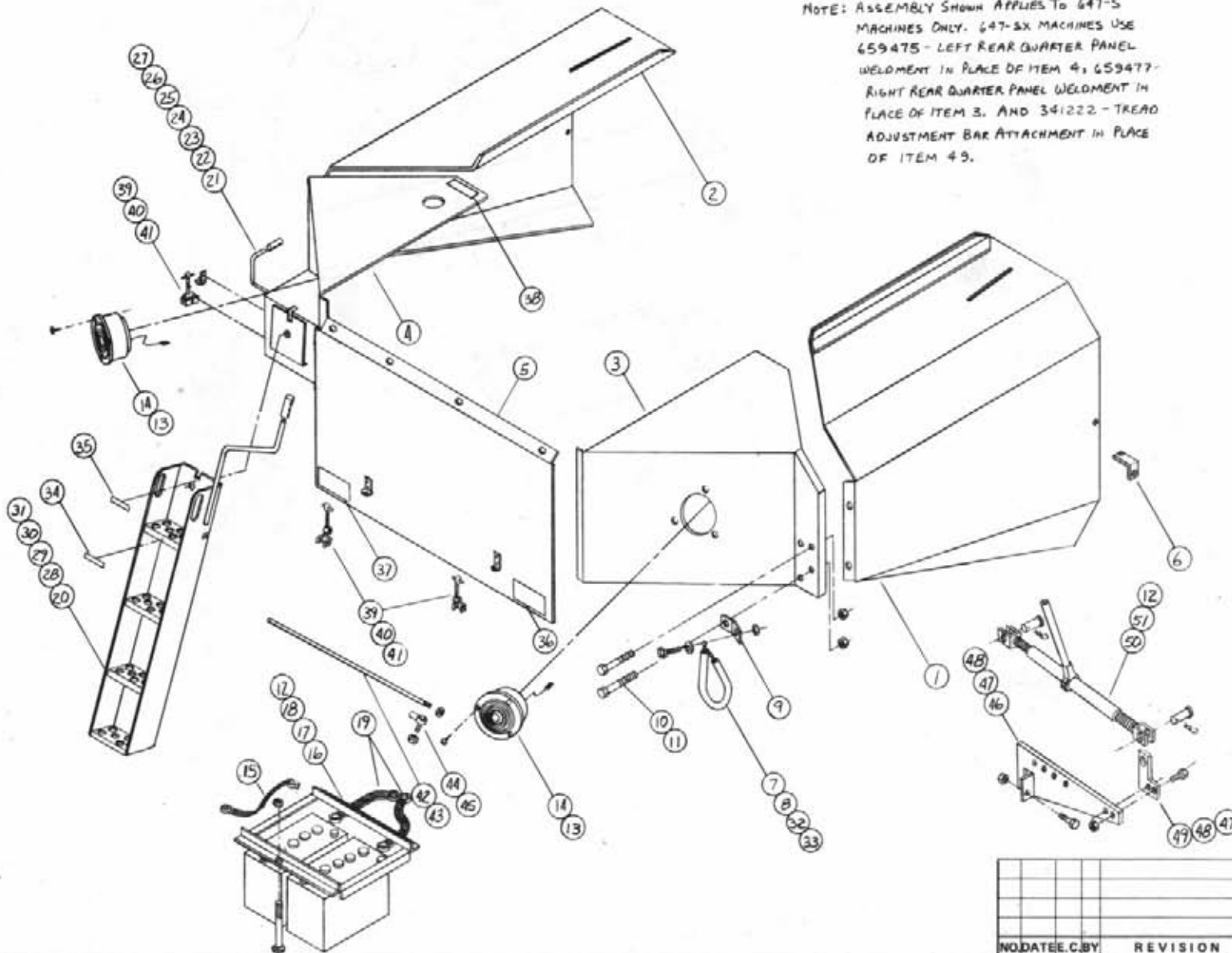
DRAWN BY: **L. GERMAN** SCALE: **None**

CHECKED BY: _____ APPROVED BY: **L. GERMAN**

DATE: **12-4-78** DRAWING NUMBER: _____

NO.	DATE	E.C.B.Y.	REVISION

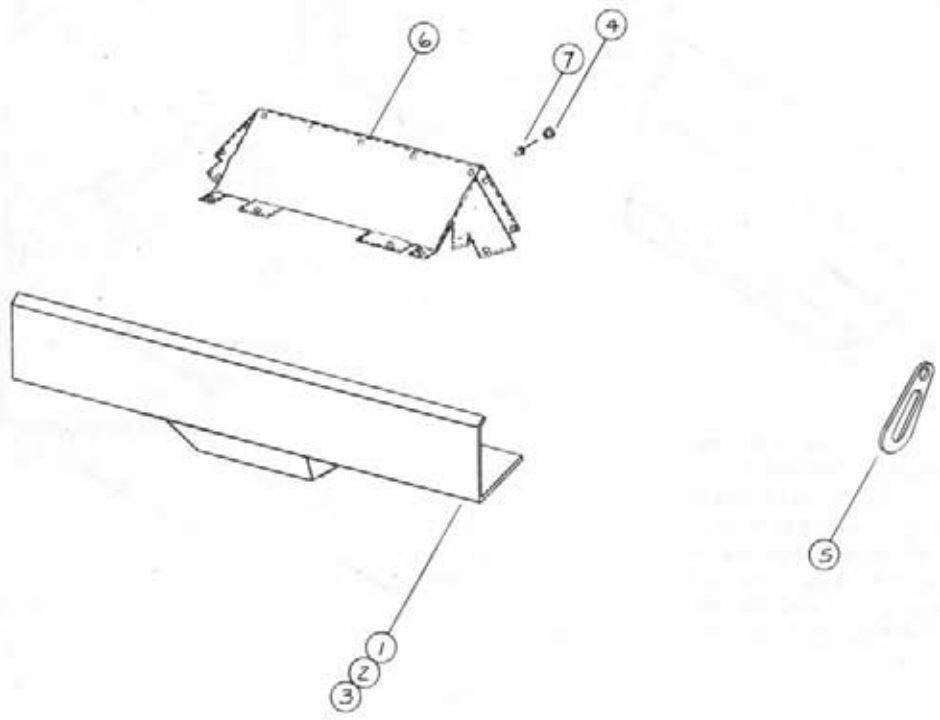
SHEET _____ OF _____



NOTE: ASSEMBLY SHOWN APPLIES TO 647-S MACHINES ONLY. 647-SX MACHINES USE 659475 - LEFT REAR QUARTER PANEL WELDMENT IN PLACE OF ITEM 4. 659477 - RIGHT REAR QUARTER PANEL WELDMENT IN PLACE OF ITEM 3. AND 341222 - TREAD ADJUSTMENT BAR ATTACHMENT IN PLACE OF ITEM 49.

52	412278	FLYER PIN
50	341068	ATCHMENT JOCK
49	341067	TREAD ADJ. BKT.
48	910008	1/2 INCH HEX NUT
47	900267	1/2 INCH #2 BOLT
46	341067	TREAD ADJ. BKT. W/O
45	914001	1/4 INCH LOCK NUT
44	473718	BALL BEARING
43	910001	1/4 INCH HEX NUT
42	341002	HOOD PROP.
41	659247	HOOD TUBE
40	656777	HOOK BKT.
39	656777	HOOK ANCHOR BKT.
38	650954	DECAL - DIESEL
37	650982	DECAL - ELECTRIC
36	650989	DECAL - SHIELDS
35	650816	DECAL - WINDSHIELD
34	650815	DECAL - NO BOMBS
33	920002	3/8 FLAT WASHER
32	914004	1/4 INCH LOCK NUT
31	249002	HANDLE GRIP
30	471005	1/4-28 X 1/2 INCH ZERK
29	914014	1/4 INCH LOCK NUT
28	900474	1/2 INCH #4 BOLT
27	470038	CUTTER PIN #17 1/2
26	470043	CUTTER PIN #16 1/4
25	473728	3/4 #1 ROLL PIN
24	482005	EXTENSION SPRING
23	249003	VINYL HANDLE GRIP
22	341064	LATCH HANDLE
21	341061	LATCH LATCH W/O
20	341054	LATCH W/O
19	290111	STAINLESS SPRING
18	901147	1/4 INCH #8 OVER BOLT
17	291029	BATTERY HOLD-DOWN
16	290013	BATTERY 12V
15	290054	12" WIRE CABLE
14	291040	TAIL LIGHT REST
13	472352	#3 TEK SCREW
12	611016	HAIR PIN
11	914008	1/4 INCH LOCK NUT
10	900264	1/2 INCH #1 1/2 HEX BOLT
9	160671	CABLE GRIP BKT.
8	900129	1/4 INCH #1 HEX BOLT
7	990480	BOTTOM CABLE ANCH
6	659174	DOOR HINGE W/O
5	659177	FRONT ENGINE DOOR
4	659248	LT. QUARTER PANEL
3	659127	RT. QUARTER PANEL
2	659367	LT. ACCESS DOOR W/O
1	687361	RT. ACCESS DOOR W/O

