

Lull[®]

Illustrated Parts Manual

Model
7C2

10709902
January 2000

ANSI

JLG[®]

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MAINTENANCE

This machine was checked and tested before shipment, but due to jolts and vibrations during shipment, it should be thoroughly checked upon delivery. A through inspection should be made of all nuts, bolts, and hose connections. Tighten where necessary. All drive wheel lug bolts should be tightened to 100 lbs. torque when the machine is received. They should be retightened after a day or two of use to above torque factor. Check all parts for breakage, and check oil leaks. Oil levels should be replenished if necessary, and should be maintained at check plug levels at all times.

Upon delivery, lubricate all points as shown on the lubrication chart and follow its instructions thereafter. Steering axle spindle bearings check and adjust if necessary.

CARE OF TIRES

For best results in operating a Lull 7C2 High-Lift, be sure to have all tires inflated properly. (When you receive the machine the 14.9-24 tires are carrying 50 lbs. air pressure each; this high pressure in shipping is to eliminate bouncing during transportation.) When working with this machine, lower the traction tires to 45 psi in the left-hand drive tire; change the pressure in the right-hand drive tire to 42 psi. This is the proper pressure under most working conditions. For light loads and soft ground conditions, lower pressures can be used, but reinflate to above for heavy loads. Rear or steering tires should be inflated to at least 50 P.S.I.

CALCIUM-CHLORIDE FILLED TIRES

For an added safety feature in lifting heavy loads to great heights, Lull Engineering Co. insists on 450 lbs. of calcium chloride water solution in each of the driving tires for additional stability and improved traction. Each driving tires is three-quarters full with 450 lbs. When the solution comes up to the valve stem when it is on the high side of the tire, this is the proper location when filling.

NOTE: THE WARRANTY ON THE MACHINE IS VOID WITHOUT THE 450 LBS. OF CALCIUM CHLORIDE SOLUTION IN EACH DRIVE TIRE AND 160 LBS. CALCIUM CHLORIDE IN EACH STEERING TIRE.

Special attention should be given to the hydraulic system. It's failure could result in danger to the load and to persons and property in the immediate area. Any oil leak should be repaired and all worn hoses should be replaced. It is essential that these parts are replaced with genuine LULL ENGINEERING CO. parts, and no other.

CAUTION: DO NOT USE STANDARD HARDWARE STORE PIPES AND FITTINGS. VERY FEW HARDWARE STORES OR PLUMBERS STOCK EXTRA STRONG PIPES OR AAR FITTINGS.

How to fill the hydraulic tank and system: Fill the tank full of hydraulic oil. Then have the operator raise and lower the hoist cylinder; fully extend and retract every cylinder on the entire system slowly. This also includes the steering booster by turning it from extreme right to extreme left position, and back to center. After all cylinders and the hydraulic system are full of oil and collapsed, refill the supply tank to the lower check level plug.

Never run the engine unless the hydraulic tank intake line to the pump is connected and filled with oil.

When hydraulic fluid is added to the system, always pour it thru a micron filter. If a micron filter is not available, use a funnel with a fine wire screen (at least 200 mesh) inserted in the small end.

Be certain that the hydraulic fluid meets the specifications as listed in the lubrication chart.

Never operate the control levers when the engine is not running. This causes air cavitation above the piston and results in momentary drifting action. If air cavitation should occur, the oil can be replaced by working the control lever until by-pass flutter is heard in full forward or full back position.

Steering booster operating pressures are governed by relief valves. The system operating pressure, checked with the steering knuckles blocked, should not exceed the recommended pressure setting of 1000 psi. These operating pressures should be reduced if it is found that the thrust developed is appreciable greater than that required for normal steering conditions.

Fluctuating pressure or loss of pressure in the system may result from faulty operation of the relief valve. Usually this is caused by a damaged spring, a worn poppet, or by scale, sludge, etc., lodging between the poppet and it's seat.

These parts can be inspected by uncoupling the drag link and ball stud from the steering gear and lowering the booster to clear the drag link. Disassembly may then be accomplished.

Pitman arm stops limit the number of degrees that the pitman arm can move in either direction. Proper adjustment of these stops is important to the prevention of excessive thrust and cramping of the booster. Wheel stops should have 3/16 inch clearance at each wheel when pitman arm is in contact with the stop under operators platform.

NOTE: Company facilities provide for complete valve overhaul on 24 hour basis when sent to the factory.

MAINTENANCE - 7C2-40'

This machine was checked and tested before shipment, but due to jolts and vibrations during shipment, it should be thoroughly checked upon delivery. A through inspection should be made of all nuts, bolts, and hose connections. Tighten where necessary. All drive wheel lug bolts should be tightened to 100 lbs. torque when the machine is received. They should be retightened after a day or two of use to above torque factor. Check all parts for breakage, and check for oil leaks. Oil levels should be replenished, if necessary, and should be maintained at check plug levels at all times.

Upon delivery, lubricate all points as shown on the lubrication chart and follow its instructions thereafter. Steering axle spindle bearings check and adjust if necessary.

CARE OF TIRES

For the best results in operating a Lull 7C2 High-Lift, be sure to have all tires inflated properly. (When you receive the machine the 14.9-24 tires are carrying 50 lbs. air pressure each; this high pressure in shipping is to eliminate bouncing.)

When working with this machine, lower the traction tires to 35 psi in the left inside tire, and 33 psi in the right inside tire. The outside drive tires should be 16 psi. The two steering tires should be inflated to 50 lbs. This is the proper pressure under most working conditions, lower pressure when working in soft ground or sand but reinflate to above for heavy loads.

CALCIUM-CHLORIDE FILLED TIRES

For an added safety feature in lifting heavy loads to great heights, Lull Engineering Company, Inc. insists on 450 lbs. of calcium chloride water solution in each of the inside driving tires for additional stability and improved traction. Each driving tire is three-quarters full with 450 lbs. When the solution comes up to the valve stem when it is on the high side of the tire, this is the proper location when filling.

NOTE: THE WARRANTY ON THE MACHINE IS VOID WITHOUT THE 450 LBS. OF CALCIUM CHLORIDE SOLUTION IN EACH INSIDE DRIVING TIRE ONLY AND 160 LBS. CALCIUM CHLORIDE IN EACH STEERING TIRE. NO CALCIUM CHLORIDE SOLUTION IN OUTSIDE DRIVE TIRES. WHEN HIGH FLOTATION TIRES ARE INSTALLED ON THE REAR ADD 160 LBS. CALCIUM CHLORIDE SOLUTION AND INFLATE THE TIRES 40 TO 50 PSI.

Special attention should be given to the hydraulic system. Its failure could result in danger to the load and to persons and property in the immediate area. Any oil leak should be repaired and all worn hoses should be replaced. It is essential that these parts are replaced with genuine LULL ENGINEERING COMPANY, INC. parts and no other.

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Never run the engine unless the hydraulic tank intake line to the pump is connected and filled with oil.

When hydraulic fluid is added to the system, always pour it thru a micron filter. If a micron filter is not available, use a funnel with a fine wire screen (at least 200 mesh) inserted in the small end.

Be certain that the hydraulic fluid meets the specifications as listed in the lubrication chart.

Never operate the control levers when the engine is not running. This causes air cavitation above the piston and results in momentary drifting action. If air cavitation should occur, the oil can be replaced by working the control lever until bypass flutter is heard in full forward or full back position.

Steering booster operating pressures are governed by relief valves. The system operating pressure, checked with the steering knuckles blocked, should not exceed the recommended pressure setting of 1000 psi. These operating pressures should be reduced if it is found that the thrust developed is appreciable greater than that required for normal steering conditions.

Fluctuating pressure or loss of pressure in the system may result from faulty operation of the relief valve. Usually this is caused by a damaged spring, a worn poppet, or by scale, sludge, etc., lodging between the poppet and its' seat.

These parts can be inspected by uncoupling the drag link and ball stud from the steering gear and lowering the booster to clear the drag link. Disassembly may then be accomplished.

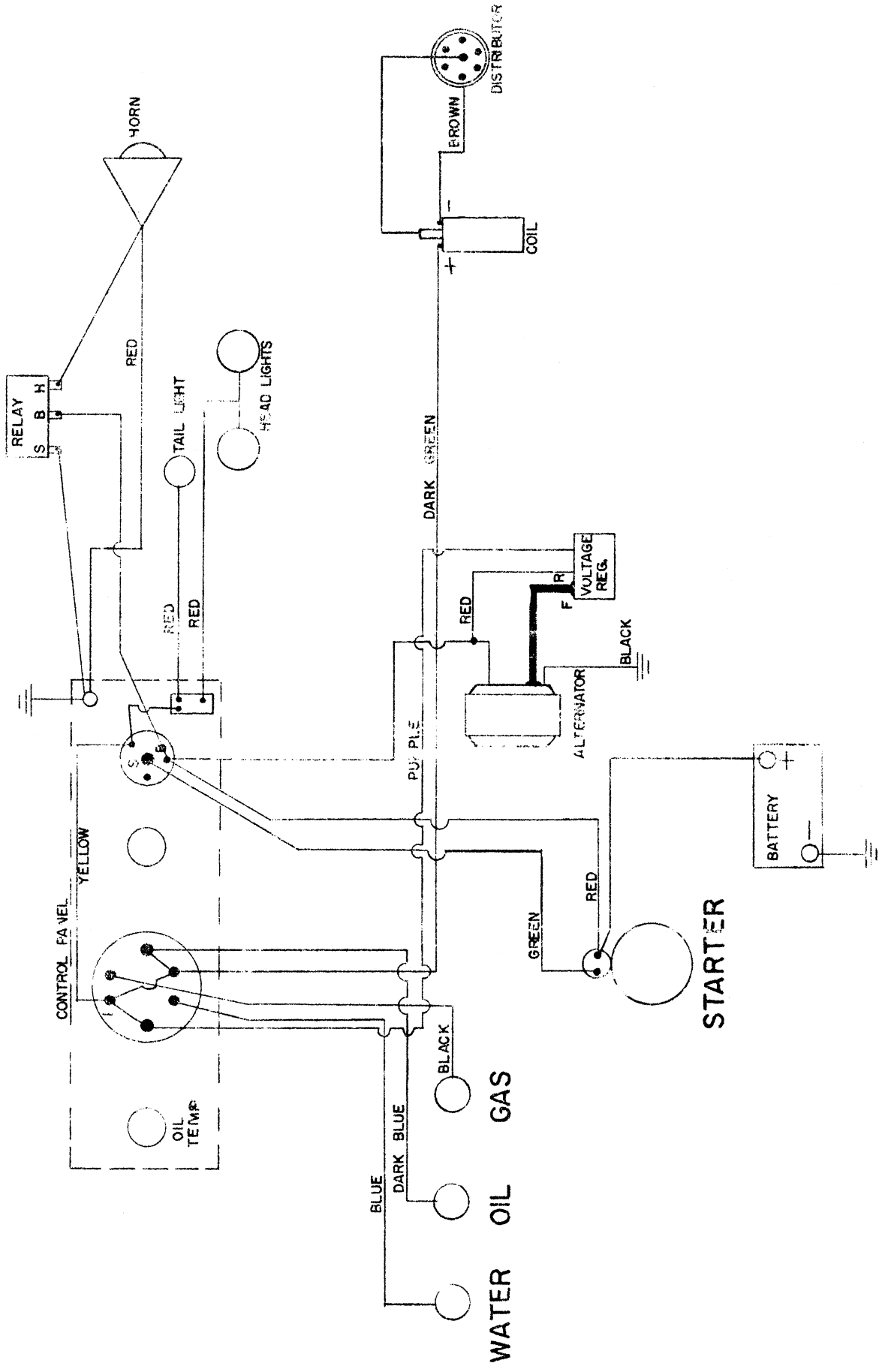
Pitman arm stops limit the number of degrees that the pitman arm can move in either direction. Proper adjustment of these stops is important to the prevention of excessive thrust and cramping of the booster. Wheel stops should have 3/16 inch clearance at each wheel when pitman arm is in contact with the stop under operators platform.

NOTE: Company facilities provide for complete valve overhaul on 24 hour basis when sent to the factory.

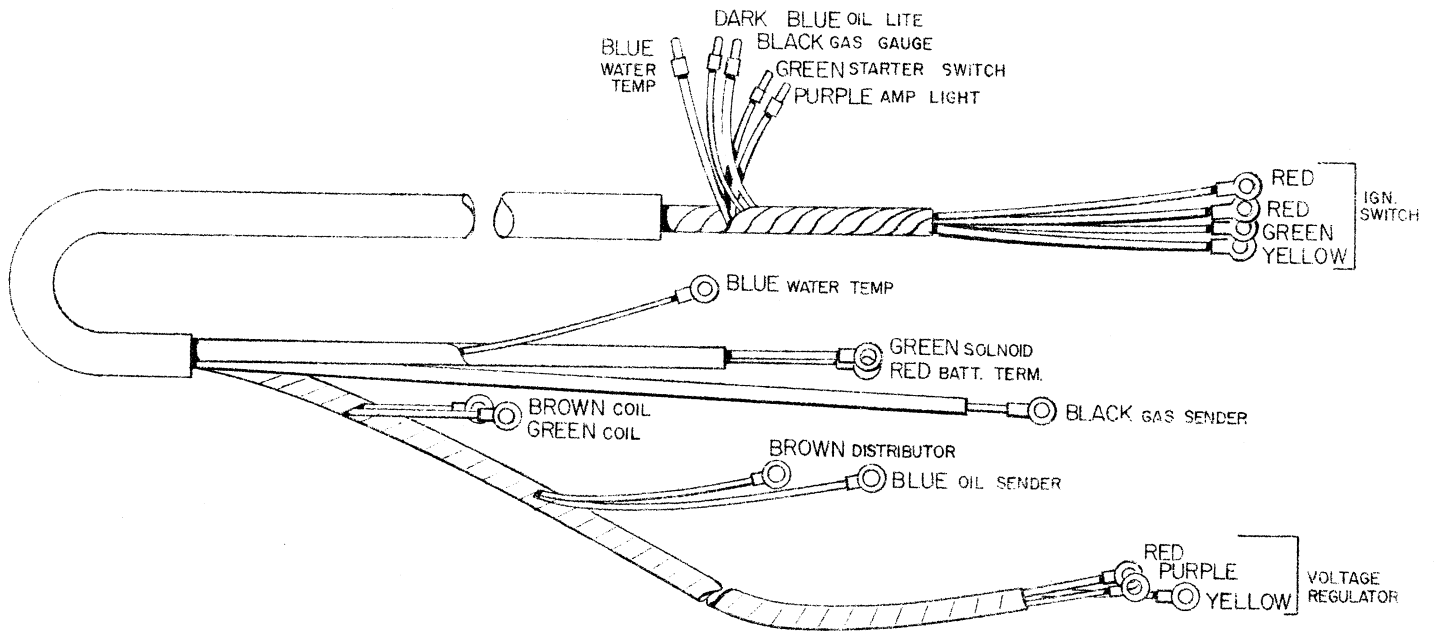
CAPACITIES - 7C2 MODELS

HYDRAULIC SYSTEM & RESERVIOR	23 GAL.
RADIATOR COOLING SYSTEM	20 QTS.
CRANKCASE	5 QTS.
TORQUE CONVERTER	2.5 GAL.
TRANSMISSION AND DIFFERENTIAL	11 GAL.
FUEL TANK	27 1/2 GAL.
TIRES (CALCIUM CHLORIDE)	
STEERING TIRES	150-160 LBS. PER TIRE.
DRIVE TIRES	450 LBS. PER TIRE

NOTE: DUAL WHEEL MODELS REQUIRE 450 LBS. ON INNER
DRIVE TIRES ONLY AND 150 to 160 LBS. PER
TIRE IN STEERING TIRES.



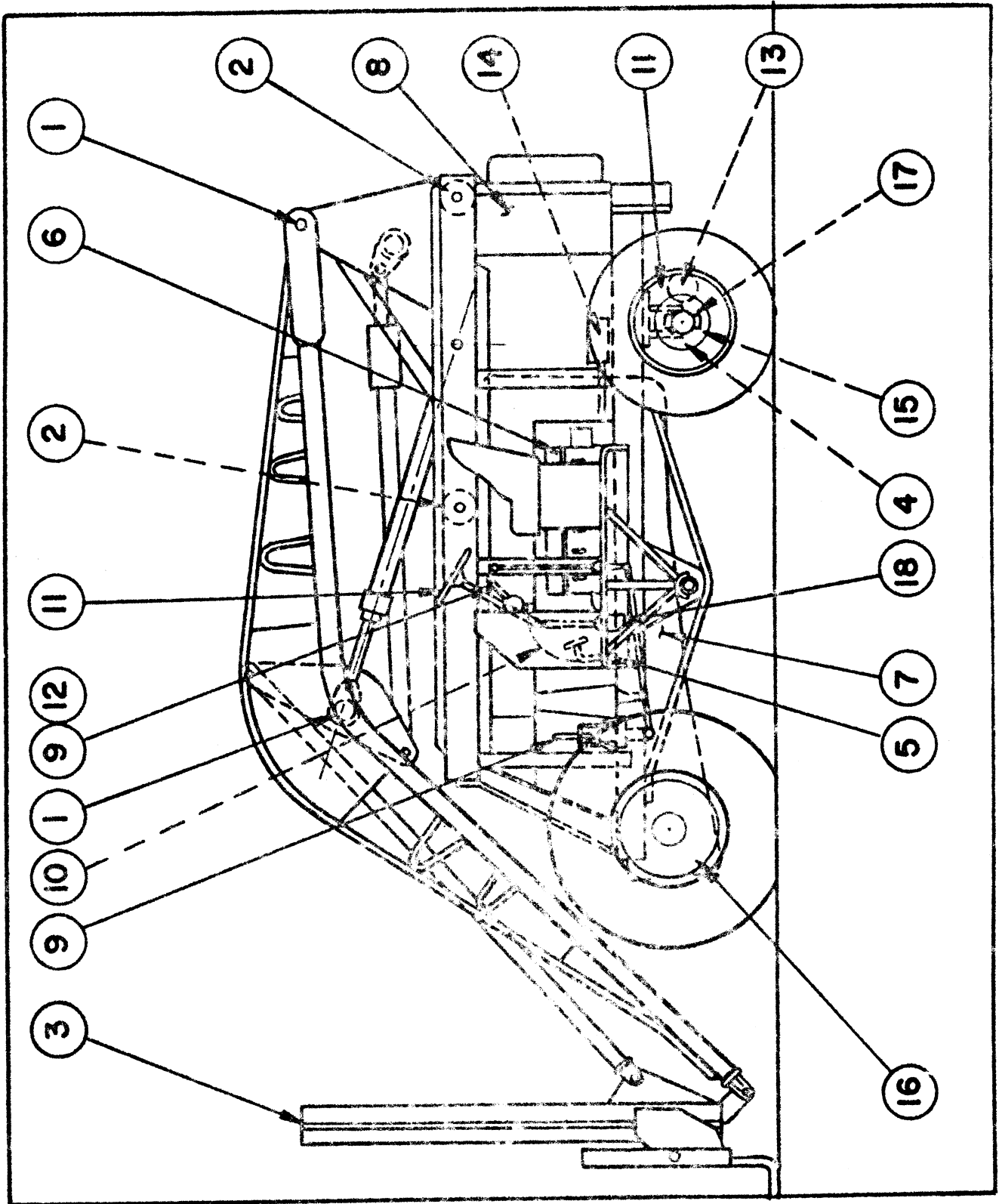
WIRING DIAGRAM NO. 11809 (FOR 7C1 & 7C2 MODELS)



WIRING HARNESS

7C 1 AND 7C2 MODELS

ASS'Y NO. 11562



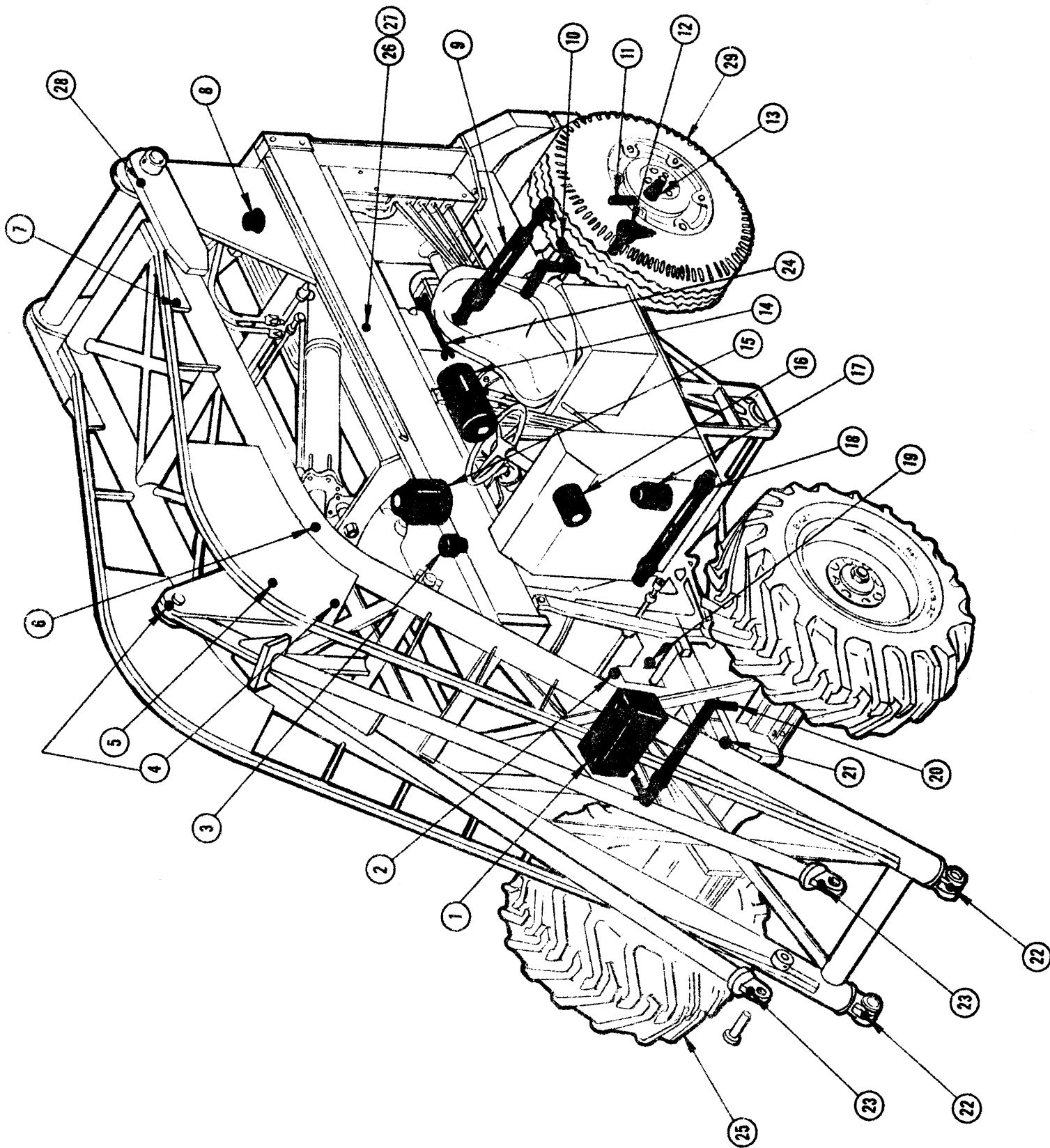
LUBRICATION CHART
 MODEL "702"

ITEM	PART	LUBRICANT	SERVICE	CHANGE
1	Lift Arm, Tilt Linkage Toggle And Cylinder Pivots	Super Permalube Grease	Daily	---
2	Transverse Frame Rollers	Super Permalube Grease	Daily	---
3	Tower	Super Permalube Grease	Daily	---
4	King Pins, Steering Toggles And Pivots	Super Permalube Grease	Daily	---
5	Brake Pivot Shaft	Super Permalube Grease	Daily	---
6	Engine: Below 32° F.	AMOCO 200 SAE 10W	Daily	100 Hrs.
	Above 32° F.	AMOCO 200 SAE 30	Daily	100 Hrs.
	Oil Filter Element			300 Hrs.
	Air Cleaner: Oil Bath	AMOCO 200 SAE 20	Daily	As Req.
	Radiator	Perma-Guard Anti-Freeze	Daily	Yearly
	Battery	Distilled Water	Daily	---
7	Torque Converter (SEE NOTE)	AMOCO Dexron ATF	Daily	300 Hrs.
	Torque Converter Filter Element			300 Hrs.
8	Hydraulic Tank	Rykon Oil No. 21	Daily	Yearly
9	Shuttle Gear Linkage	Super Permalube Grease	Weekly	---
	Shuttle Gear Linkage	AMOCO 200 SAE 20	Weekly	---
	Shift Lever Linkage	Super Permalube Grease	Weekly	---
	Shift Lever Linkage	AMOCO 200 SAE 20	Weekly	---
10	Emergency Brake	AMOCO 200 SAE 20	Weekly	---
11	Rear Steering	Super Permalube Grease	Weekly	---
12	Forward & Reverse Controls	Super Permalube Grease	Weekly	---
13	Steering Cylinders & Boosters	Super Permalube Grease	Weekly	---
14	Pump Drive Shaft	Super Permalube Grease	Weekly	---
15	Tie Rod Ends	Super Permalube Grease	Weekly	---
16	Transmission & Final Drive			
	Below 32° F.	American MP Gear SAE 80	Monthly	Yearly
	Above 32° F.	American MP Gear SAE 90	Monthly	Yearly
17	Wheel Bearing	Repack yearly or every 1000 hrs. with Super Permalube Grease or Equal.		
		Inspect & Adjust 500 Hrs. or 6 Months.		
18	Steering Gear	American MP Gear SAE 90	Monthly	Yearly
TIRE PRESSURES - RIGHT FRONT 42# - LEFT FRONT 45# - REAR 50#				

NOTE: USE AMERICAN OIL COMPANY LUBRICANTS SHOWN OR EQUAL.

CHANGE TORQUE CONVERTER OIL AFTER FIRST 20 HOURS OPERATION ON NEW MACHINES. AFTER THAT CHANGE EVERY 300 HOURS OPERATION. CHANGE CONVERTER OIL FILTER AT SAME INTERVAL.

DRAIN ENGINE BREAK IN OIL AT 20 HOURS. CHANGE OIL FILTER THEN REFILL WITH OIL



LUBRICATION CHART GUIDE

LUBRICATION CHART

ITEM NO.	PART NAME	FREQUENCY CHECK	NO. OF ZERKS OR TYPE OF LUBRICATION
1	Battery	Weekly	Fill with distilled water
2	Forward and reverse toggle	Weekly	1
3	Engine Crank Case	90 Hrs.	Above 32°F./SAE 20 or 30. Below 32°F./SAE 10
4	Parallel-O-Gram Joints	Daily	2
5	Center Toggle	Daily	2
6	Hoist Cylinders	Daily	4
7	Tilt Cylinder Bushing	Daily	1
8	Hydraulic Oil Reservoir	Weekly	Non-Foam, Non-Detergent Hyd. Oil (Sinclair Rocket "S" or equal.)
9	Power Steering Booster	Weekly	3
10	Steering Toggles & Pivots	Daily	6
11	King Pins	Daily	4
12	Steering Tie Rod Ends	Weekly	3
13	Steering Axle Wheel Bearings	Yearly	Clean & Repack with Lithium or Calcium Base Grease.
14	Generator	Weekly	SAE #20 Oil (2 Cups)
15	Air Filter	Daily	Clean and Fill with clean engine oil.
16	Engine Oil Filter # 104397-A.	300 Hrs.	Change Filter, Add 1 Qt. Crank Case Oil.
17	Steering Gear	Monthly	Fill with SAE 90
18	Brake Shafts	Daily	11
19	Torque Converter (See Note)	Daily	1 Type "A" Transmission Fluid.
20	Brake Shafts.	Daily	11
21	Transmission (Change Yearly)	Weekly	SAE 80 or 90 Transmission Oil.
22	Lift Arm Pin - Front	Daily	2
23	Parallel-O-Gram Arm Pin	Daily	2
24	Pump Drive Shaft	Weekly	3 (Hand Gun Only)
25	Right Drive Tire (Outside)	Weekly	16 P.S.I.
	Right Drive Tire (Inside)	Weekly	33 P.S.I.
	Left Drive Tire (Outside)	Weekly	16 P.S.I.
	Left Drive Tire (Inside)	Weekly	35 P.S.I.
26	Transverse Frame Rollers	Daily	4
27	Transverse Frame	Daily	4

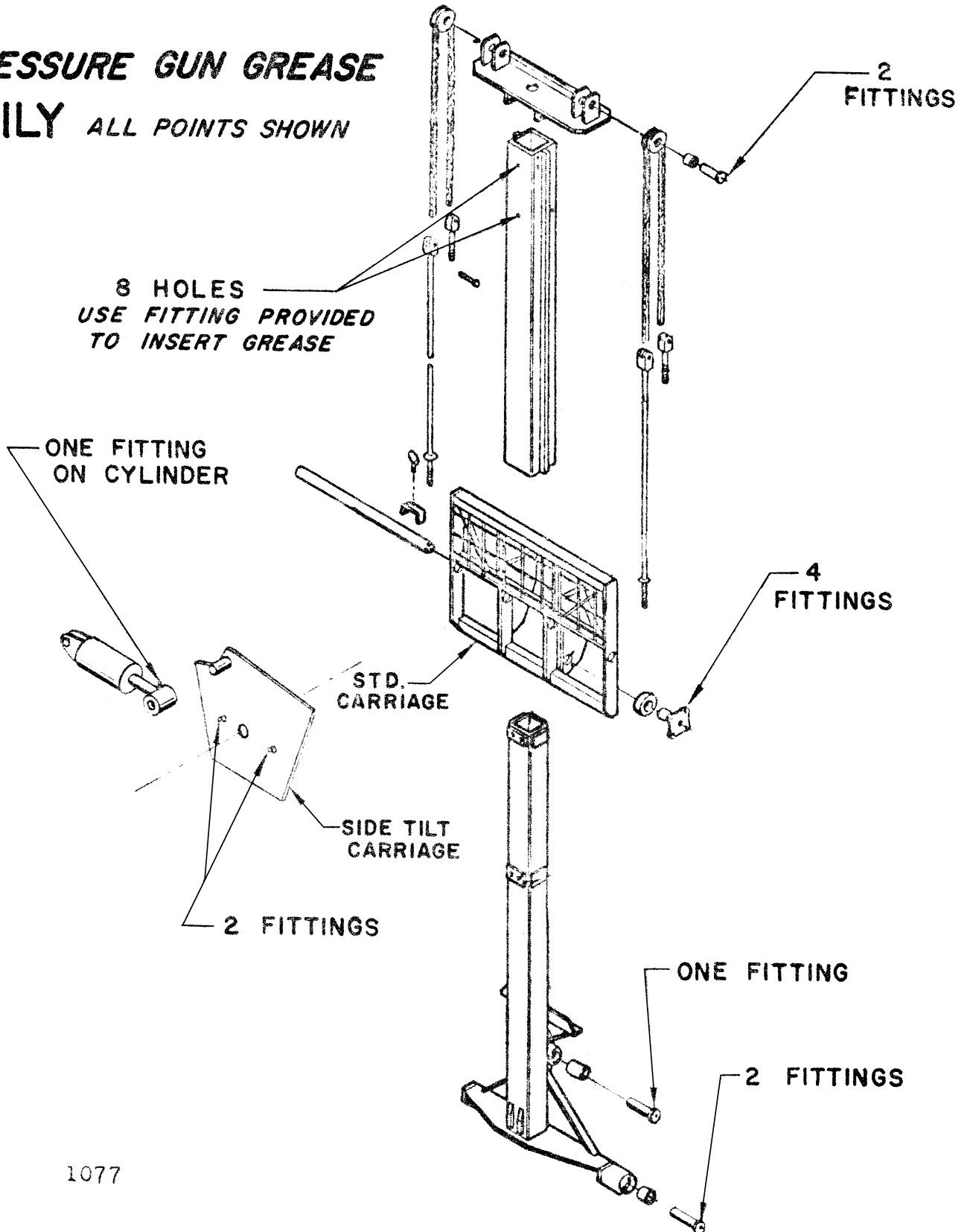
NOTE: CHANGE TORQUE CONVERTER OIL AFTER FIRST 20 HOURS OPERATION ON NEW MACHINES. AFTER THAT CHANGE EVERY 300 HOURS OPERATION. CHANGE CONVERTER OIL FILTER AT SAME INTERVAL. FILTER # 105234-A.