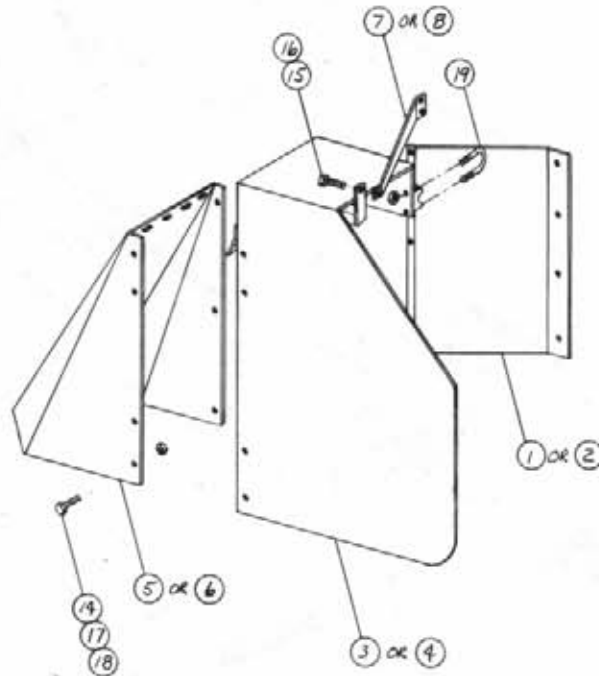
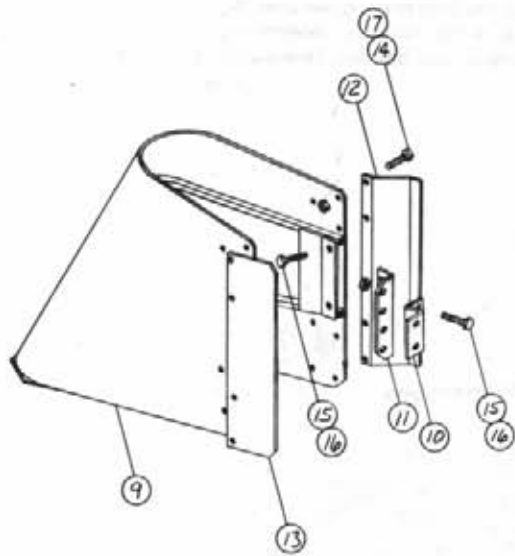
ITEM NO.	DESCRIPTION
HAGIE	
HAGIE MANUFACTURING COMPANY CLARION, IOWA 50535	
REMOVED ALL SHARP CORNERS & BURRS	
TOLERANCES UNLESS OTHERWISE SPECIFIED	
FRACTURE:	DATE: 12-7-78
DESIGNED BY: L. GERMAN	SCALE: NONE
CHECKED BY: L. GERMAN	APPROVED BY: L. GERMAN
NO. DATE, C. BY	REVISION
	1 of 1



715485054	RUE 1/8 x 1/2
61659258	CAR NOSE BODY
52341032	FRONT TIE DOWN
415473930	SNAP-MALE HALF
32900128	1/8" DIA x 3/4" BOLT
22720002	1/8" DIA FLAT WASH
11659356	NOSE COVER L&R

HAGIE
 HAGIE MANUFACTURING COMPANY
 CLARKSON, OHIO 43085
 REMOVED ALL SHARP CORNERS & BURRS
 TOLERANCE UNLESS OTHERWISE SPECIFIED
 FRACTION DECIMALS ANGLES
 DRAWN BY: *L. GERMAN* SCALE: *1/8" = 1"*
 CHECKED BY: _____ APPROVED BY: _____
 DATE: *1-10-79* DRAWING NUMBER: _____
 SHEET OF: _____

NO DATE	C.B.Y.	REVISION



QTY	PART NO.	DESCRIPTION
19	972195	U-BOLT 1/2" DIA TALL
18	920000	1/2" DIA FLAT WASHER
17	914000	3/8" DIA LOCK NUT
16	914008	3/8" DIA LOCK NUT
15	900265	1/2" DIA X 1/4" HEX BOLT
14	900002	1/2" DIA X 3/4" HEX BOLT
13	662132	INSIDE REAR SEAT
12	662131	OUTSIDE REAR SEAT
11	662130	COMPRESSOR AT ANGLE
10	662129	FR COMPRESSOR W/O
9	662122	FR COMPRESSOR W/O
8	662119	LT REAR COMPRESSOR
7	662118	RT REAR COMPRESSOR
6	662109	LT COMPRESSOR W/O
5	662105	RT COMPRESSOR W/O
4	662085	RT COMPRESSOR W/O
3	662076	LT COMPRESSOR W/O
2	662053	RT REAR TOWER COMPRESSOR
1	662051	LT REAR TOWER COMPRESSOR

HAGIE
HAGIE MANUFACTURING COMPANY
 CLARION, IOWA 50502

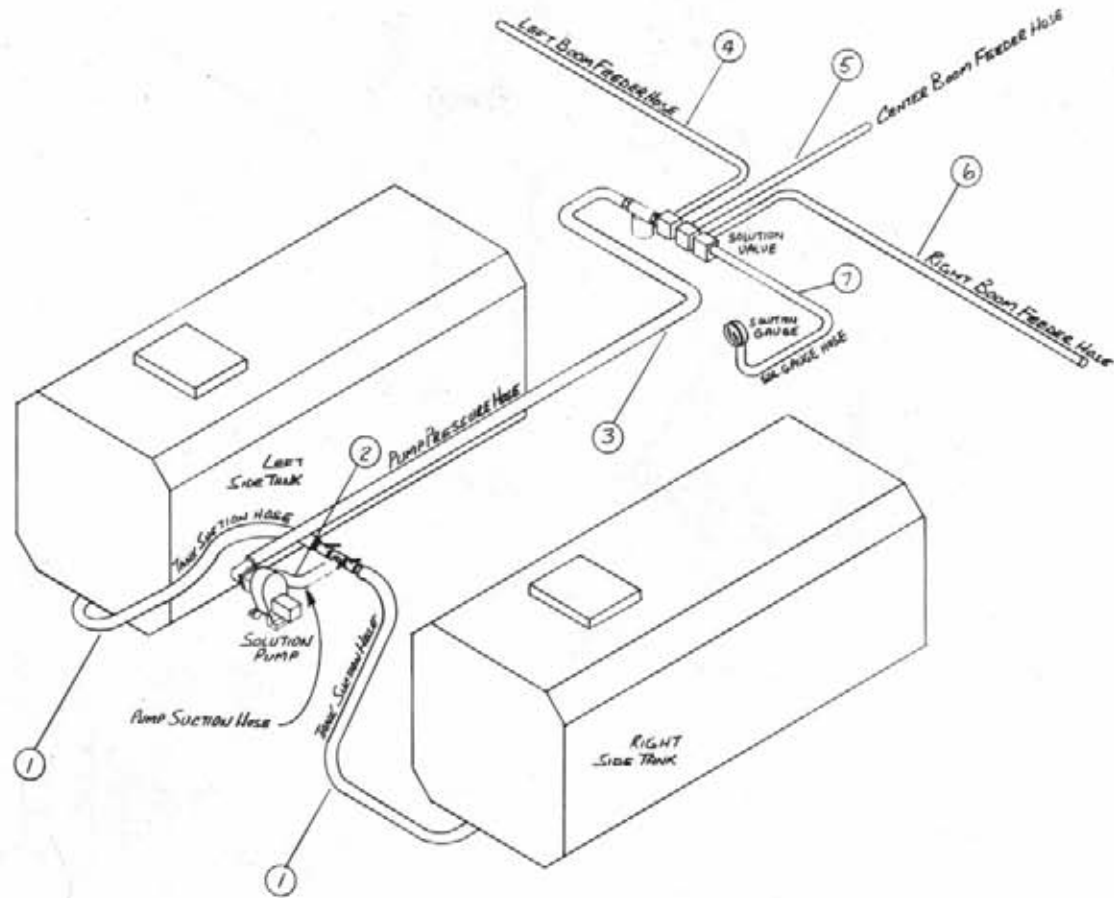
REMOVE ALL SHARP CORNERS & BURRS

TOLERANCES UNLESS OTHERWISE SPECIFIED

FRACTIONAL DECIMALS ANGLES

DESCRIPTION: FRONT & REAR COMPRESSOR ASSEMBLY
 DRAWN BY: T. MARKER
 CHECKED BY: [Signature]
 DATE: 5-21-80
 NO. DATE E.C. BY REVISION

NO.	DATE	E.C. BY	REVISION



NOTE:

1. FOR MACHINES EQUIPPED WITH THE BOTTOM FILL OPTION, THE FOLLOWING ADDITIONAL HOSE IS REQUIRED BETWEEN THE SOLUTION TEE ASSEMBLY AND THE BOTTOM FILL CONNECTOR: 81N-601189 - HOSE - 2" X 21"
2. ASSEMBLY SHOWN APPLIES TO 647-S MACHINES ONLY. 647-SX MACHINES USE 601240 - HOSE - 1 1/2" X 84" IN PLACE OF ITEM 1.