DRAIN ENGINE BREAK IN OIL AT 20 HRS. CHANGE OIL FILTER THEN REFILL WITH OIL ACCORDING TO ITEM # 3 ABOVE.

LULL ENGINEERING COMPANY, INC.
3045 HIGHWAY 13,
ST. PAUL 11, MINNESOTA 55111

TOWER LUBRICATION CHART
702-31' SINGLE MAST

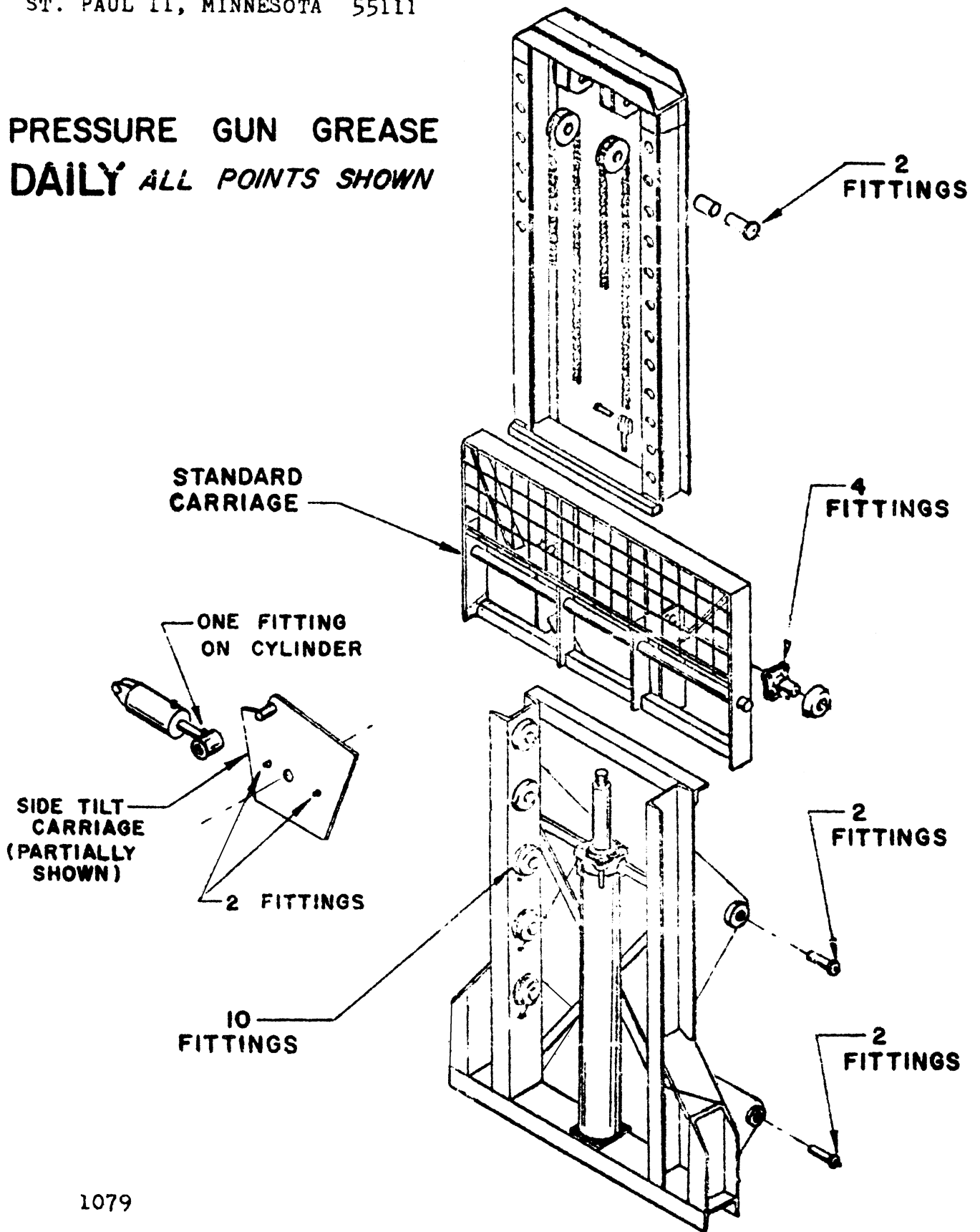
**PRESSURE GUN GREASE
DAILY ALL POINTS SHOWN**

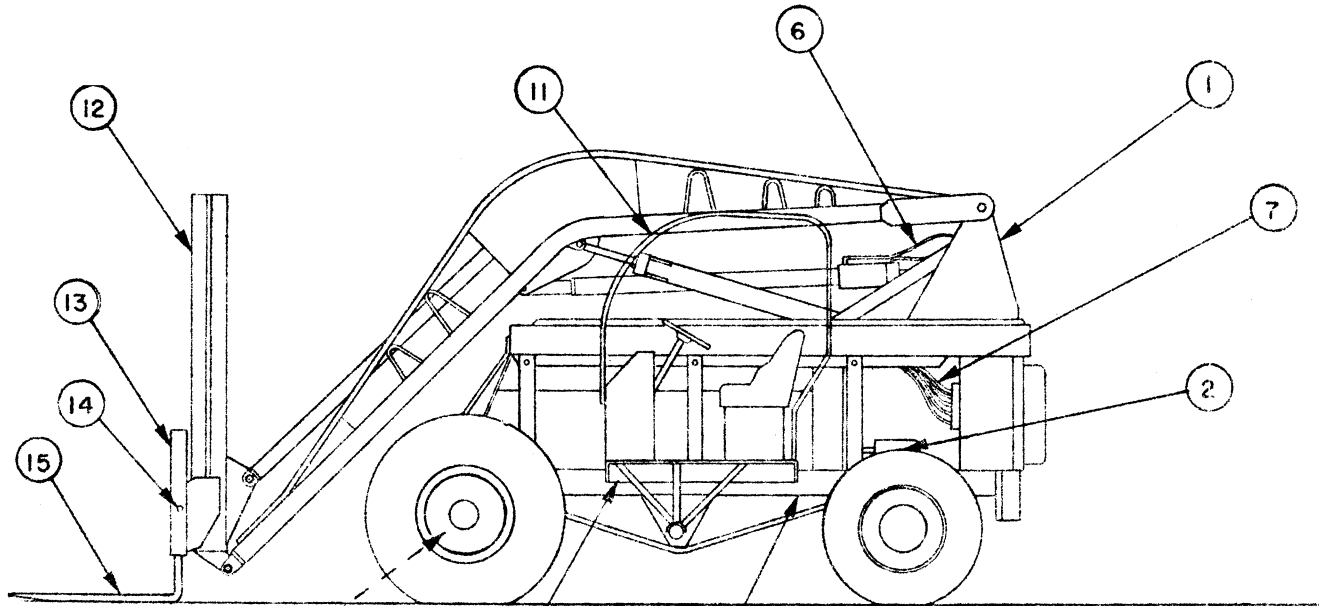
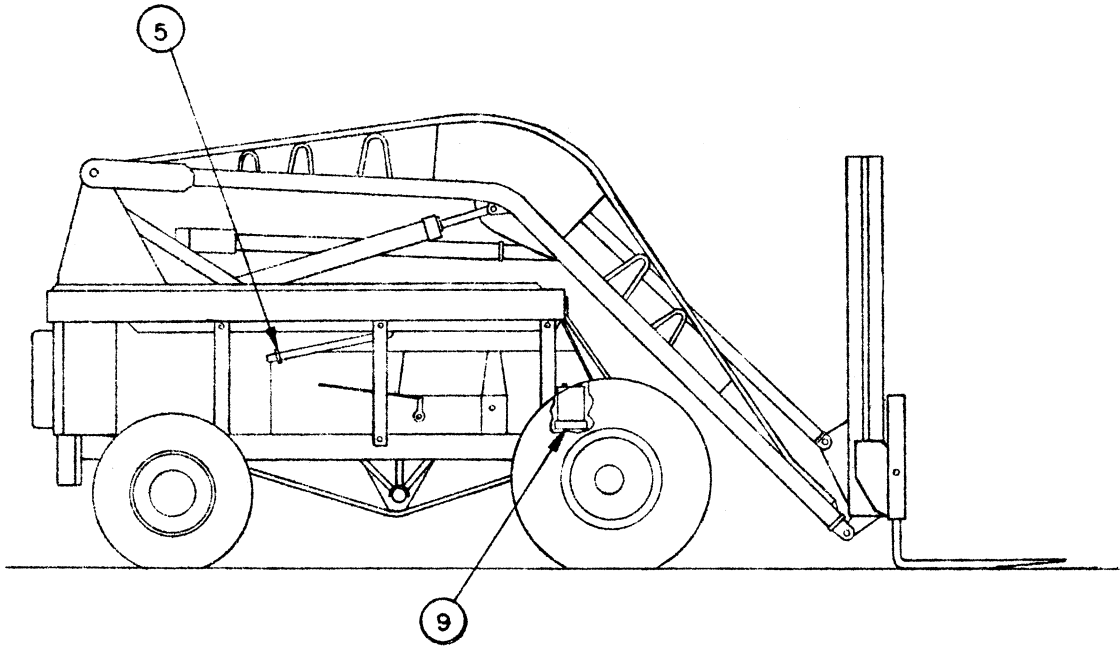


LULL ENGINEERING COMPANY, INC.
3045 HIGHWAY 13,
ST. PAUL 11, MINNESOTA 55111

TOWER LUBRICATION CHART
7C2 AND 4D3-40' MODELS

**PRESSURE GUN GREASE
DAILY ALL POINTS SHOWN**





- 4 TRUSS ROD
- 10 AXLE PAD WELDMENT

S/N 2050 & UP

1 3/4" DIA. FORK SHAFT

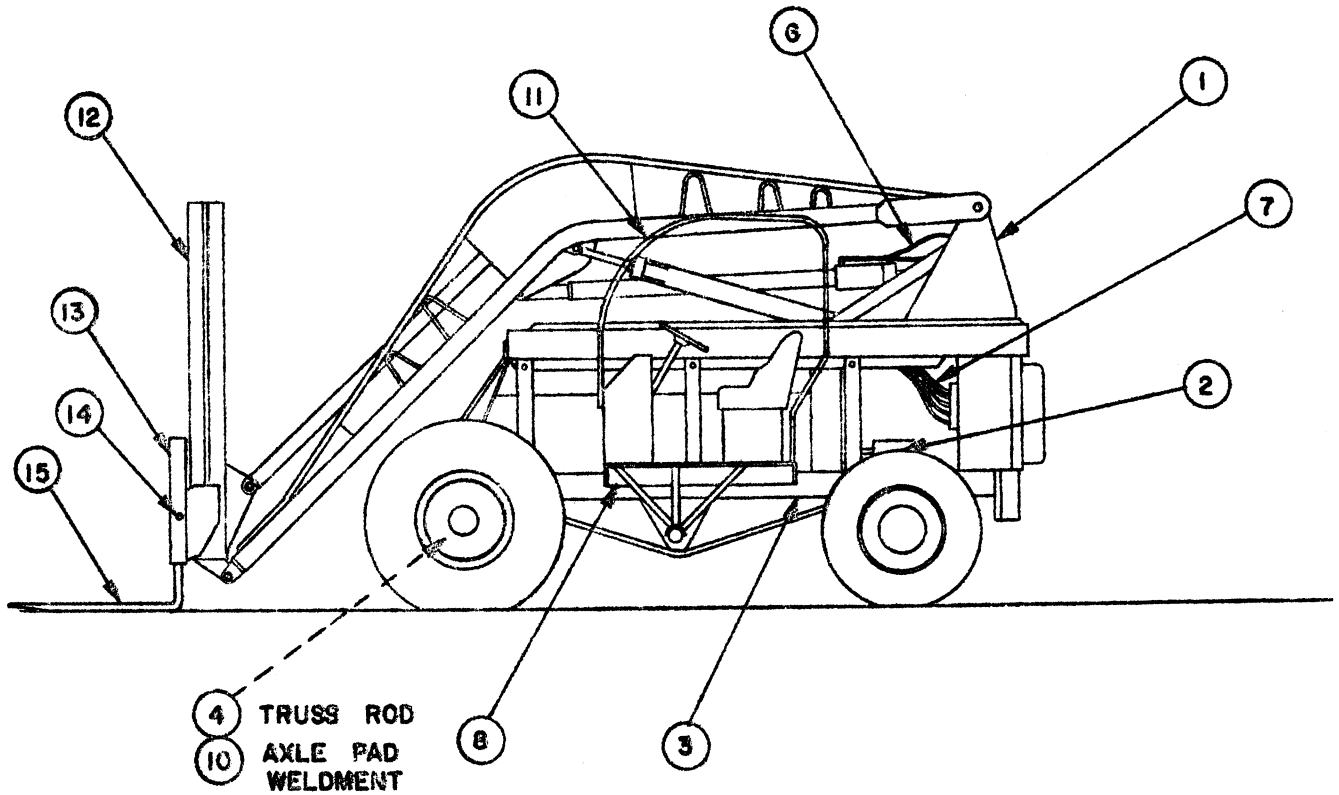
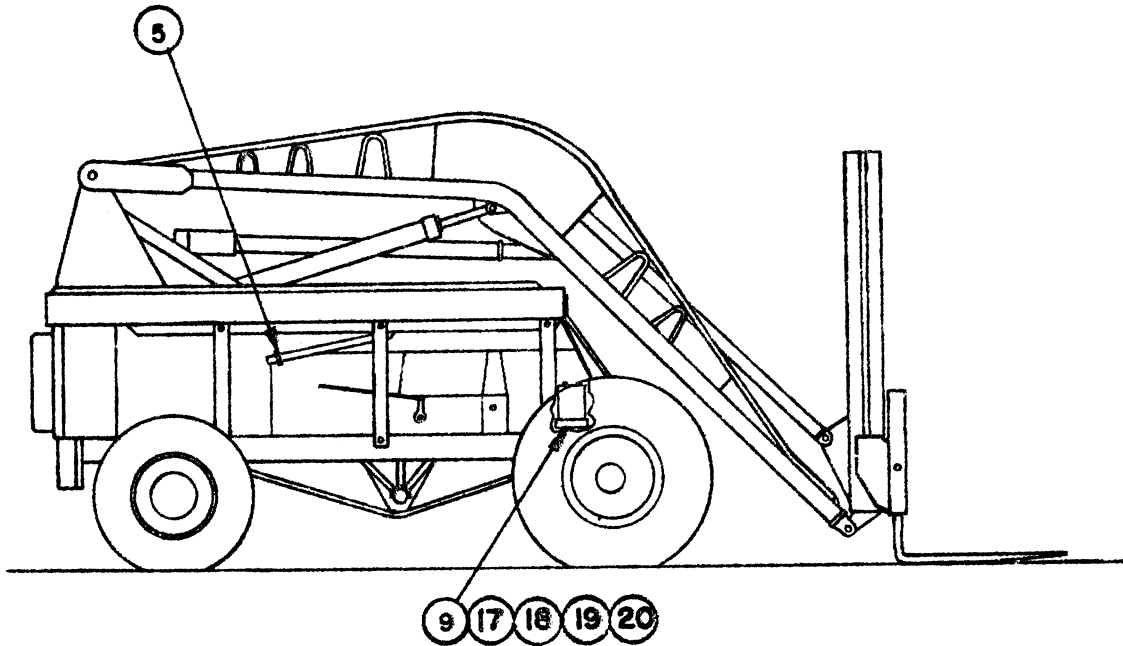
GENERAL ASSEMBLY

NO. 11,233 -

LULL ENGINEERING COMPANY, INC.
 3045 HIGHWAY 13,
 ST. PAUL 11, MINNESOTA 55111

GENERAL ASSEMBLY
 702-31' HIGH-LIFT
 NO. 11,233

<u>ITEM NO.</u>	<u>PART NO.</u>	<u>ASSEMBLY NO.</u>	<u>DESCRIPTION</u>	<u>NO. REQ.</u>
1		11,229	Loader Assembly (Page 32)	1
2		11,205	Pump & Drive Ass'y (Page 42)	1
3	11,000		Main Frame	1
4	11,300		Truss Rod	1
5	7528		Exhaust Pipe Bracket	1
6	11,313		Hydraulic System (Page 60)	1
7	11,302		Hydraulic System (Pump to Valves) P-38	1
8		11,239	Operator's Platform Ass'y (Page 18)	1
9	11,043		Battery Support	1
10	11,227		Axle Pad Weldment	1
11	11,235		Overhead Guard	1
12		1265	Tower Assembly (Page 66)	1
13	6891		Carriage	1
14	11,369		Shaft	1
15	11,290		Forks	2
16	7840		Headlight Bracket (Optional)	1

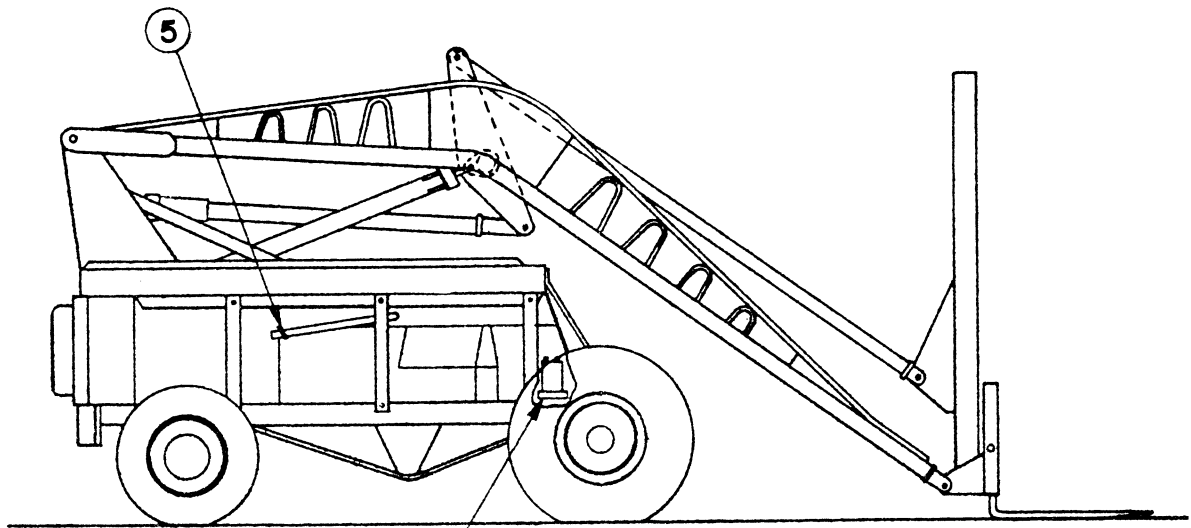


LULL ENGINEERING COMPANY, INC.
 3045 HIGHWAY 13,
 ST. PAUL, MINNESOTA 55121

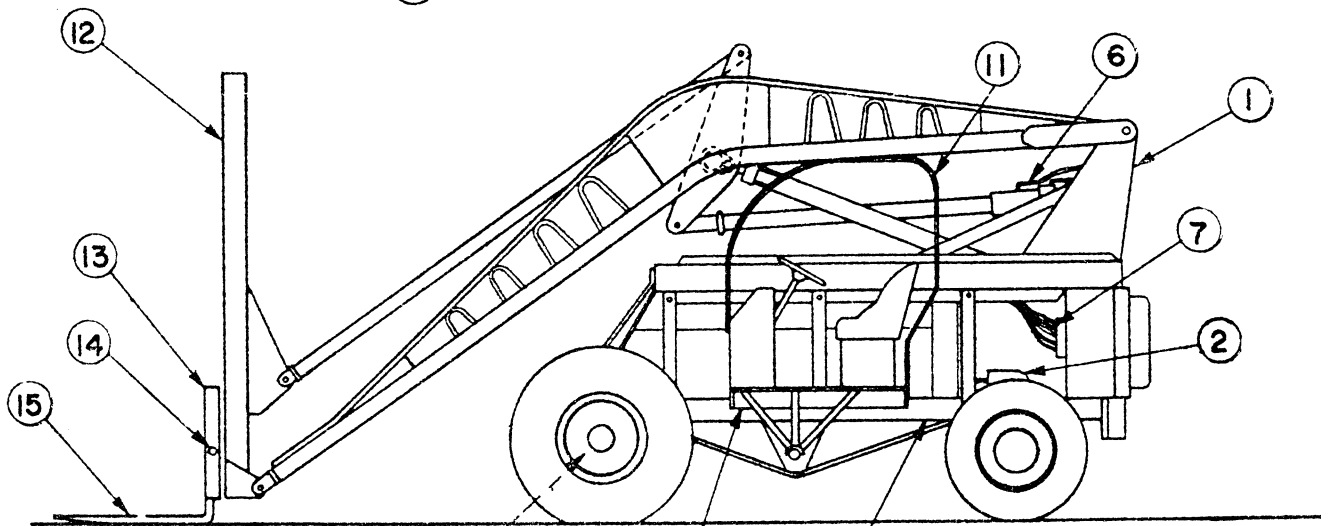
GENERAL ASSEMBLY
 7C2-31' HIGH-LIFT
 NO. 13,483

<u>ITEM NO.</u>	<u>PART NO.</u>	<u>ASSEMBLY NO.</u>	<u>DESCRIPTION</u>	<u>NO. REQ.</u>
1		11,229	Loader Assembly (Page 32)	1
2		11,205	Pump & Drive Ass'y (Page 42)	1
3	11,000		Main Frame	1
4	11,300		Truss Rod	1
5	7528		Exhaust Pipe Bracket	1
6		11,313	Hydraulic System (Page 60)	1
7		11,302	Hydraulic System (Pump to Valve) Page 38)	1
8		13,481	Operator's Platform Ass'y (Page 18)	1
9	11,043		Battery Support	1
10	11,227		Axle Pad Weldment	1
11	11,235		Overhead Guard	1
12		1265	Tower Assembly (Page 66)	1
13	6891		Carriage	1
14	11,369		Shaft	1
15	11,290		Forks	2
16	7840		Headlight Bracket (Optional)	1
*17	11,757		Battery Support Ass'y	1
*18	P-13057		Battery	1
*19	P-13040		Cable	1
*20	P-12500		Cable	1

*DIESEL MODELS ONLY



9



- 4 TRUSS ROD
- AXLE PAD
- 10 WELDMENT

GENERAL ASS'Y.

NO. 11,236

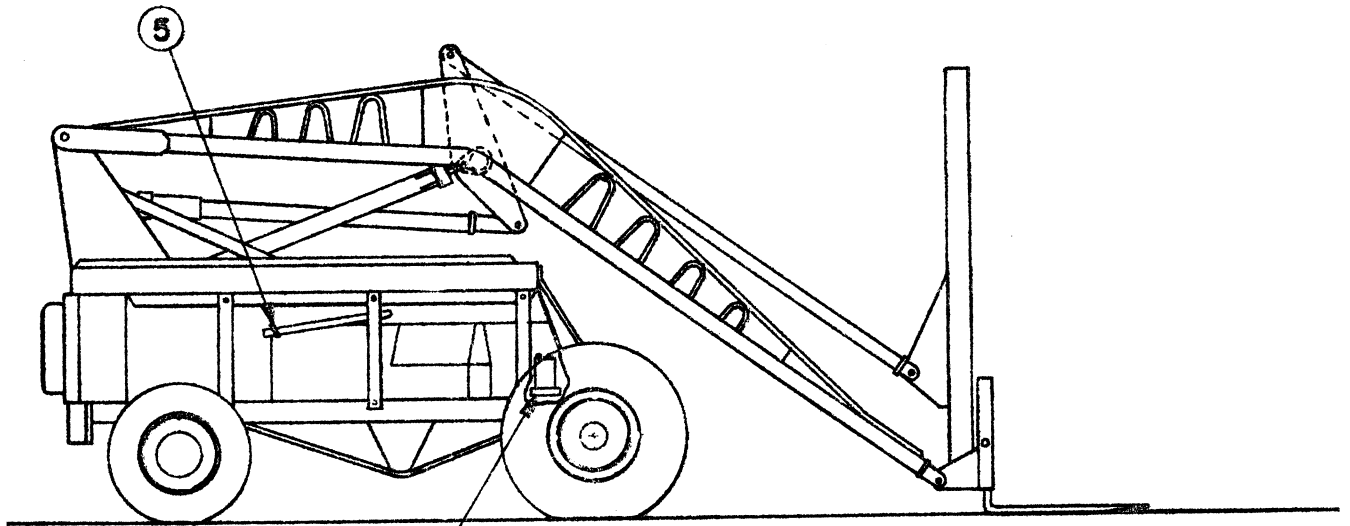
S/N 2050 AND UP

GENERAL ASSEMBLY
NO. 11,236

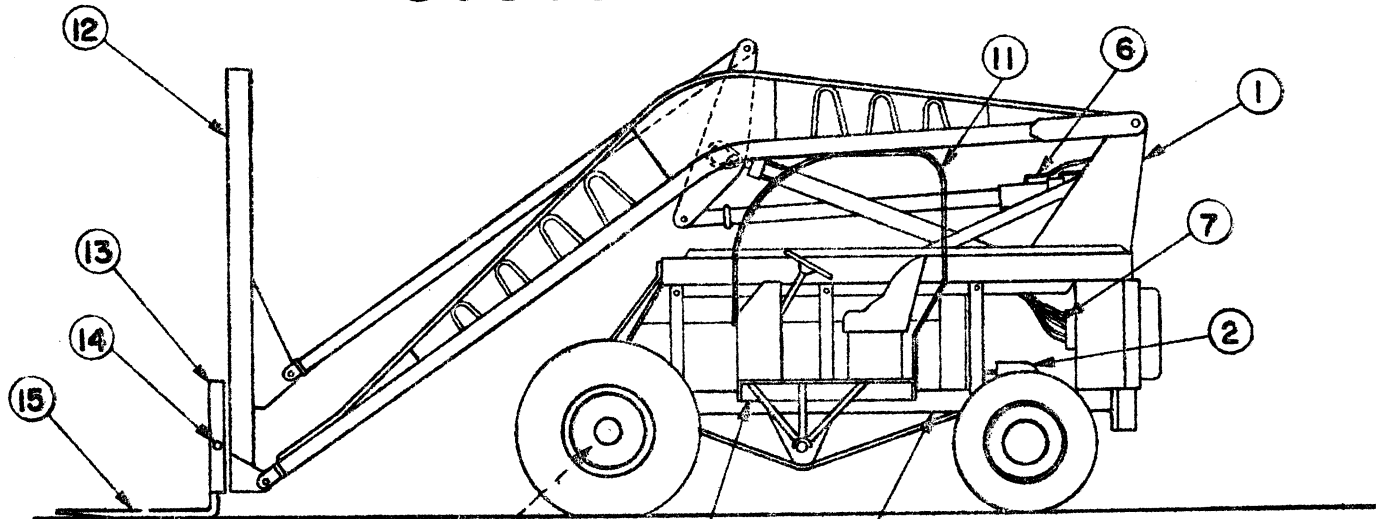
ITEM	PART	DESCRIPTION	RE'Q.
1	11,237	Loader Ass'y (Page 32)	1
2	11,205	Pump & Drive Ass'y (Page 42)	1
3	11,072	Main Frame	1
4	11,300	Truss Rod	1
5	7528	Exhaust Pipe Bracket	1
6	11,312	Hydraulic System (Junction Block to Lift Arm)	1
7	11,303	Hydraulic System (Pump to Valves)	1
8	11,240	Operator's Platform Ass'y (Page 18)	1
9	11,043	Battery Support	1
10	11,227	Axle Pad Weldment	2
11	11,235	Overhead Guard Ass'y (Page 110)	1
12	11,293	Tower Assembly (Page 66)	1
13	11,296	Carriage	1
14	11,378	Shaft	1
15	11,290	Forks	2
16	7840	Headlight Bracket (Optional)	1

LULL ENGINEERING COMPANY, INC.
 3045 HIGHWAY 13,
 ST. PAUL, MINNESOTA 55121

GENERAL ASSEMBLY
 NO. 13,484



9 17 18 19 20



4 TRUSS ROD
 10 AXLE PAD
 WELDMENT

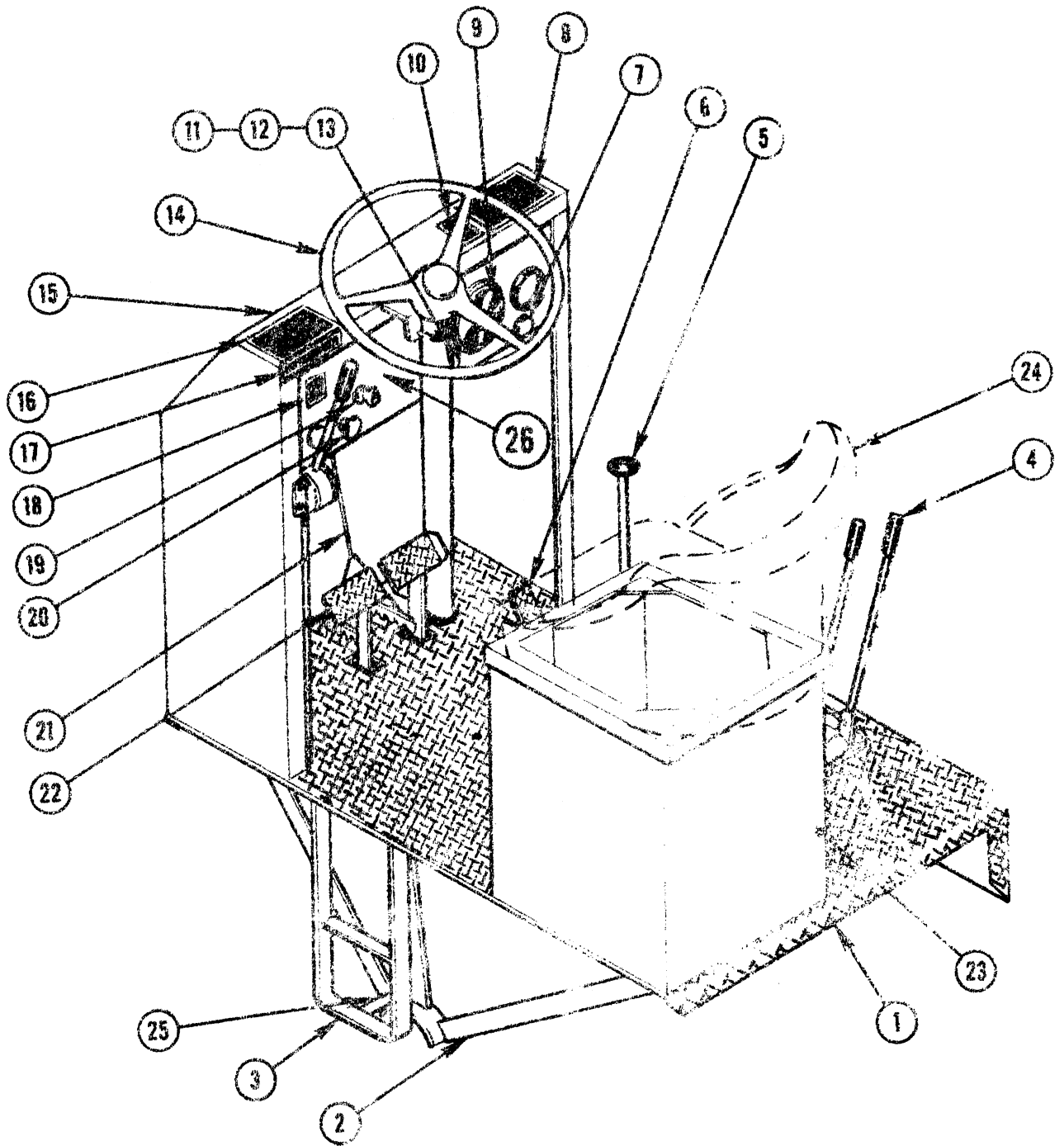
7C2-40'

LULL ENGINEERING COMPANY, INC.
 3045 HIGHWAY 13,
 ST. PAUL, MINNESOTA 55121

GENERAL ASSEMBLY
 No. 13,484

<u>ITEM NO.</u>	<u>PART NO.</u>	<u>ASSEMBLY NO.</u>	<u>DESCRIPTION</u>	<u>NO. REQ.</u>
1		11,237	Loader Assembly (Page 32)	1
2		11,205	Pump and Drive Ass'y (Page 42)	1
3	11,072		Main Frame	1
4	11,300		Truss Rod	1
5	7528		Exhaust Pipe Bracket	1
6		11,312	Hydraulic System (Page 60)	1
7		11,303	Hydraulic System (Pump to Valve) P-38	1
8		13,482	Operators Platform Ass'y (Page 18)	1
9	11,043		Battery Support	1
10	11,227		Axle Pad Weldment	2
11		11,235	Overhead Guard Ass'y (Page 110)	1
12		11,293	Tower Assembly (Page 66)	1
13	11,367		Carriage	1
14	11,363		Shaft	1
15	13,279		Forks	2
16	7840		Headlight Bracket (Optional)	1
*17	11,757		Battery Support Ass'y	1
*18	P-13057		Battery	1
*19	P-13040		Cable	1
*20	P-12500		Cable	1