7	1	601185	HOSE - 1/2" X 144"
6	1	601177	HOSE - 3/4" X 242"
5	1	601242	HOSE - 3/4" X 90"
4	1	601241	HOSE - 3/4" X 348"
3	1	601213	HOSE - 1" X 318"
2	1	601217	HOSE - 1 1/2" X 24"
1	2	601230	HOSE - 1 1/2" X 68"
TOTAL		By	DESCRIPTION

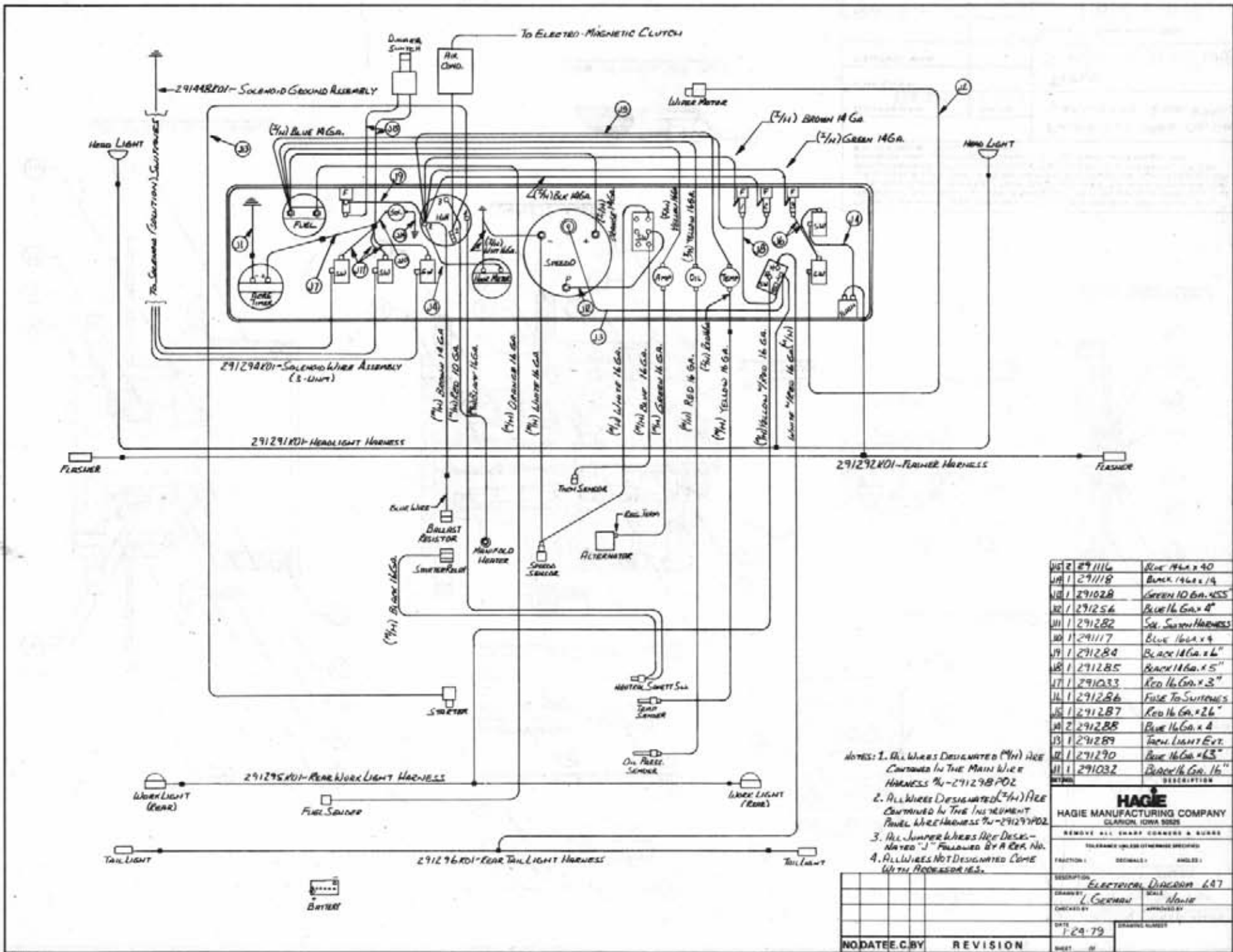
HAGIE
 HAGIE MANUFACTURING COMPANY
 CLARION, IOWA 50525

REMOVE ALL SHARP CORNERS & BURRS
 TOLERANCES UNLESS OTHERWISE SPECIFIED

FRACTION: DECIMALS: ANGLES:
 DESCRIPTION: SOLUTION SYSTEM - STANDARD
 DRAWN BY: L. GERMAN SCALE: NONE
 CHECKED BY: APPROVED: L. GERMAN

DATE: 1-25-79 DRAWING NUMBER: SHEET: OF:

NO.	DATE	E.C.	BY	REVISION



- NOTES: 1. ALL WIRES DESIGNATED (7/11) ARE CONTAINED IN THE MAIN WIRE HARNESS #291298P02
 2. ALL WIRES DESIGNATED (7/11) ARE CONTAINED IN THE INSTRUMENT PANEL WIRE HARNESS #291297P02
 3. ALL JUMPER WIRES ARE DESIGNATED "J" FOLLOWED BY A REF. NO.
 4. ALL WIRES NOT DESIGNATED COME WITH APPROVED TAGS.

QTY	DESCRIPTION	SIZE
2	291116	BLUE 16 GA. x 40"
1	291118	BLACK 14 GA. x 14"
1	291028	GREEN 10 GA. x 55"
1	291256	BLUE 16 GA. x 4"
1	291282	SOLO. SW. HARNESS
1	291117	BLUE 16 GA. x 4"
1	291284	BLACK 16 GA. x 6"
1	291285	BLACK 16 GA. x 5"
1	291033	RED 16 GA. x 3"
1	291286	FUSE TO SWITCHES
1	291287	RED 16 GA. x 26"
2	291288	BLUE 16 GA. x 4"
1	291289	HEAD LIGHT EXT.
1	291290	BLUE 16 GA. x 63"
1	291032	BLACK 16 GA. 16"

HAGIE
 HAGIE MANUFACTURING COMPANY
 CLARKSON, IOWA 50505

REMOVE ALL SHARD CORNERS & BURRS

TOLERANCES UNLESS OTHERWISE SPECIFIED

FRACTION	DECIMALS	ANGLES

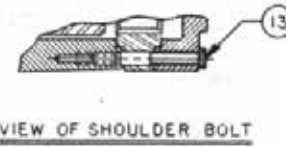
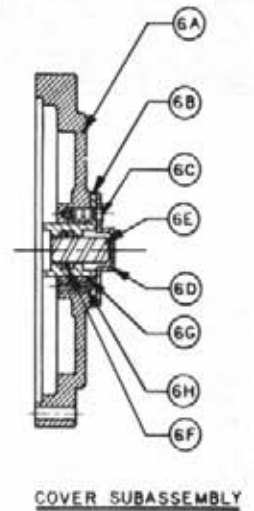
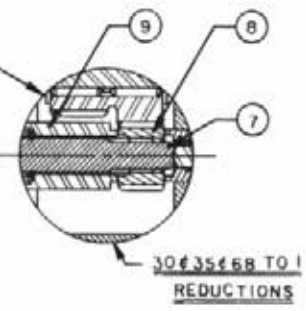
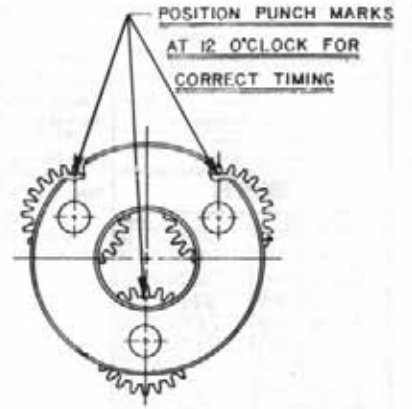
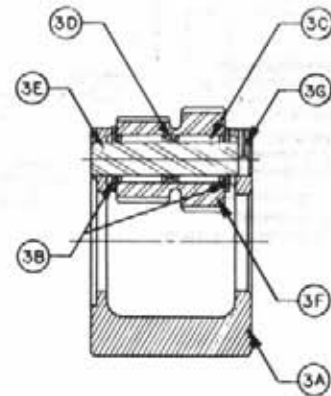
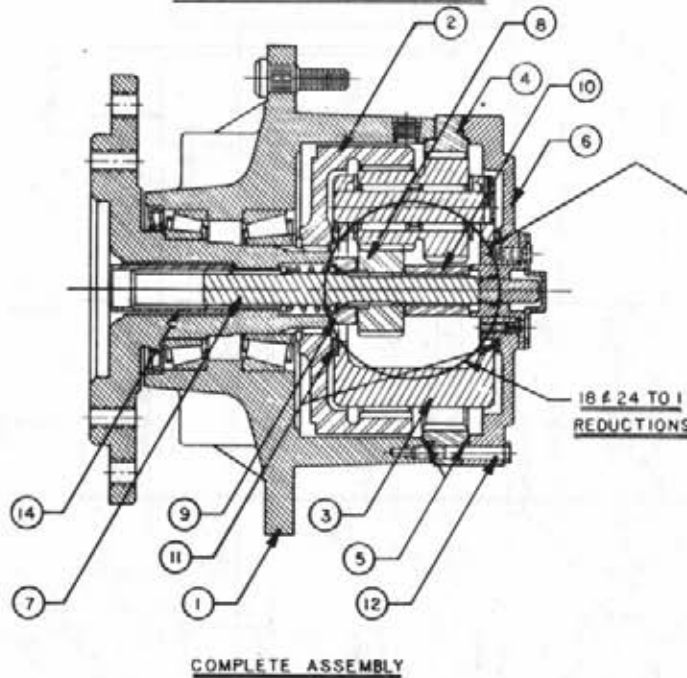
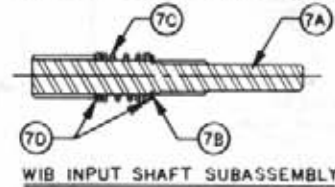
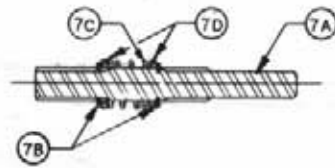
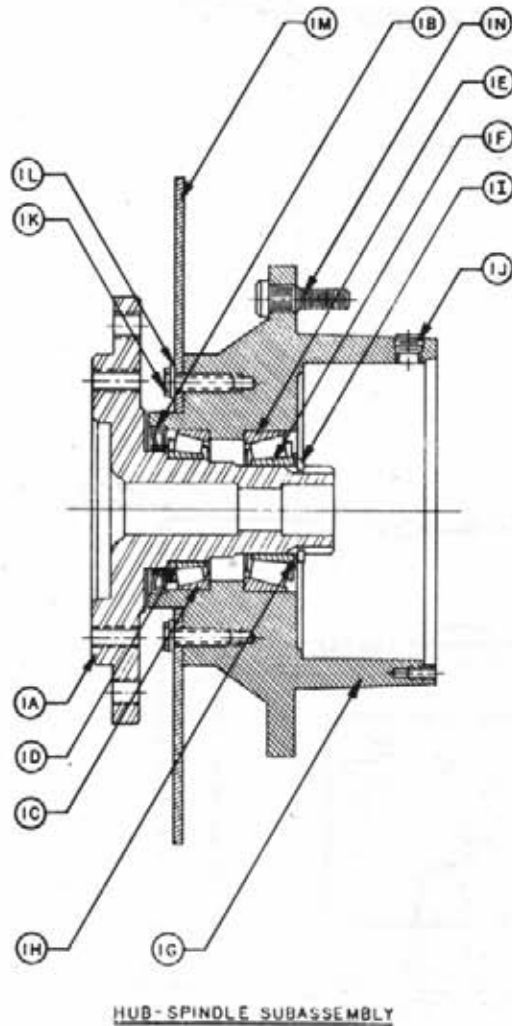
DESCRIPTION: ELECTRICAL DIAGRAM 647