*DIESEL MODELS ONLY

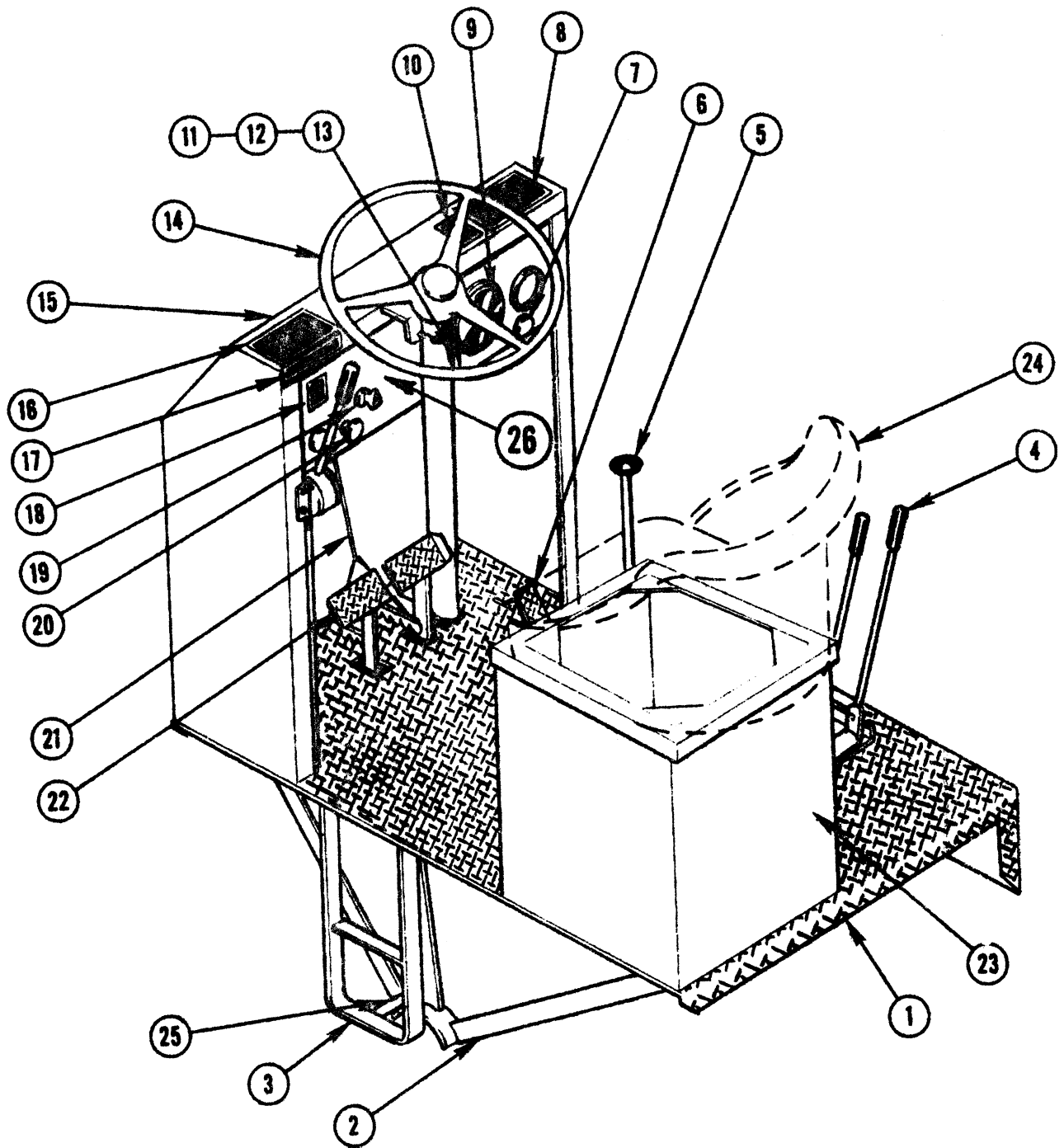


**OPERATOR'S PLATFORM ASSEMBLY
NO. 11,239**

LULL ENGINEERING COMPANY, INC.
 3045 HIGHWAY 13,
 ST. PAUL 11, MINNESOTA 55111

OPERATORS PLATFORM ASS'Y
 7C2-31' HIGH-LIFT LOADER
 NO. 11,239

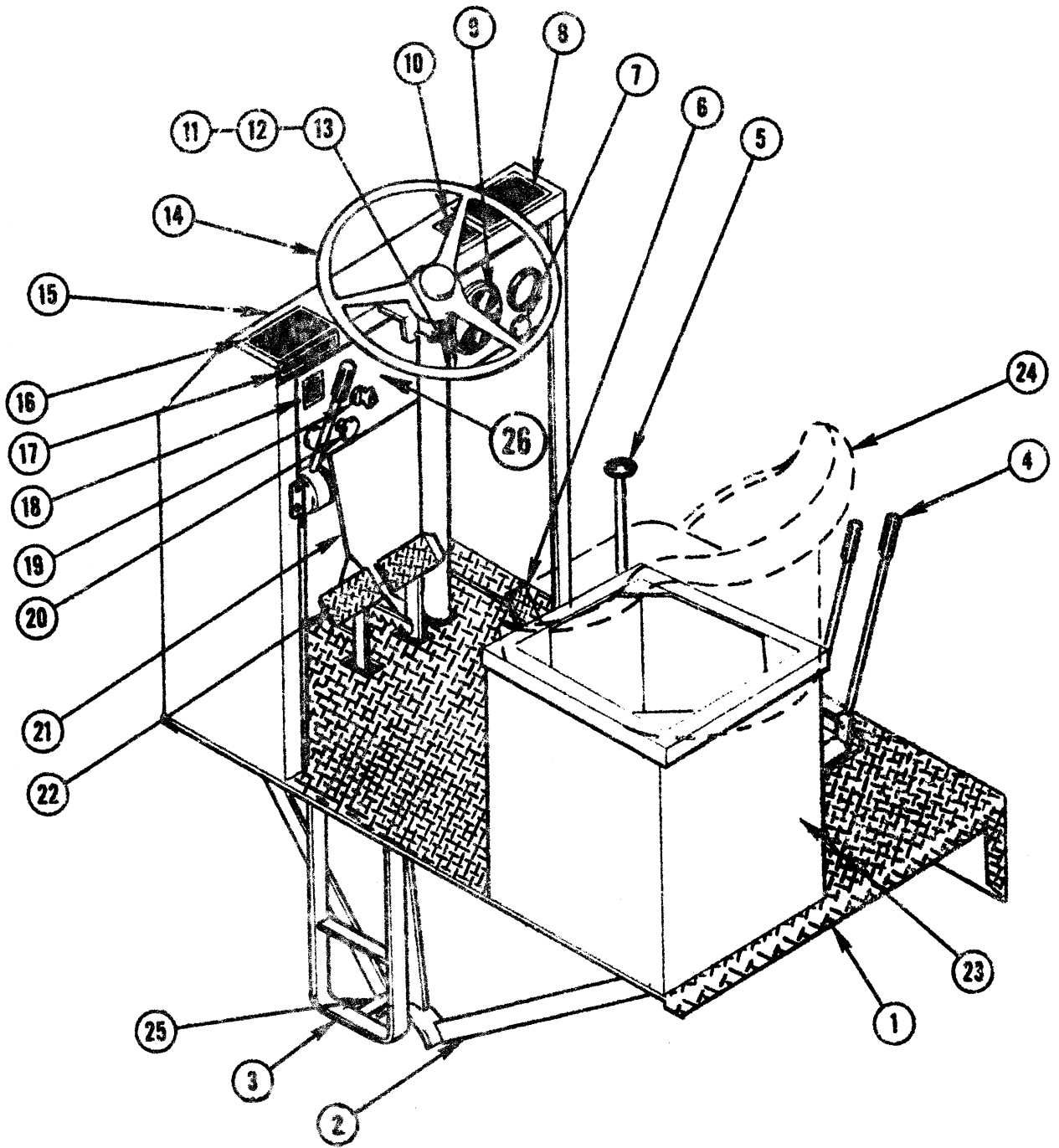
<u>ITEM</u> <u>NO.</u>	<u>PART</u> <u>NO.</u>	<u>ASSEMBLY</u> <u>NO.</u>	<u>DESCRIPTION</u>	<u>NO.</u> <u>REQ.</u>
1	11,080		Operator's Platform	1
2	11,126		Platform Support	1
3	8813		Step Weldment	1
4		11,262	Valve Control Ass'y (Page 50)	1
5		11,250	Shifting Ass'y (Page 34)	1
6		11,260	Accelerator Ass'y (Page 30)	1
7	P-10035		Choke Control	1
8	7371		Hand Lever Control Tag	1
9	P-10036		Cluster Gauge	1
10	11,208		Shifting Tag	1
11	7683		Strap	1
12	7682		Cover	1
13	P-10074		Hour Meter (Optional)	1
14		11,242	Steering Ass'y (Page 22)	1
15	11,244		Instrument Panel	1
16	450		Serial Number Tag	1
17	7521		Caution Tag	1
18	7524		Torque Converter Tag	1
19	P-10037		Ignition Switch	1
20	P-10007		Brake Lock Cable	1
21		7597	Brake Lock Ass'y (Page 64)	1
22		11,253	Brake & Torque Conv. Ass'y (Page 26)	1
23	6952		Tool Box & Seat Stand	1
24	P-11618		Seat	1
25	11,193		Support Strap	1
26	8638		Dashboard	1



**OPERATOR'S PLATFORM ASSEMBLY
NO. 11,239**



REF.	PART NO.	DESCRIPTION	REQ.
		OPERATORS PLATFORM ASSEMBLY NO. 11,239	
1	11,080	Operators Platform	1
2	11,126	Platform Support	1
3	8813	Step Weldment	1
4	11,262	Valve Control Ass'y (Page 50)	1
5	11,250	Shifting Ass'y (Page 34)	1
6	*12,546	Accelerator Ass'y (Page 30)	1
7	P-10035	Choke Control	1
8	7371	Hand Lever Control Tag	1
9	P-10036	Cluster Gauge	1
10	11,208	Shifting Tag	1
11	7683	Strap	1
12	7682	Cover	1
13	P-10074	Hour Meter (Optional)	1
14	12,327	Steering Ass'y (Page 22)	1
15	11,244	Instrument Panel	1
16	450	Serial Number Tag	1
17	7521	Caution Tag	1
18	7524	Torque Converter Tag	1
19	P-10037	Ignition Switch	1
20	P-10007	Brake Lock Cable	1
21	7597	Brake Lock Ass'y (Page 64)	1
22	11,253	Brake & Torque Conv. Ass'y (Page 26)	1
23	6952	Tool Box & Seat Stand	1
24	P-11618	Seat	1
25	11,193	Support Strap	1
26	8638	Dashboard	1
		*Start With S/N 2379.	



OPERATOR'S PLATFORM ASSEMBLY

NO. 11,239

LULL ENGINEERING COMPANY, INC.
 3045 HIGHWAY 13,
 ST. PAUL, MINNESOTA 55121

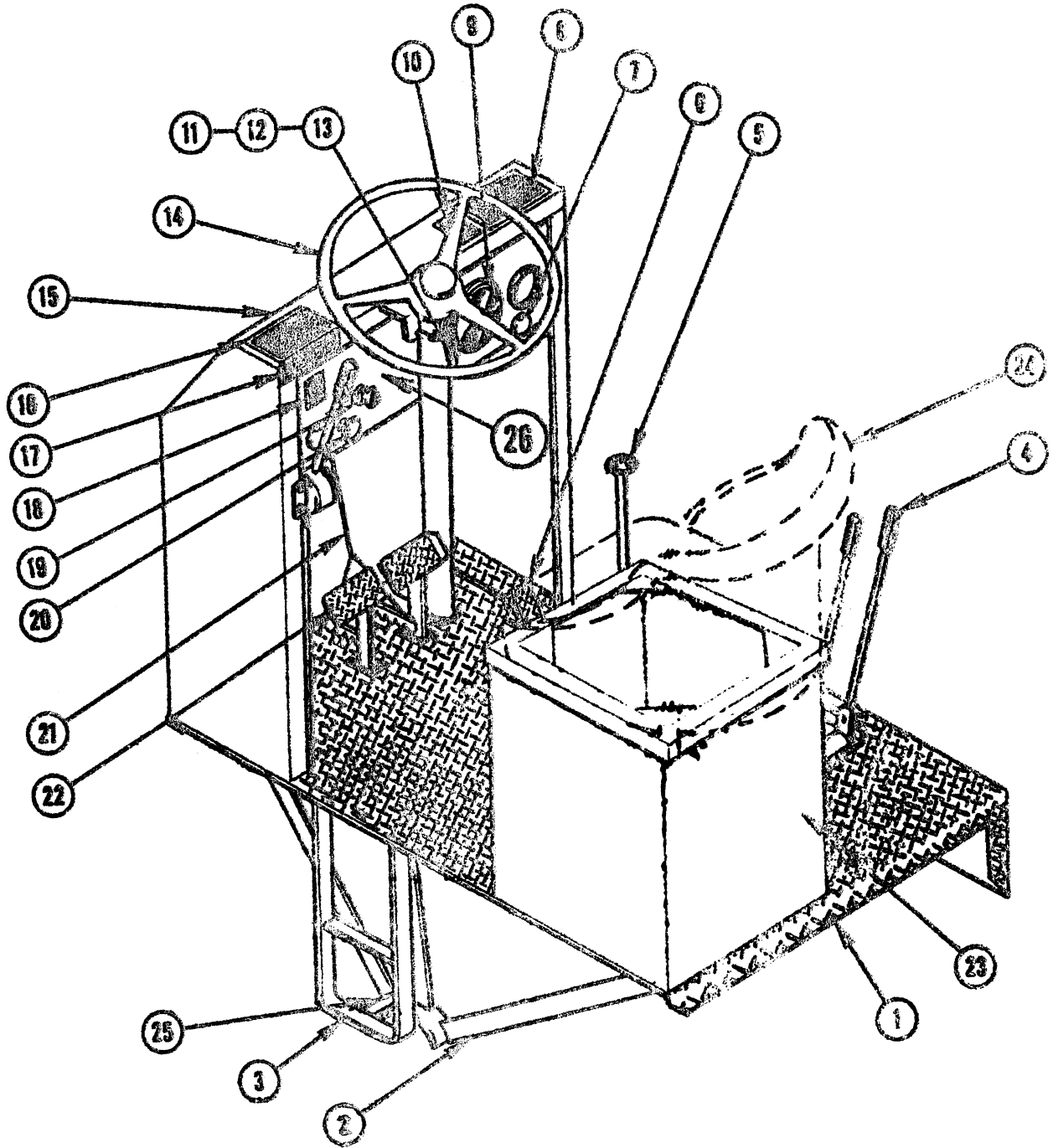
OPERATORS PLATFORM ASS'Y
 NO. 11,239

<u>ITEM NO.</u>	<u>PART NO.</u>	<u>ASSEMBLY NO.</u>	<u>DESCRIPTION</u>	<u>NO. REQ.</u>
1	11,080		Operators Platform	1
2	11,126		Platform Support	1
3	8813		Step Weldment	1
*4		13,187	Valve Control Ass'y (Page 50)	1
5		11,250	Shifting Ass'y (Page 34)	1
*6		12,546	Accelerator Ass'y (Page 30)	1
7	P-10035		Choke Control	1
8	7371		Hand Lever Control Tag	1
9	P-10036		Cluster Gauge	1
10	11,208		Shifting Tag	1
11	7683		Strap	1
12	7682		Cover	1
13	P-10074		Hour Meter (Optional)	1
*14		12,928	Steering Ass'y (Page 22)	1
15	11,244		Instrument Panel	1
16	450		Serial Number Tag	1
17	7521		Caution Tag	1
18	7524		Torque Converter Tag	1
19	P-10037		Ignition Switch	1
20	P-10007		Brake Lock Cable	1
21		7597	Brake Lock Ass'y (Page 64)	1
22		11,253	Brake & Torq. Conv. Ass'y (Page 26)	1
23	6952		Tool Box & Seat Stand	1
24	P-11618		Seat	1
25	11,193		Support Strap	1
26	8638		Dashboard	1

- *4 Use No. 11,262 Before Serial Number 2456
- *6 Use No. 11,260 Thru Serial Number 2378.
- *14 Was No. 12,327 Up to Serial Number 2450.