DRAWN BY: L. GERMAN

CHECKED BY:

DATE: 1-29-79

NO. DATE E.C. BY: REVISION

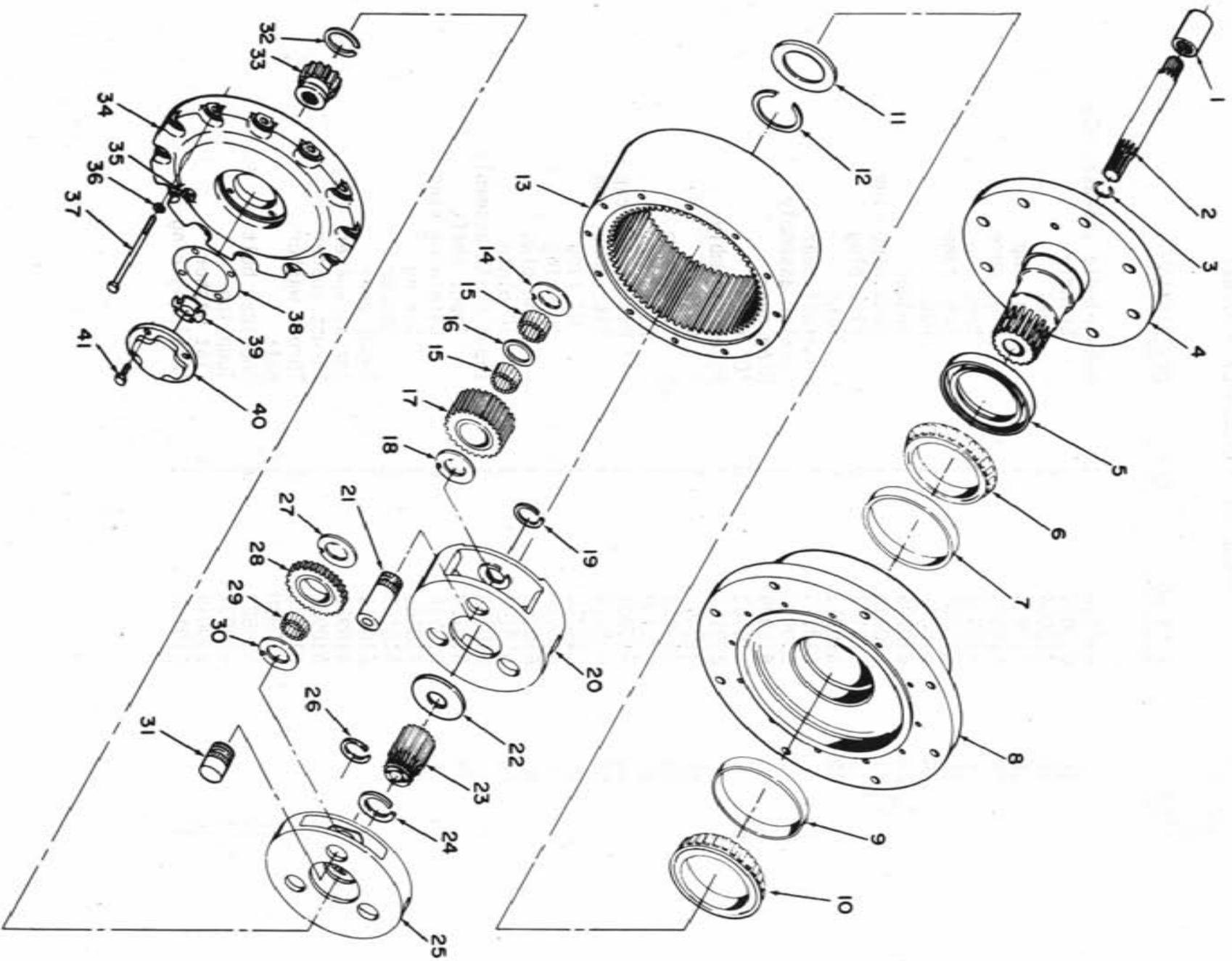


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DRAFTSMAN Beck		DATE 10-8-73	FAIRFIELD MFG. CO., INC. LAFAYETTE, IND. 47505
CHECKER		TITLE SERVICE LITERATURE	
PROJECT ENG.		SCALE:	DRAWING NO. WIA & WIB
RELEASED			

WHEEL DRIVE ASSEMBLY - 437617

<u>ITEM</u>	<u>PART NO.</u>	<u>QTY.</u>	<u>DESCRIPTION</u>
1	610156	1	Hub-spindle sub-assembly
	610052	1	Spindle
1A	610904	1	Seal
1B	610905	1	Brg. cup
1C	610906	1	Brg. cone
1D	610907	1	Brg. cup
1E	610908	1	Brg. cone
1F	610047	1	Hub
1G	610909	1	Spacer
1H	610910	1	Retaining ring
1I	610147	2	pipe plug
1J	610911	9	Stud
1N	610148	1	Internal gear
2	610912	1	Carrier assembly
3	610929	1	Ring gear
4	610903	2	'O' ring
5	610157	1	Cover assembly
6	610149	1	Cover
	610914	1	Cover cap
6A	610150	4	Bolt
6B	610901	1	Disconnect cap
6C	610915	1	Disconnect rod
6D	610916	1	'O' ring
6E	610917	1	'O' ring
6F	610151	1	pipe plug
6G	610152	1	ID plate
6H	610158	1	Input shaft assembly
6J	610159	1	Input shaft
7	610936	2	Retaining ring
	610145	1	Spring
	610153	2	Spacer
8	610919	1	Input gear
9	610920	1	Thrust spacer
10	610921	1	Thrust spacer
11	610922	2	Thrust washer
12	610930	12	Bolt
13	610923	4	Shoulder bolt
14	610931	1	Coupling
16	610049	1	Flat washer
17	610160	1	Retaining ring



Power Wheel Assembly - 611030

INDEX NO.	PART NUMBER	PART NAME	QUANTITY
1	610165	Internal Coupling	1
2	610166	Input Shaft Assembly	1
3	610167	Retaining Ring	1
4	610168	Spindle	1
5	129012	Oil Seal	1
6	610169	Bearing Cone	1
7	610170	Bearing Cup	1
8	610171	Hub	1
9	610172	Bearing Cup	1
10	610173	Bearing Cone	1
11	610234	Thrust Washer	1
12	610174	Retaining Ring	1
	610175	Retaining Ring	1
	610176	Retaining Ring	1
13	610202	Ring Gear	1
14	610203	Thrust Washer	3
15	610996	Needle Roller	3
16	610204	Separator	96
17	610997	Planet Gear	3
18	610203	Thrust Washer	3
19	610235	Retaining Ring	3
20	610237	Secondary Carrier	3
21	610238	Pinion Shaft	1
22	610239	Thrust Washer	3
23	610210	Large Sun Gear	1
24	610211	Retaining Ring	1
25	610241	Primary Carrier	1
26	610235	Retaining Ring	3
27	610203	Thrust Washer	3
28	610215	Planet Gear	3
29	610216	Needle Roller	48
30	610203	Thrust Washer	3
31	610242	Pinion Shaft	3
32	610243	Retaining Ring	3
33	611003	Small Sun Gear	1
34	610218	Large Cover	1
35	610244	Drain & Filler Plug	1
36	610206	3/8 Lock Washer	12
37	610220	3/8-16x5 1/2 Hex Head Bolt	12
38	610221	Gasket	1
39	610995	Thrust Washer	1
40	610935	Small Cover	1
41	610245	5/16-18x3/4 Hex Head Bolt	4
	610240	Primary Carrier Assembly	
	610236	Secondary Carrier Assembly	

NOTICE

The following three pages contain decals for the 1980 647-S and 647-SX.

These decals can be obtained at no cost and should be used whenever your machine is repainted or when the decals become worn, weathered, or faded.

Special attention should be paid to decals involving personal safety. They have been attached for your protection.

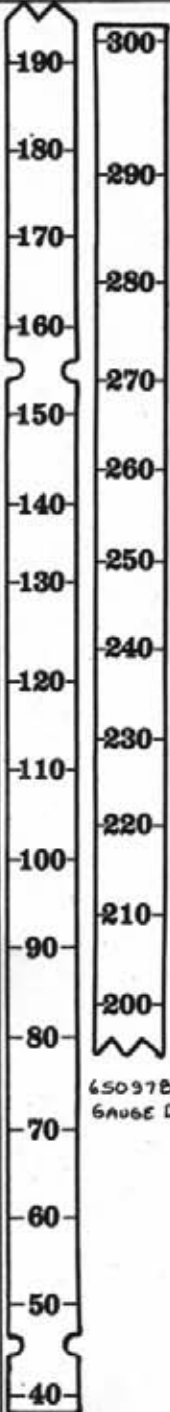
KEEP THEM IN PLACE.

Contact: Hagie Manufacturing Co.
Box 273, Clarion, Iowa 50525

647-S & 647-SX DECALS

P/N	Qty.	Description	Location
650814	1	Parking Brake Decal	Near Parking Brake lever
650815	3	No Passengers Decal	On right & left sides of roof, above doors, on ladder
650816	1	Match Step Decal	On ladder
650818	1	Engine Fuel Decal	Near fuel tank filler neck
650829	2	Chemicals Decal	On solution tank lids
650846	2	6" Hagie Decal	On sides of solution tanks
650855	2	6" 647-S Decal	On sides of top engine cover
650858	1	Do Not Use Ether Decal	On sheet metal near air cleaner
650954	1	Diesel Decal	On fuel tank filler neck
650978	2	Sight Gauge Decal	On sight gauge mounts
650982	1	Electrical System Decal	On rear engine access panel
650985	4	Wheel Bolt Torque Decal	On each wheel rim
650989	3	Shields Decal	On right & left side of top engine cover, on rear access panel
650822	1	Solution Pump Seals Decal	Near solution control levers
650873	1	Indicator Light & Switch Decal	On instrument panel
650939	1	Speedometer & Tach Decal	On instrument panel
650967	1	Throttle Decal	Near throttle lever
650968	1	Hydrostatic Drive Decal	Near hydrostatic control lever
650969	1	Spray Pressure Decal	Near solution control lever
650970	1	Agitator Decal	Near agitator control lever
650971	1	Four Wheel Drive Decal	Near four wheel drive control lever
650972	1	Boom Position Decal	On 2-3 spool valve mount
650973	1	Boom Spray Decal	On instrument panel
650974	1	Caution Combination Decal	On instrument panel
650977	1	Flasher Decal	On instrument panel
650831	1	Emergency Stop Decal	On lower left corner of front windshield
650893	1	Diesel Start Decal	On instrument panel
650935	1	Speedometer Decal	On speedometer gauge
650863	1	Acre Timer Decal	On instrument panel
650862	2	"X" Decal	Behind 647-S Decal

Decal Package 650864 includes all decals listed above.



650935- SPEEDOMETER DECAL

CAUTION

DO NOT USE ETHER AS A STARTING FLUID WITH THIS ENGINE. IT IS EQUIPPED WITH A GLOW PLUG IGNITER. USE OF ETHER MAY RESULT IN INJURY OR DEATH. SEE OPERATOR'S MANUAL FOR STARTING INSTRUCTIONS.

650858- No ETHER DECAL

Keep wheel bolts tight. See owner's manual for torque specifications.

650985- WHEEL Bolt TORQUE DECAL

NOTICE

TO PREVENT SEAL DAMAGE INSIDE THE SOLUTION PUMP

- DO NOT ALLOW SOLUTION PUMP TO RUN DRY. WHEN YOU RUN OUT OF SOLUTION, SHUT OFF THE SOLUTION PUMP.
- DO NOT OPERATE SOLUTION PUMP FOR MORE THAN FIVE MINUTES AT A TIME WITHOUT PUMPING SOLUTION THROUGH.
- ALWAYS DRAIN THE SOLUTION PUMP IF STORING THE HI-TRACTOR FOR AN EXTENDED PERIOD OF TIME.
- BE SURE TO PRIME THE SOLUTION PUMP WHEN REMOVING THE HI-TRACTOR FROM STORAGE.

650822- SOLUTION PUMP SEALS DECAL

650978- Sight GAUGE DECAL

DIESEL STARTING INSTRUCTIONS
 TURN SWITCH TO POSITION R (RUN).
 RELEASE STOP CONTROL.
 OPEN THROTTLE FULLY.
WARM WEATHER OR ENGINE WARM
 TURN SWITCH TO HS (HEAT & START).
COLD WEATHER
 TURN SWITCH TO H (HEAT) FOR 15-20 SECONDS. TURN SWITCH TO HS. IF ENGINE DOESN'T START IN 20 SEC. RETURN TO H FOR 10 SEC. REPEAT HS. ENGINE OIL MUST CONFORM TO MIL-L-2104B 10 W 30 SEE MANUAL.

650893- DIESEL START DECAL

CAUTION

Shields are for your protection. Keep them in place.

650989- SHIELDS DECAL

CAUTION

ENGINE FUEL CAN BE DANGEROUS

- TURN OFF ENGINE BEFORE REFUELING.
- DO NOT SMOKE WHILE REFUELING.
- CLEAN OFF ANY SPILLED FUEL AFTER REFUELING.

CARELESSNESS WITH FUEL CAN KILL

650818- CAUTION, ENGINE FUEL DECAL

CAUTION

DON'T RISK INJURY BY SLIPPING OR FALLING

BE CAREFUL

WATCH YOUR STEP

650816- WATCH STEP DECAL

WARNING

CHEMICALS ARE DANGEROUS.

READ THE CHEMICAL MANUFACTURER'S LABELS TO AVOID INJURY OR DAMAGE.

650829- WARNING, CHEMICALS DECAL

CAUTION

READ OPERATOR'S MANUAL. BE ALERT. LEARN TO OPERATE THIS MACHINE SAFELY. OBSERVE ALL SAFETY PRACTICES. MACHINES CAN BE HAZARDOUS IN THE HANDS OF AN UNFAMILIAR, UNTRAINED, OR COMPLACENT OPERATOR. DON'T RISK INJURY OR DEATH.

1. Keep all shields in place.
2. Shut off engine before servicing.
3. When mechanism becomes clogged, shut off engine before cleaning.
4. Keep hands, feet, and clothing away from all moving parts.
5. NO RIDERS.

650974- CAUTION COMBINATION DECAL

WARNING

THIS MACHINE WAS NOT DESIGNED TO CARRY PASSENGERS.

FAILURE TO KEEP PASSENGERS OFF MAY RESULT IN THEIR INJURY OR DEATH.

650815- No PASSENGERS DECAL

CAUTION

Electrical system is 12 volt negative ground. When using booster with jumper cables, precautions must be taken to prevent personal injury or damage to electrical parts.

1. Attach one end of jumper cable to positive terminal of booster battery and other end to positive terminal of vehicle battery connected to starter motor.
2. Attach one end of second cable to negative terminal of booster battery and other end to vehicle frame away from battery. Do not attach to cab or cab support.
3. To remove cables, reverse above sequence exactly to avoid sparks. See operator's manual for additional information.

650982- ELECTRICAL SYSTEM DECAL

PARKING BRAKE

650814- PARK BRAKE DECAL

CAUTION

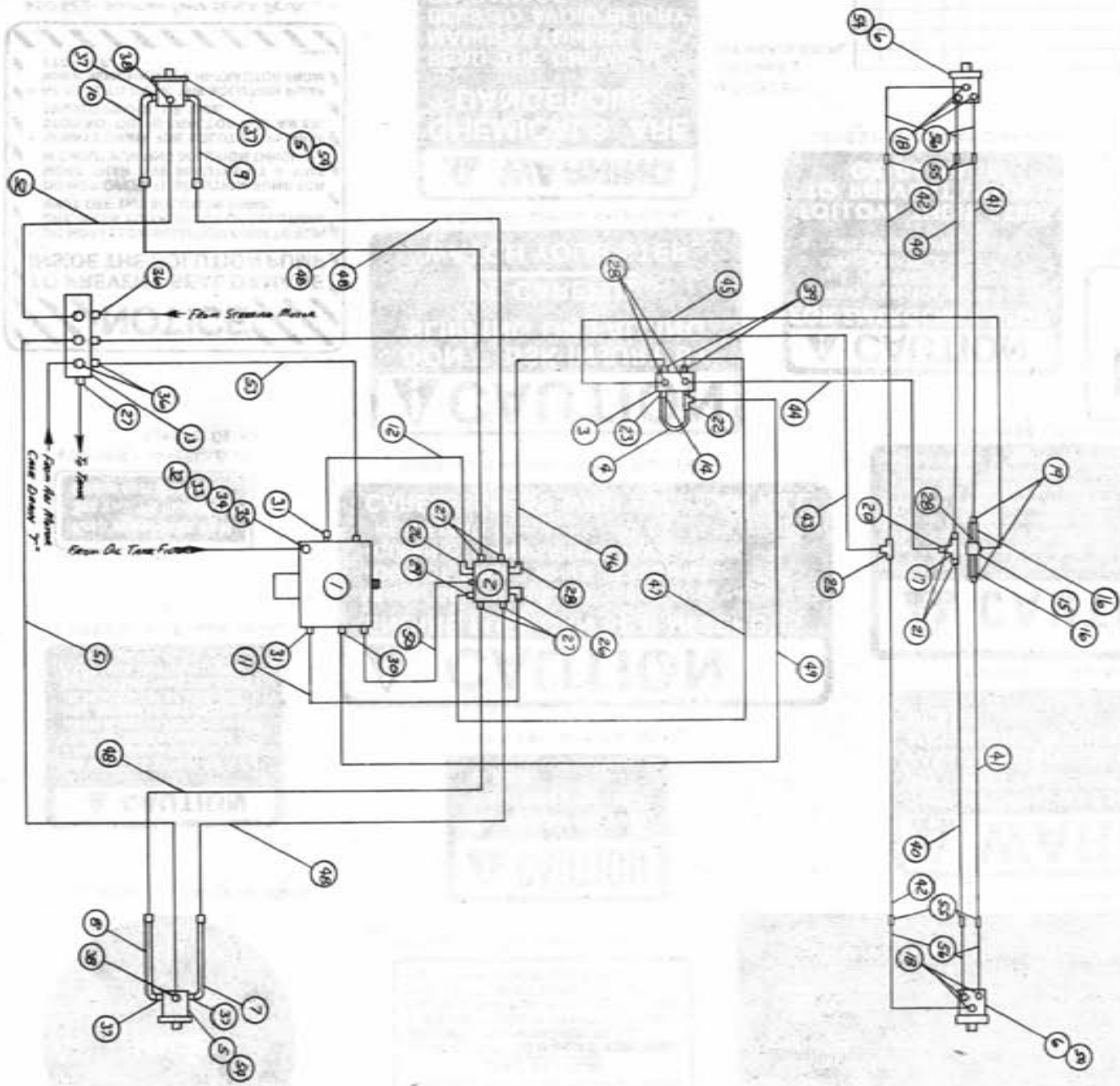
FOR EMERGENCY STOP:

1. MOVE CONTROL LEVER TO THE N (S) (NEUTRAL STOP) POSITION.
2. APPLY BRAKES
3. TURN ENGINE OFF.

FOLLOW THESE STEPS TO PREVENT INJURY OR DAMAGE.