LULL ENGINEERING COMPANY, INC.
3045 HIGHWAY 13,
ST. PAUL, MINNESOTA 55121

OPERATOR'S PLATFORM ASSEMBLY
NO. 13,481



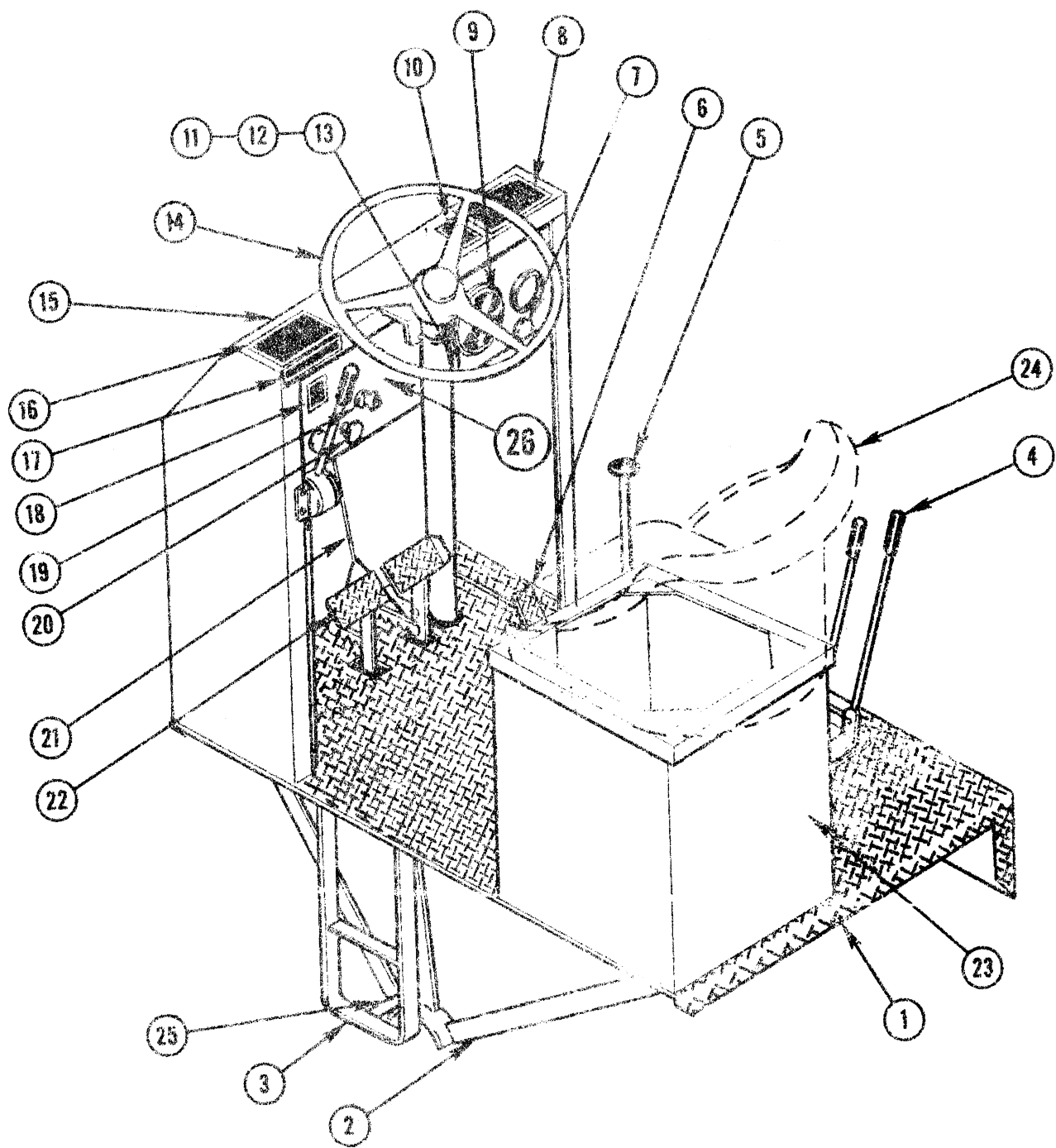
702-31'

LULL ENGINEERING COMPANY INC.
 2045 HIGHWAY 13,
 ST. PAUL, MINNESOTA 55121

OPERATOR'S PLATFORM ASS'Y
 NO. 13.481

<u>ITEM NO.</u>	<u>PART NO.</u>	<u>ASSEMBLY NO.</u>	<u>DESCRIPTION</u>	<u>NO. REQ.</u>
1	11,080		Operators Platform	1
2	11,126		Platform Support	1
3	8813		Step Weldment	1
4		13,479	Valve Control Ass'y (Page 50)	1
5		11,250	Shifting Ass'y (Page 34)	1
6		12,546	Accelerator Ass'y (Page 30)	1
7	P-10035		Choke Control	1
8	7371		Hand Lever Control Tag	1
9	P-10036		Cluster Gauge	1
10	11,208		Shifting Tag	1
11	7683		Strap	1
12	7682		Cover	1
13	P-12631		Hour Meter	1
14		*14,006	Steering Ass'y (Page 22)	1
15	11,244		Instrument Panel	1
16	450		Serial Number Tag	1
17	7521		Caution Tag	1
18	7524		Torque Converter Tag	1
19	P-10037		Ignition Switch	1
20	P-10007		Brake Lock Cable	1
21		7597	Brake Lock Ass'y (Page 64)	1
22		11,253	Brake & Torq. Conv. Ass'y (Page 26)	1
23	6952		Tool Box and Seat Stand	1
24	P-11618		Seat	1
25	11,193		Support Strap	1
26	8638		Dashboard	1

*NOTE: Use #13,485 Steering Assembly through S/N 2535.



OPERATORS PLATFORM ASSEMBLY

NO. 11,240

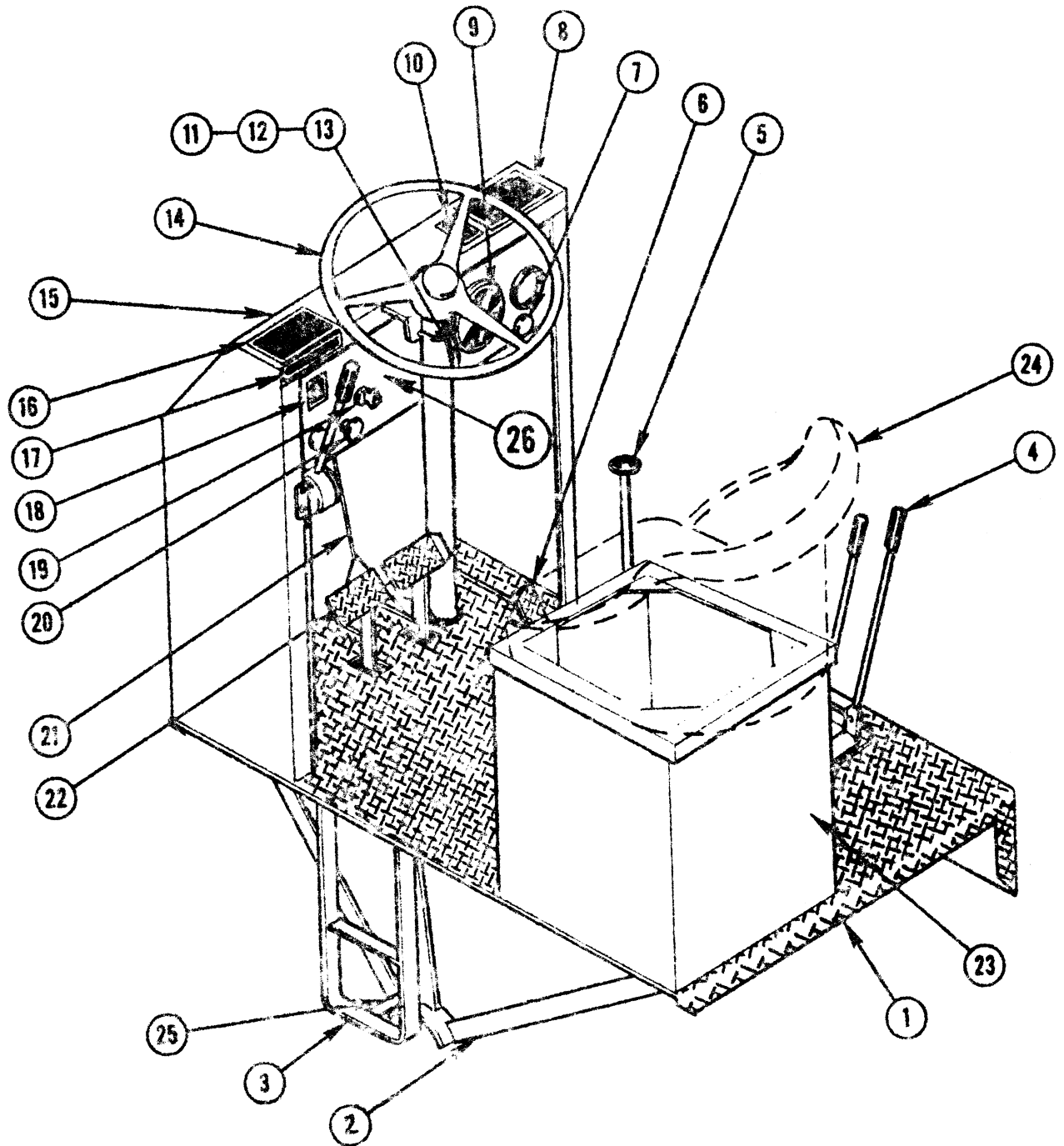
LULL ENGINEERING COMPANY. INC.
 3045 HIGHWAY 13,
 ST. PAUL 11, MINNESOTA 55111

OPERATORS PLATFORM ASS'Y
 NO. 11,240

<u>ITEM NO.</u>	<u>PART NO.</u>	<u>ASSEMBLY NO.</u>	<u>DESCRIPTION</u>	<u>NO. REQ.</u>
1	11,080		Operators Platform	1
2	11,126		Platform Support	1
3	8813		Step Weldment	1
4		11,263	Valve Control Ass'y (Page 50)	1
5		11,251	Shifting Ass'y (Page 34)	1
6		11,260	Accelerator Ass'y (Page 30)	1
7	P-10035		Choke Control	1
8	7371		Hand Lever Control Tag	1
9	P-10036		Cluster Gauge	1
10	11,208		Shifting Tag	1
11	7683		Strap	1
12	7682		Cover	1
13	P-10074		Hour Meter	1
14		11,243	Steering Ass'y (Page 22)	1
15	11,244		Instrument Panel	1
16	450		Serial Number Tag	1
17	7521		Caution Tag	1
18	7524		Torque Converter Tag	1
19	P-10037		Ignition Switch	1
20	P-10007		Brake Lock Cable	1
21		7597	Brake Lock Ass'y (Page 64)	1
22		11,253	Brake & Torque Conv. Ass'y (Page 26)	1
23	6952		Tool Box & Seat Stand	1
24	P-11618		Seat	1
25	11,193		Support Strap	1
26	8638		Dashboard	1

LULL ENGINEERING COMPANY, INC.
3045 HIGHWAY 13,
ST. PAUL, MINNESOTA 55121

OPERATOR'S PLATFORM ASSEMBLY
NO. 13,482



702-40'

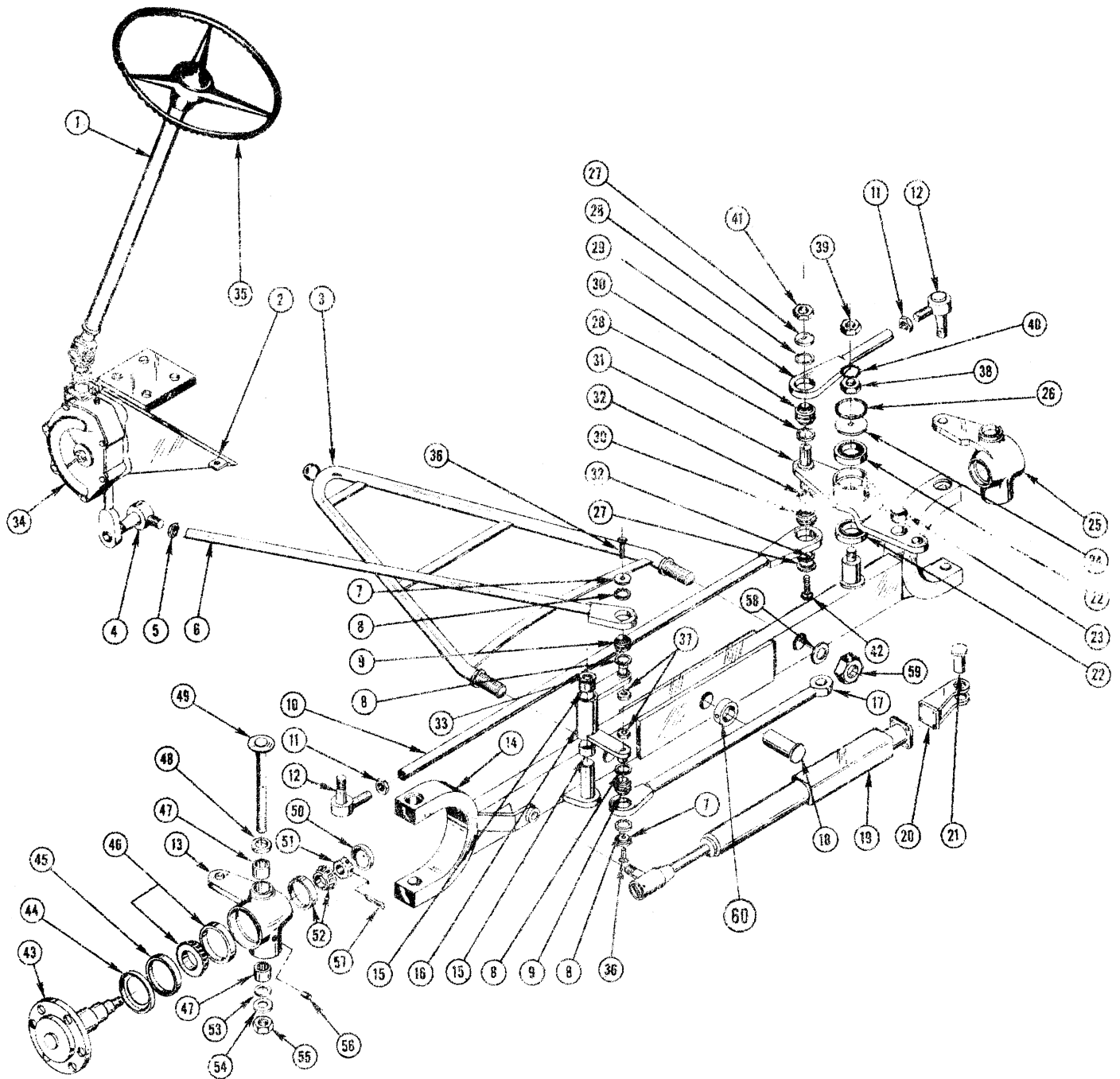
1534

LULL ENGINEERING COMPANY, INC.
 3045 HIGHWAY 13,
 ST. PAUL, MINNESOTA 55121

OPERATOR'S PLATFORM ASS'Y
 NO. 13,482

<u>ITEM NO.</u>	<u>PART NO.</u>	<u>ASSEMBLY NO.</u>	<u>DESCRIPTION</u>	<u>NO. REQ.</u>
1	11,080		Operator's Platform	1
2	11,126		Platform Support	1
3	8813		Step Weldment	1
4		13,480	Valve Control Ass'y (Page 50)	1
5		11,251	Shifting Ass'y (Page 34)	1
6		12,546	Accelerator Ass'y (Page 30)	1
7	P-10035		Choke Control	1
8	7371		Hand Lever Control Tag	1
9	P-10036		Cluster Gauge	1
10	11,208		Shifting Tag	1
11	7683		Strap	1
12	7682		Cover	1
13	P-12631		Hour Meter	1
14		*14,007	Steering Ass'y (Page 22)	1
15	11,244		Instrument Panel	1
16	450		Serial Number Tag	1
17	7521		Caution Tag	1
18	7524		Torque Converter Tag	1
19	P-10037		Ignition Switch	1
20	P-10007		Brake Lock Cable	1
21		7597	Brake Lock Ass'y (Page 64)	1
22		11,253	Brake & Torq. Conv. Ass'y (Page 26)	1
23	6952		Tool Box & Seat Stand	1
24	P-11618		Seat	1
25	11,193		Support Strap	1
26	8638		Dashboard	1

*NOTE: Use #13,485 Steering Assembly through S/N 2535.