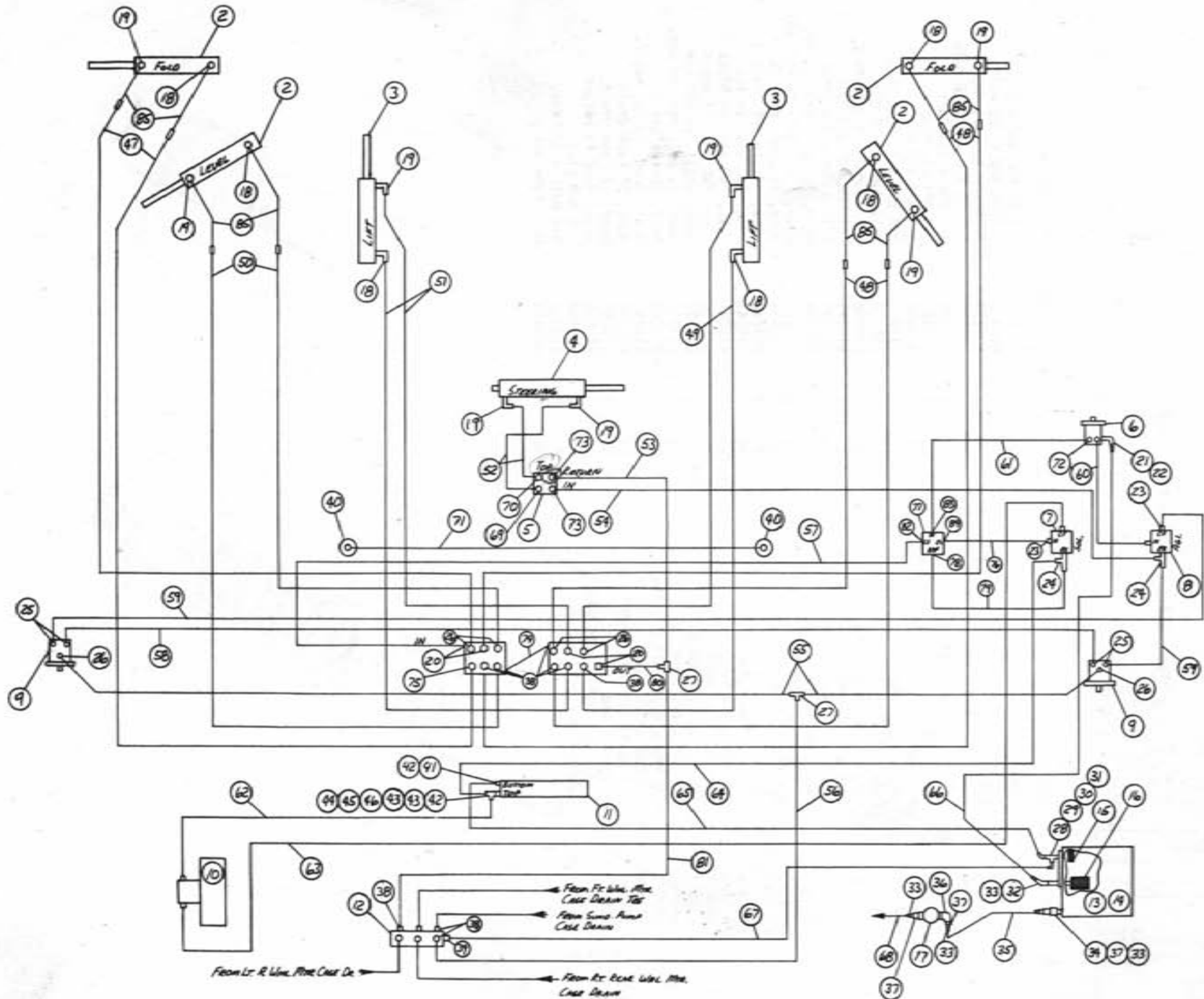
650831- EMERGENCY STOP DECAL

ITEM NO.	DESCRIPTION
HAGIE	
HAGIE MANUFACTURING COMPANY CLARION, IOWA 50505	
REMOVE ALL SHARP CORNERS & BURRS	
TOLERANCE UNLESS OTHERWISE SPECIFIED	
FRACTION	DECIMALS
DESCRIPTION	SCALE
DRAWN BY	CHECKED BY
DATE	APPROVED BY
NO. DATE, E.C. BY	REVISION
SHEET	OF