STEERING ASSEMBLY 11242

STEERING ASSEMBLY

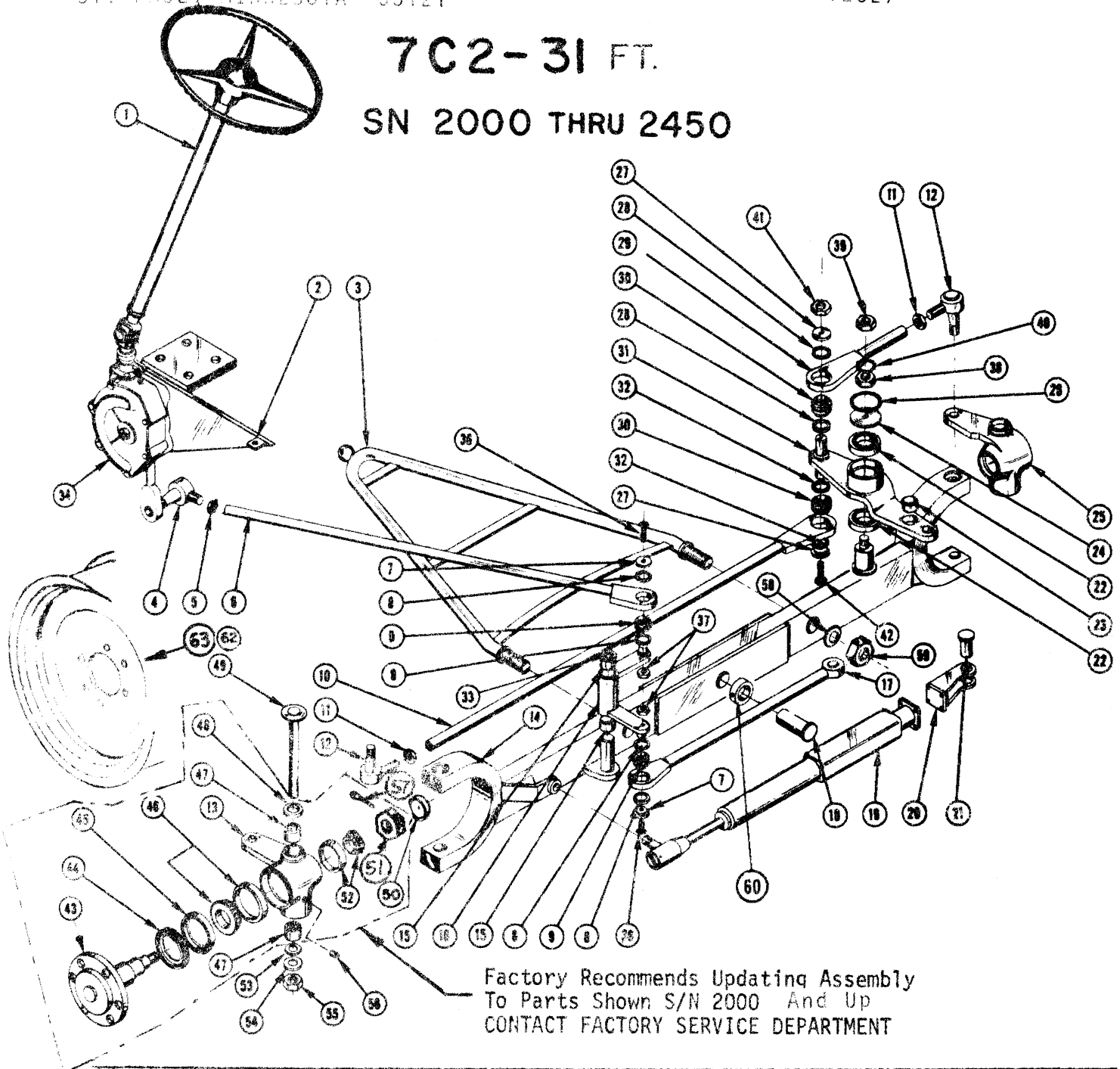
NO. 11,242

7C2-31'

ITEM NO.	PART NO.	ASSEMBLY NO.	DESCRIPTION	NO. REQ.
1		P-11653	Steering Column Ass'y (Page 24)	1
2	1171		Steering Gear Bracket	1
3	11,136		Wish Bone	1
4	P-10343		Tie Rod End	1
5	7602		Special Nut	1
6	11,154		Drag Link	1
7	8802		Retainer	2
8	P-11495		Felt Washer	4
9	P-11496		Swivel Bushing	2
10	8275		Tie Rod	1
11	7615		Special Nut	2
12	P-10345		Tie Rod End	2
13	8230		Axle Spindle (LH)	1
14	11,135		Axle	1
15	5209		Bushing	2
16	8801		Bell Crank	1
17	8759		Booster Actuating Rod	1
18	11,157		Axle Pivot Pin	1
19		P-11126	Booster Assembly (Page 46)	1
20	7931		Booster Clevis	1
21	7927		Clevis Pin	1
22	P-11306		Bearing	2
23	7965		Bushing	1
24	7930		Bearing Retainer	1
25	8229		Axle Spindle (R.H.)	1
26	P-10314		"O" Ring	1
27	8300		Retainer	1
28	P-11428		Felt Washer	2
29	8273		Tie Rod	1
30	P-11430		Swivel Bushing	2
31	11,165		Toggle	1
32	P-11429		Felt Washer	2
33	8301		Retainer	1
34		P-11652	Steering Gear Box Ass'y (Page 25)	1
35	P-10339		Steering Wheel	1
36	COM'L		5/16 NC x 2" F.H. Screw	2
37	COM'L		5/16 NC Cast Nut	2
38	COM'L		Nut, 3/4-16 N.F. Full	1
39	COM'L		Nut, 3/4-16 NF, Jam	1
40	COM'L		Washer, 3/4" Shakeproof	1
41	COM'L		Nut Cast 1/2-20 N.F.	1
42	COM'L		Bolt, 1/2-20 N.F. x 20"	1
43	IK-713-G		Spindle	2
44	IK-738-A		Cup	2
45	IK-737-A		Seal	2
46	IKS-5014		Bearing	2
47	105434-A		Bearing	4
48	IKS-5039		Bearing	2
49	105-431-A		Pivot, Spindle Carrier	2
50	105-438-A		Cap	2
51	IK-731-A		Nut	2
52	IKS-5013		Bearing	2
53	105437-A		Seal	2
54	IK-727-A		Washer, Thrust	2
55	105436-A		Nut	2
56	943-420		Plug	1
57	932-047		Cotter Pin	2
58	920097		Lockwasher 1 1/4"	2
59	915-011		Nut, 1 1/4-12 Hex	2
60	8746		Collar	1

1124A

7C2-31 FT.
 SN 2000 THRU 2450



ITEM NO.	PART NO.	ASSEMBLY NO.	DESCRIPTION	NO. RE
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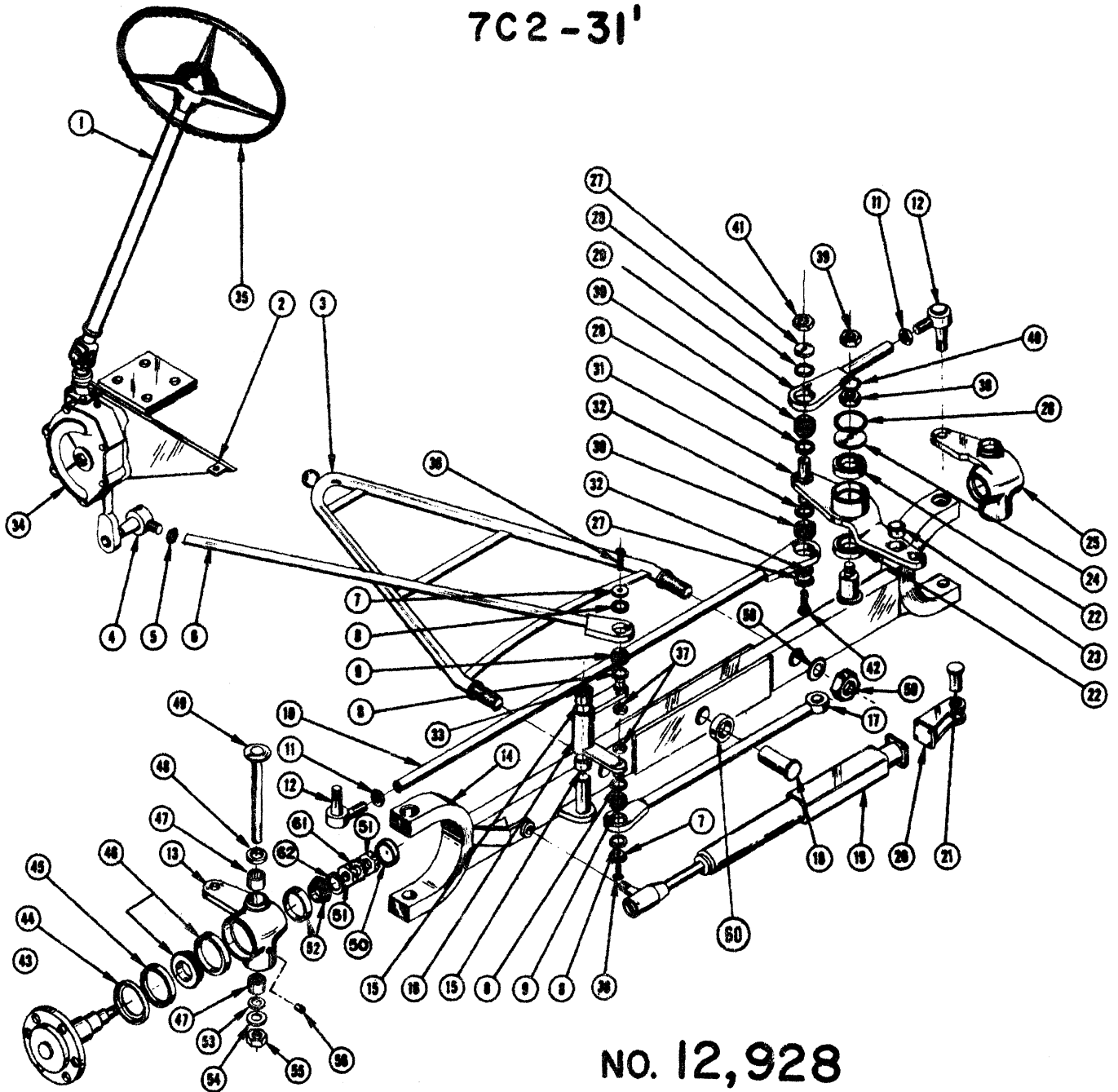
1		P-11653	Steering Column Ass'y (Page 24)	1
2	1171		Steering Gear Bracket	1
3	11,136		Wishbone	1
4	P-10343		Tie Rod End	1
5	7602		Special Nut	1
6	11,154		Drag Link	1
7	8802		Retainer	2
8	P-11495		Felt Washer	4
9	P-11496		Swivel Bushing	2
10	8275		Tie Rod	1
11	7615		Special Nut	2
12	P-10345		Tie Rod End	2

STEERING ASSEMBLY NO. 12327

<u>ITEM NO.</u>	<u>PART NO.</u>	<u>ASSEMBLY NO.</u>	<u>DESCRIPTION</u>	<u>NO. REQ.</u>
13	P-16012		Axle Spindle, Left Hand	1
14	11,135		Axle	1
15	5209		Bushing	2
16	8801		Bell Crank	1
17	8759		Booster Actuating Rod	1
18	11,157		Axle Pivot Pin	1
19		P-11126	Booster Assembly (Page 46)	1
20	7931		Booster Clevis	1
21	7927		Clevis Pin	1
22	P-11306		Bearing	2
23	7965		Bushing	1
24	7930		Bearing Retainer	1
25	P-16013		Axle Spindle, Right Hand	1
26	P-10314		O-Ring	1
27	8300		Retainer	2
28	P-11428		Felt Washer	2
29	8273		Tie Rod	1
30	P-11430		Swivel Bushing	2
31	11,165		Toggle	1
32	P-11429		Felt Washer	2
33	8301		Retainer	1
34	*P-11652		Steering Gear (Page 25)	1
35				
36	COM'L		Screw, 5/16-18 N.C. x 2"	2
37	COM'L		Nut, Cast. 5/16 N.C.	2
38	COM'L		Nut, 3/4-16 N.F. Full	1
39	COM'L		Nut, 3/4-16 N.F. Jam	1
40	COM'L		Washer, Shakeproof 3/4"	1
41	COM'L		Nut, Cast. 1/2-20 N.F.	1
42	COM'L		Bolt, 1/2-20 N.F. x 4"	1
43	P-17456		Spindle	2
44	P-14000		Seal	2
45	P-13999		SLEEVE	2
46	P-14001		Bearing	2
47	P-13984		Bearing	4
48	P-13985		Bearing	2
49	P-14742		Pivot Spindle Carrier	2
50	P-15963		Cap	2
51	P-13988		Nut	2
52	P-14007		Bearing	2
53	P-13990		Seal	2
54	P-13991		Washer, Thrust	2
55	P-13992		Nut	2
56	P-13993		Plug	1
57	P-13994		Cotter Pin	2
58	P-14350		Lockwasher	2
59	P-14662		Nut, Hex	2
60	8746		Collar	1
62	P-13494		TIRE	2
63	12,339 — (P-16011)		Wheel Weldment	2

*NOTE: Item #34 P-11662 Steering Gear is no longer available as a complete new assembly. If complete new assembled gear box is necessary order Bracket # 12981, P-13702 Column Assembly and P-13701 Gear Box. Pitman Arm not included - Old one can be reused.