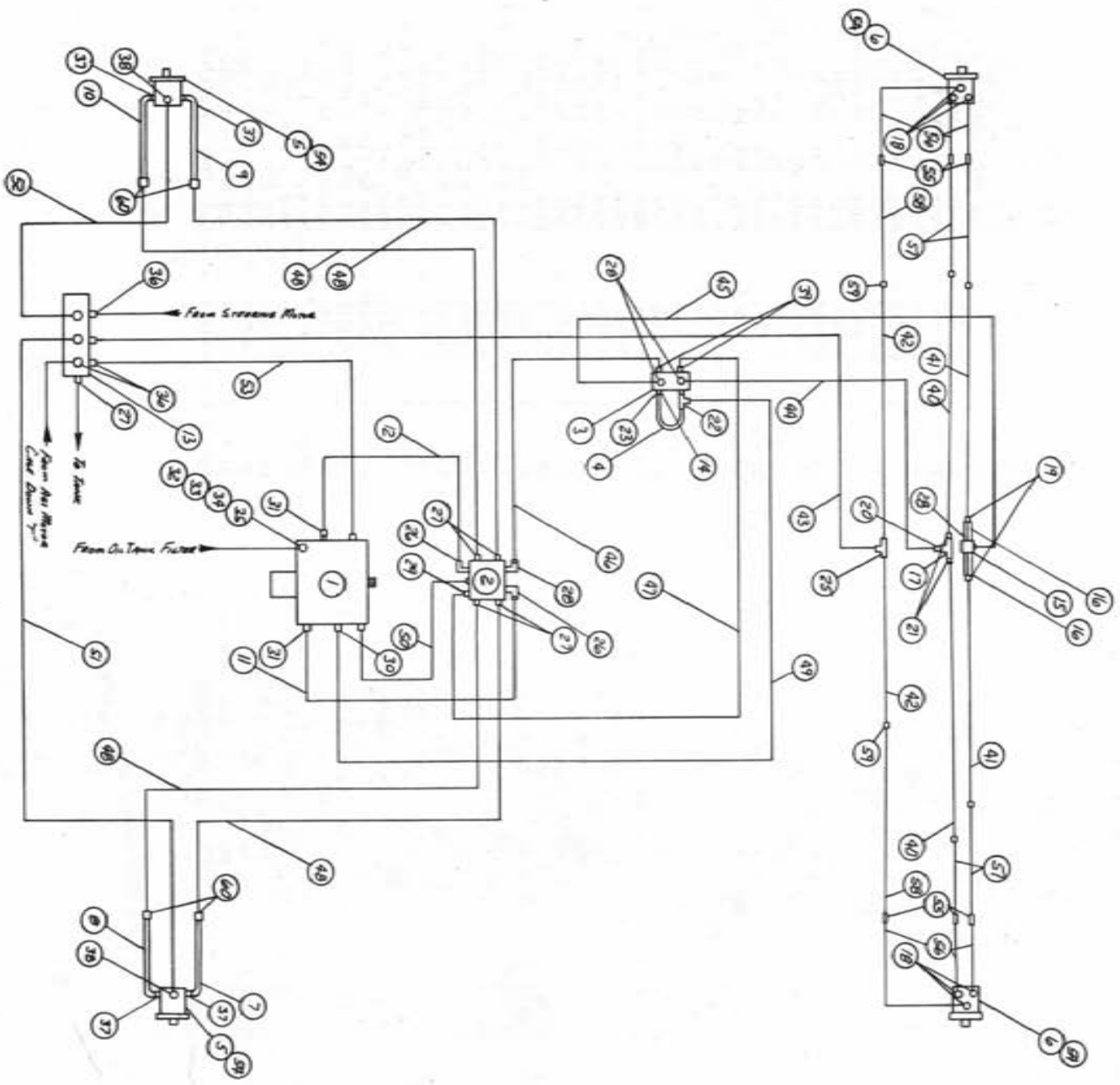
1980 - 647-S CLOSED LOOP SCHEMATIC

Ref.	Req.	Part No.	Description	Ref.	Req.	Part No.	Description
1	1	611054	Sundstrand Pump	28	4	618100	1 1/16 MOR 90° 1/2 NPSM
2	1	615003	Lg. hyd. manlf.	29	1	618309	1 1/16 MOR x 7/8 MJIC
3	1	606003	FMD valve	30	1	618187	7/16 MOR 90° 1/4 NPSM
4	1	614198	"u" tube	31	2	618186	1 5/16 MOR x 1 5/16 MJIC
5	2	610030	Whl. mtr. thru shaft	32	1	618131	7/8 MOR x 3/4 FNPT
6	2	610029	Wheel motor	33	1	504702	3/4 NPT cl'd nipple
7	1	615226	Tube ass'y, long rt.	34	1	504501	3/4 NPT 90° el.
8	1	615237	Tube ass'y, short pt.	35	1	712251	3/4 NPT x 1" hose barb
9	1	615227	Tube ass'y, long lt.	36	3	618126	9/16 MOR x 9/16 MJIC
10	1	615236	Tube ass'y, short lt.	37	4	618308	1 5/16 MOR x 1 1/16 MJIC
11	1	615211	Tube ass'y, manlf., rt.	38	2	618241	3/4 MOR 90° 3/4 MJIC
12	1	615213	Tube ass'y, manlf., lt.	39	2	618095	1 1/16 MOR x 1/2 NPSM
13	1	615266	Return manifold	40	2	615443	Hose, Ft. whl. mtr. to tee
14	2	618132	1 1/16 MOR x 7/8 FOR	41	2	615445	Hose, ft. cont. to whl. mtr.
15	1	615013	FMD manlf. block	42	2	615444	Hose, ft. whl. mtr. CD
16	2	610028	Cessna flo. cont.	43	1	615243	Hose, "u" to ret. case dr.
17	1	615276	Ht press. tee w/alm't	44	1	615241	Hose, FMD vlv. to tee
18	4	611125	3/4 MOR x 3/4 MJIC	45	1	615241	Hose, FMD vlv. to block
19	2	619011	7/8 MOR x 1/2 NPSM	46	1	615240	Hose, FMD vlv. to manlf.
20	1	618062	1/2 NPT 90° 1/2 NPSM	47	1	615239	Hose, manlf. to FMD vlv.
21	2	618197	1/2 NPT x 1/2 NPSM	48	4	611141	Hose, R. whl. mtr. to man.
22	1	618287	7/8 MOR x 9/16 MJIC Br. tee	49	1	615244	Hose, Charge press.
23	1	611126	7/8 MOR x 7/8 MJIC	50	1	615247	Hose, Sund. to 1g. manlf.
24	2	618100	1 1/16 MOR 90° 1/2 NPSM	51	1	615246	Hose, RR case drain
25	1	618019	9/16 MJIC tee	52	1	615245	Hose, LR case drain
26	2	618178	1 5/16 MOR 90° 1 5/16 MJIC	53	1	611159	Hose, Pump to return
27	5	611127	1 1/16 MOR x 1 1/16 MJIC	54	4	611159	3/4 MOR Plug
				55	6	618314	3/4 MJIC x 3/4 MJIC
				56	6	615438	Hyd. tube ass'y

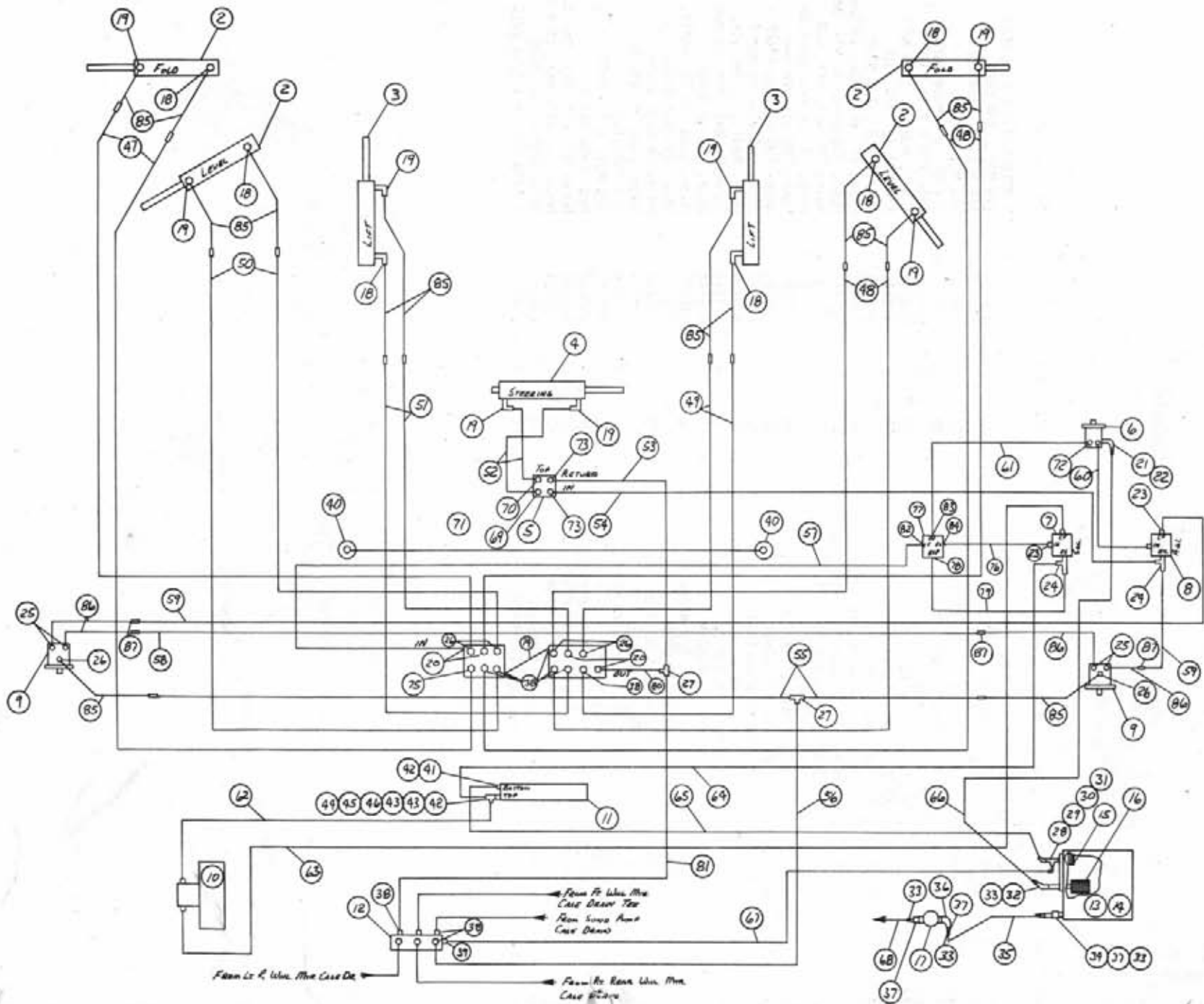


Ref.	Req.	Part No.	Description	Ref.	Req.	Part No.	Description
1	2	606585	3-Spool valve	44	1	618197	1/2 NPT x 1/2 NPSM
2	4	620052	Lev. & fold cyl.	45	1	504702	3/4 NPT cl. nipple
3	2	620499	Lift cylinder	46	1	504511	3/4 NPT side out. el.
4	1	620249	Strg. cylinder	47	2	611212	Hose, lt. hand fold
5	1	749150	Strg. motor	48	4	611202	Hose, RH lev. & fold
6	1	610141	Auxiliary pump	49	2	611204	Hose, Rt. hand lift
7	1	606818	Solution VFC	50	2	611210	Hose, Lt. hand level
8	1	606827	Agitator VFC	51	2	611208	Hose, Lt. hand lift
9	2	610044	Agitator motor	52	2	615308	Hose, mtr. to cylinder
10	1	690053	Flomax pump	53	1	615341	Hose, mtr. to ret.
11	1	618088	011 cooler	54	1	615342	Hose, Agt. VFC to strg.
12	1	615266	Ret. manlf. wid.	55	2	615442	Hose, Agt. CD. to tee
13	1	760617	011 tank wid.	56	1	615313	Hose, Agt. case "I" to ret.
14	1	760624	Receiver plate wid.	57	1	615343	Hose, Flo. div. to 6-spl.
15	1	605603	011 diffuser	58	1	615440	Hose, Agt. mtr. jump.
16	1	605600	"In tank" filter	59	2	615441	Hose, Agt. VFC to mtr.
17	1	605601	Filter - 10 MIC	60	1	615294	Hose, pump to agt. VFC
18	6	614365	Restrictor ass'y	61	1	615344	Hose, pump to flo. div.
19	6	611122	1/4 NPT 90° 9/16 MJIC	62	1	615305	Hose, O.C. to Flomax
20	4	618424	9/16 MOR 90° 9/16 MJIC	63	1	615252	Hose, Flomax to sol. VFC
21	4	712251	3/4 NPT x 1" hose barb	64	1	615251	Hose, O.C. to sol. VFC
22	1	618195	1 1/16 MOR 90° 3/4 FNPT	65	1	601110	Hose, O.C. to tank
23	2	611128	7/8 MOR 90° 7/8 MJIC	66	1	601117	Hose, tank to Cessna
24	2	618130	7/8 MOR run tee	67	1	615248	Hose, tank to tank
25	4	618241	3/4 MOR 90° 3/4 MJIC	68	1	601116	Hose, Sund. suction
26	6	618119	9/16 MOR 90° 9/16 MJIC	69	1	618048	3/4 MOR x 3/8 NPSM
27	2	618019	9/16 MJIC tee	70	1	618188	3/4 MOR x 3/8 x 45° NPSM
28	1	505101	1" NPT tee	71	1	615283	Hose, leg cyl. jump.
29	1	505200	1" NPT 90° St. el.	72	1	611126	7/8 MOR x 7/8 MJIC
30	1	505110	1" NPT 45° St. el.	73	1	618109	3/4 MOR x 9/16 MJIC
31	1	714331	1" NPT x 3/4 hose barb	74	1	614361	Hose, valve jumper
32	1	506301	1" NPT 45° elbow	75	1	618425	9/16 MOR 45° 9/16 MJIC
33	4	714560	1" NPT x 1" hose barb	76	1	615345	Hose, ext. to In VFC
34	1	506303	1 1/4 NPT 90° elbow	77	1	607509	BGR 52 Flo. cont.
35	1	601115	Hose, tank to filter	78	1	618015	3/8 NPT 90 9/16 MJIC
36	1	506410	1 1/4 NPT 90° St. el.	79	1	615346	Hose, byp. to sol. VFC
37	3	506005	1 1/4 x 1" NPT red. bush.	80	1	615347	Hose, valve to tee
38	10	618126	9/16 MOR x 9/16 MJIC	81	1	615348	Hose, tee to ret.
39	1	611127	1 1/16 MOR x 1 1/16 MJIC	82	1	619435	3/8 NPT x 7/8 MJIC
40	2	620570	Leg lev. cylinder	83	1	618156	3/4 NPT 90° 7/8 MJIC
41	1	619625	3/4 MNPT 90° 3/4 hose barb	84	1	618059	3/4 NPT x 7/8 MJIC
42	2	505213	1" NPT x 3/4 red. bush.	85	1	614335	Cyl. hose extension
43	2	504210	3/4 x 1/2 red. bush.		8		

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Ref.	Req.	Part No.	Description	Ref.	Req.	Part No.	Description
1	1	611054	Sundstrand Pump	31	2	618186	1 5/16 MOR x 1 5/16 MJIC
2	1	615003	Lg. Hyd. manifold	32	1	618131	7/8 MOR x 3/4 FNPT
3	1	606003	FMD valve	33	1	504702	3/4 NPT cl. nipple
4	1	614198	"u" tube	34	1	504501	3/4 NPT 90° el.
5	2	610030	Whl. mtr. thru shaft	35	1	712251	3/4 NPT x 1 hose barb
6	2	610029	Wheel motor	36	3	618126	9/16 MOR x 9/16 MJIC
7	1	615276	Tube ass'y long. rt.	37	4	618308	1 5/16 MOR x 1 1/16 MJIC
8	1	615237	Tube ass'y short. rt.	38	2	618241	3/4 MOR 90° 3/4 MJIC
9	1	615277	Tube ass'y long. lt.	39	2	618095	1 1/16 MOR x 1/2 NPSM
10	1	615236	Tube ass'y short. lt.	40	2	615443	Hose, Ft. whl. mtr. to tee
11	1	615211	Tube ass'y, manifold rt.	41	2	615445	Hose, flo cont. to whl. mtr.
12	1	615213	Tube ass'y, manifold lt.	42	2	615444	Hose, Ft. whl. mtr. C.D.
13	1	615266	Return manifold	43	1	615243	Hose, "T" to ret. case dr.
14	2	618132	1 1/16 MOR x 7/8 FOR	44	1	615241	Hose, FMD vlv. to tee
15	1	615013	FMD manifold block	45	1	615241	Hose, FMD vlv. to block
16	2	610028	Cessna flow control	46	1	615240	Hose, FMD vlv. to manif.
17	1	615276	Ht press tee wldm't	47	1	615239	Hose, Manif. to FMD vlv.
18	4	611125	3/4 MOR x 3/4 MJIC	48	4	611141	Hose, R. whl. mtr. to man.
19	2	619011	7/8 MOR x 1/2 NPSM	49	1	615244	Hose, charge press.
20	1	618062	1/2 NPT 90° - 1/2 NPSM	50	1	615247	Hose, Sund. to lg. manif.
21	2	618197	1/2 NPT x 1/2 NPSM	51	1	615246	Hose, RR case drain
22	1	618287	7/8 MOR x 9/16 MJIC Br. tee	52	1	615245	Hose, LR case drain
23	1	611126	7/8 MOR x 7/8 MJIC	53	1	615250	Hose, pump to return
24	1	618100	1 1/16 MOR - 90°-1/2 NPSM	54	4	611159	3/4 MOR plug
25	2	618019	9/16 MJIC tee	55	6	618314	3/4 MJIC x 3/4 MJIC
26	2	618178	1 5/16 MOR 90° 1 5/16 MJIC	56	6	615438	Hyd. tube ass'y
27	5	611127	1 1/16 MOR x 1 1/16 MJIC	57	4	614306	Hose, ft. whl. mtr. ex. turn
28	4	618100	1 1/16 MOR 90° 1/2 NPSM	58	2	615401	Hose, ft. whl. mtr. case dr.
29	1	618309	1 1/16 MOR x 7/8 MJIC	59	2	619010	9/16 MJIC x 9/16 MJIC
30	1	618187	7/16 MOR 90° 1/4 NPSM	60	4	618529	1 1/16 MJIC x 1 1/16 FJIC 45°



1980 - 647-SX 6-SPOOL & VFC SCHEMATIC

Ref.	Req.	Part No.	Description	Ref.	Req.	Part No.	Description
1	2	606585	3-Spool valve	45	1	504702	3/4 NPT cl. nipple
2	4	620052	Lev. & fold cvl.	46	1	504511	3/4 NPT side out el.
3	2	620499	Lift cylinder	47	2	611212	Hose, Lt. hand fold
4	1	620249	Strg. cylinder	48	4	611202	Hose, rh. lev. & fold
5	1	749150	Strg. motor	49	2	611204	Hose, Rt. hand 1ft
6	1	610141	Auxiliary pump	50	2	611210	Hose, Lt. hand level
7	1	606818	Solution VFC	51	2	611208	Hose, Lt. hand 1ft
8	1	606827	Agit. VFC	52	2	615308	Hose, mtr. to cvl.
9	2	610044	Agitator motor	53	1	615341	Hose, mtr. to ret.
10	1	690053	Flomax Pump	54	1	615342	Hose, agit. VFC to strg.
11	1	618088	Oil cooler	55	2	615442	Hose, agit. C.D. to tee
12	1	615266	Ret. manifold w/d.	56	1	615313	Hose, Agt. case "T" to tee
13	1	760617	Oil tank w/d.	57	1	615343	Hose, flo div. to 6-spl.
14	1	760624	Receiver plate w/d.	58	1	615440	Hose, flo div. to 6-spl.
15	1	605603	Oil diffuser	59	2	615441	Hose, Agt. mtr. Jump
16	1	605600	"in tank" filter	60	1	615294	Hose, agit. VFC to mtr.
17	1	605601	Filter - 10 Mic.	61	1	615294	Hose, pump to agit. VFC
18	6	614365	Restrictor ass'y	62	1	615305	Hose, O.C. to Flomax
19	6	611122	1/4 NPT 90° 9/16 MJIC	63	1	615252	Hose, Flomax to sol. VFC
20	4	618424	9/16 MOR 90° 9/16 MJIC 1g.	64	1	615251	Hose, O.C. to Sol VFC
21	1	712251	3/4 NPT x 1" hose barb	65	1	601110	Hose, O.C. to tank
22	1	618195	1 1/16 MOR 90° 3/4 FNPT	66	1	601117	Hose, tank to Cessna
23	2	611128	7/8 MOR 90° 7/8 MJIC	67	1	615248	Hose, ret. to tank
24	4	618130	7/8 MOR run tee	68	1	601116	Hose, Sund. solution
25	4	618241	3/4 MOR 90° 3/4 MJIC	69	1	618048	3/4 MOR-450 X3/8NPSM
26	6	618119	9/16 MOR 90° 9/16 MJIC	70	1	618188	3/4 MOR-450 X3/8NPSM
27	2	618019	9/16 MJIC tee	71	1	615283	Hose, leg cvl. Jump.
28	1	505101	1" NPT tee	72	1	611126	7/8 MOR x 7/8 MJIC
29	1	505200	1" NPT 90° st. el.	73	2	618109	3/4 MOR x 9/16 MJIC
30	1	505110	1" NPT 45° st. el.	74	1	614361	Hose, valve jumper
31	1	714331	1" NPT x 3/4 Hose barb	75	1	618425	9/16 MOR 450-9/16 MJIC
32	1	506301	1" NPT 45° elbow	76	1	615345	Hose, Ex. to In VFC
33	4	714560	1" NPT x 1" hose barb	77	1	607509	BGR 52 Flo.cont.
34	1	506303	1 1/4 NPT 90° elbow	78	1	618015	3/8 NPT 90 9/16 MJIC
35	1	601115	Hose, tank to filter	79	1	615346	Hose, byp. to sol. VFC
36	1	506410	1 1/4 NPT 90° st. el.	80	1	615347	Hose, valve to tee
37	3	506005	1 1/4 x 1" NPT red. bush.	81	1	618435	3/8 NPT x 3/8 MJIC
38	10	618126	9/16 MOR x 9/16 MJIC	82	1	618156	3/4 NPT 90° 7/8 MJIC
39	1	611127	1 1/16 MOR x 1 1/16 MJIC	83	1	618059	3/4 NPT x 7/8 MJIC
40	2	620570	Leg. lev. cylinder	84	1	614335	Cvl. hose ext.
41	1	619625	3/4 MNPT 90° 3/4 HB	85	14	616034	Hose, Agit. mtr. ext.
42	2	505213	1" NPT x 3/4 red. bush.	86	4	618314	3/4 MJIC x 3/4 MJIC
43	2	504210	3/4 x 1/2 red. bush.	87	4	618314	3/4 MJIC x 3/4 MJIC
44	1	618197	1/2 NPT x 1/2 NPSM				

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