7C2-31'



NO. 12,928
STEERING ASSEMBLY

S/N 2451 AND UP

ITEM NO.	PART NO.	ASSEMBLY NO.	DESCRIPTION	NO. REQ.
1		P-13702	Steering Column Ass'y (Page 24)	1
2	12,891		Steering Gear Bracket	1
3	11,136		Wishbone	1
4	P-10343		Tie Rod End	1
5	7602		Special Nut	1
6	11,154		Drag Link	1
7	8802		Retainer	2
8	P-11495		Felt Washer	4

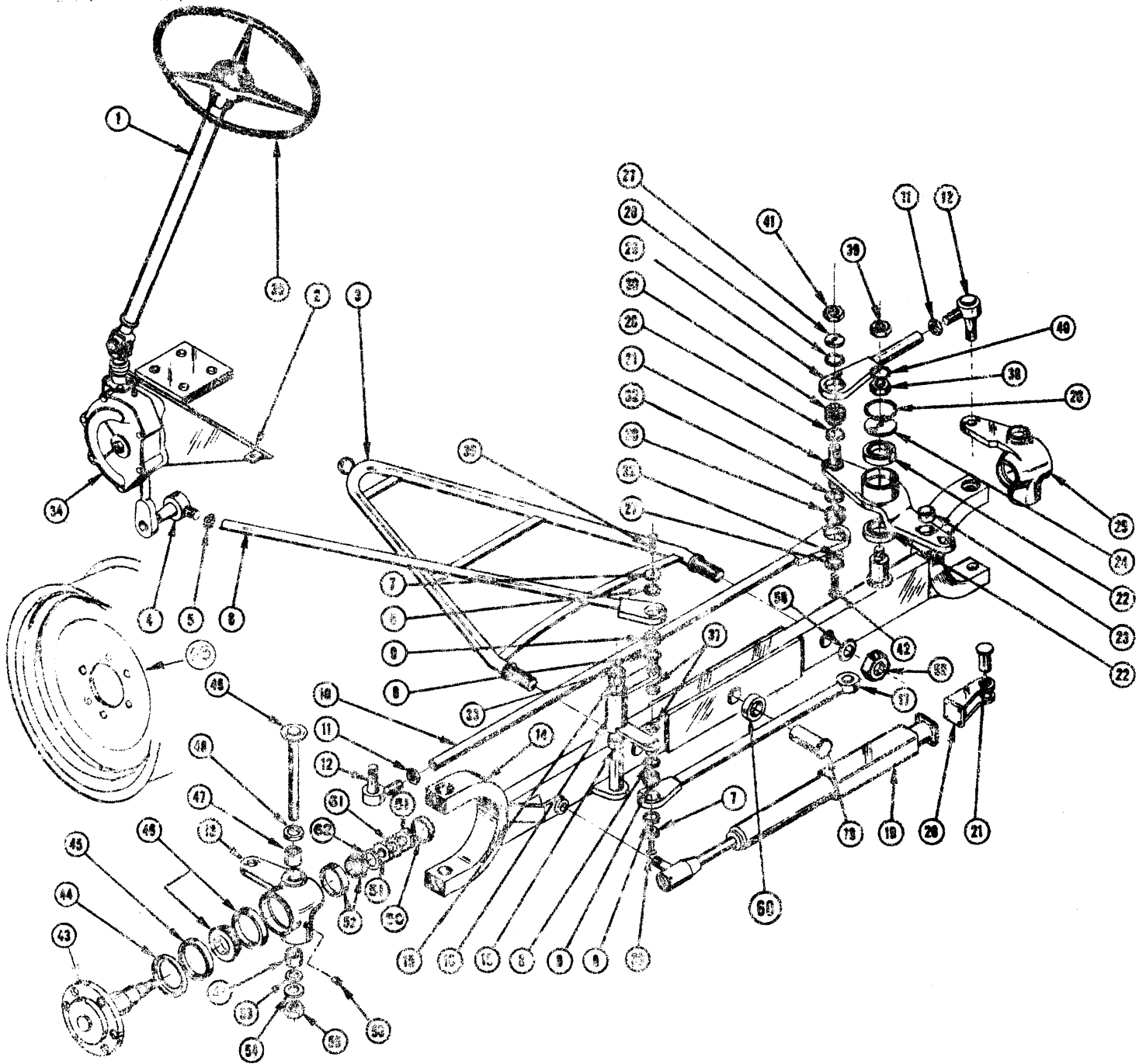
STEERING ASSEMBLY

NO. 12,928

7C2 Series

S/N 2451 AND UP

ITEM NO.	PART NO.	ASSEMBLY NO.	DESCRIPTION	NO. REQ.
9	P-11496		Swivel Bushing	2
10	8275		Tie Rod	1
11	7615		Special Nut	2
12	P-10345		Tie Rod End	2
13	303025403		Axle Spindle (L.H.)	1
14	11,135		Axle	1
15	5209		Bushing	2
16	8801		Bell Crank	1
17	8759		Booster Actuating Rod	1
18	11,157		Axle Pivot Pin	1
19		P-11126	Booster Assembly (Page 46)	1
20	7931		Booster Clevis	1
21	7927		Blevis Pin	1
22	P-11306		Bearing	2
23	7965		Bushing	1
24	7930		Bearing Retainer	1
25	303025411		Axle Spindle (R.H.)	1
26	P-10314		O-Ring	1
27	8300		Retainer	2
28	P-11428		Felt Washer	2
29	8273		Tie Rod	1
30	P-11430		Swivel Bushing	2
31	11,165		Toggle	1
32	P-11429		Felt Washer	2
33	8301		Retainer	1
34	P-13701		Steering Gear	1
35	P-10339		Steering Wheel	1
36	COM'L		Screw, 5/16 NC x 2" F.H.	2
37	COM'L		Nut, Cast 5/16 N.C.	2
38	COM'L		Nut, 3/4-16 NF Full	1
39	COM'L		Nut, 3/4-16 NF Jam	1
40	COM'L		Washer, Shakeproof 3/4"	1
41	COM'L		Nut, Cast 1/2-20 NF	1
42	COM'L		Bolt, 1/2-20 NF x 20"	1
43	303025438		Spindle	2
44	165756-A		Cup	2
45	165-757		Seal	2
46	165-804-A		Bearing	2
47	105434-A		Bearing	4
48	IKS-5039		Bearing	2
49	105-431-A		Pivot, Spindle Carrier	2
50	165-762-A		Cap	2
51	30-3026884		Nut	4
52	165-805		Bearing	2
53	105437-A		Seal	2
54	IK-727-A		Washer, Thrust	2
55	105436-A		Nut	2
56	943-420		Plug	1
57				
58	920-097		Lockwasher	2
59	915-011		Nut, Hex	2
60	8746		Collar	1
61	303026892		Lockwasher Steering Knuckle	2
62	303026906		Washer Steering Knuckle	2

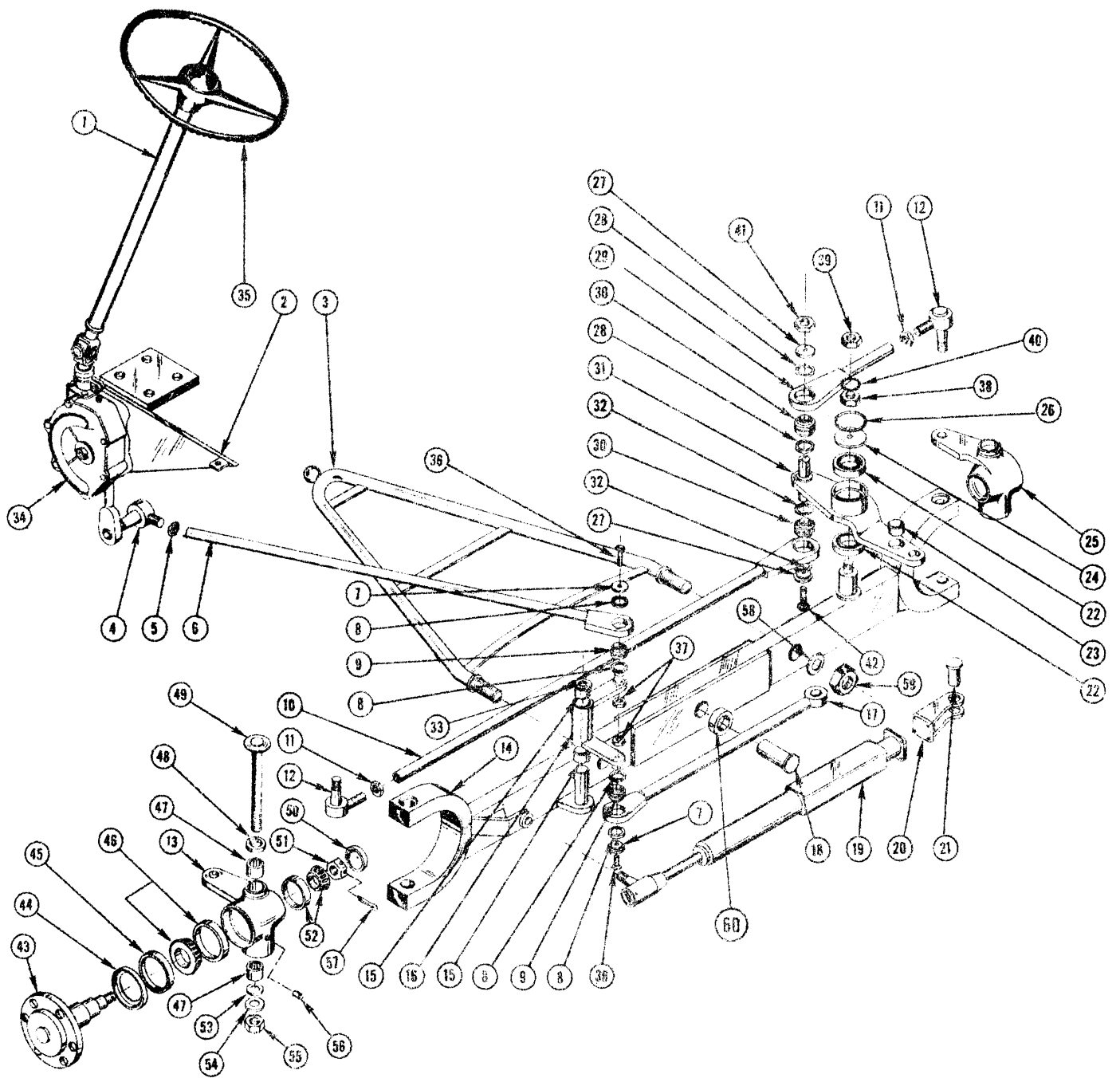


ITEM NO.	PART NO.	ASSEMBLY NO.	DESCRIPTION	NO. REQ.
1		P-13702	Steering Column Ass'y (Page 24)	1
2	12,891		Steering Gear Bracket	1
3	11,136		Wishbone	1
4	P-10343		Tie Rod End	1
5	7602		Special Nut	1
6	11,154		Drag Link	1
7	8802		Retainer	2
8	P-11495		Felt Washer	4
9	P-11496		Swivel Bushing	2
10	8275		Tie Rod	1
11	7615		Special Nut	2
12	P-10345		Tie Rod End	2

LULL ENGINEERING COMPANY, INC.
 3045 HIGHWAY 13,
 ST. PAUL, MINNESOTA 55121

STEERING ASSEMBLY
 NO. 13,486

<u>ITEM NO.</u>	<u>PART NO.</u>	<u>ASSEMBLY NO.</u>	<u>DESCRIPTION</u>	<u>NO. REQ.</u>
13	P-16012		Axle Spindle, Left Hand	1
14	11,135		Axle	1
15	5209		Bushing	2
16	8801		Bell Crank	1
17	8759		Booster Actuating Rod	1
18	11,157		Axle Pivot Pin	1
19		P-11126	Booster Assembly (Page 46)	1
20	7931		Booster Clevis	1
21	7927		Clevis Pin	1
22	P-11306		Bearing	2
23	7965		Bushing	1
24	7930		Bearing Retainer	1
25	P-16013		Axle Spindle, Right Hand	1
26	P-10314		O-Ring	1
27	8300		Retainer	2
28	P-11428		Felt Washer	2
29	8273		Tie Rod	1
30	P-11430		Swivel Bushing	2
31	11,165		Toggle	1
32	P-11429		Felt Washer	2
33	8301		Retainer	1
34	P-13701		Steering Gear	1
35	P-10339		Steering Wheel	1
36	COM'L		Screw, 5/16-18 N.C. x 2"	2
37	COM'L		Nut, Cast 5/16 N.C.	2
38	COM'L		Nut, 3/4-16 N.F. Full	1
39	COM'L		Nut, 3/4-16 N.F. Jam	1
40	COM'L		Washer, Shakeproof 3/4"	1
41	COM'L		Nut, Cast 1/2-20 N.F.	1
42	COM'L		Bolt, 1/2-20 N.F. x 20"	1
43	P-16974		Spindle	2
44	P-13999		Cup	2
45	P-14000		Seal	2
46	P-14001		Bearing	2
47	P-13984		Bearing	4
48	P-13985		Bearing	2
49	P-14742		Pivot Spindle Carrier	2
50	P-15963		Cap	2
51	P-17188		Nut	4
52	P-14007		Bearing	2
53	P-13990		Seal	2
54	P-13991		Washer, Thrust	2
55	P-13992		Nut	2
56	P-13993		Plug	1
58	P-14350		Lockwasher	2
59	P-14662		Nut, Hex	2
60	8746		Collar	1
61	P-14039		Lockwasher, Steering Knuckle	2
62	P-14012		Washer, Steering Knuckle	2
63	12,339		Wheel Weldment	2

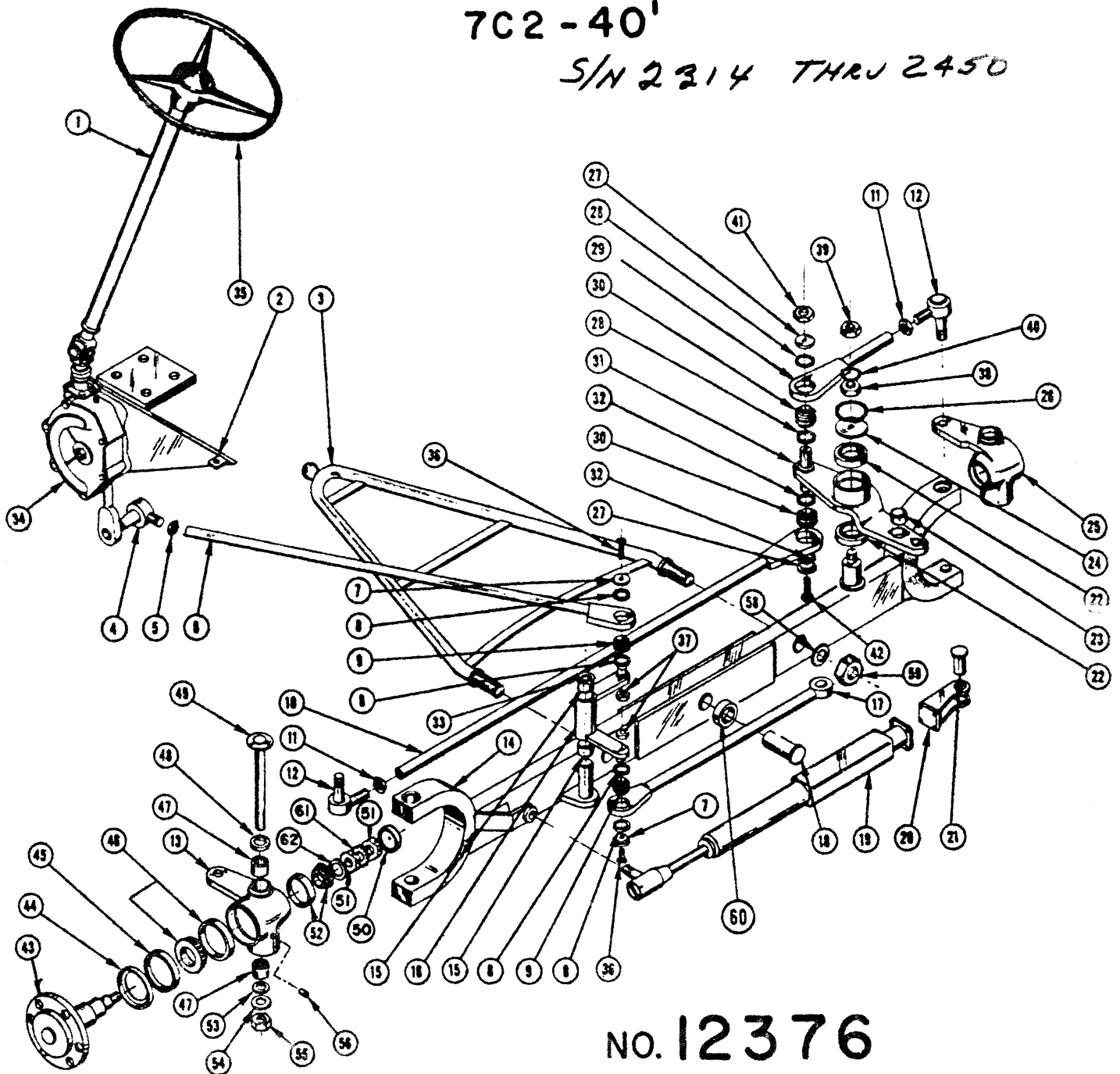


STEERING ASSEMBLY 11243

ITEM NO.	PART NO.	ASSEMBLY NO.	DESCRIPTION	NO. REQ.
1		P-11653	Column Assembly (Page 24)	1
2	1171		Steering Bracket	1
3	11,090		Wishbone	1
4	P-10343		Tie Rod End	1
5	7602		Special Nut	1
6	11,188		Drag Link	1
7	8802		Retainer	2
8	P-11495		Felt Washer	4
9	P-11496		Swivel Bushing	2
10	8275		Tie Rod	1
11	7615		Special Nut	2
12	P-10345		Tie Rod End	2
13	8230		Axle Spindle (L.H.)	1
14	11,135		Axle	1
15	5209		Bushing	2
16	8801		Bell Crank	1
17	8759		Booster Actuating Rod	1
18	11,157		Axle Pivot Pin	1
19		P-11126	Booster Ass'y (Page 46)	1
20	7931		Booster Clevis	1
21	7927		Clevis Pin	1
22	P-11306		Bearing	2
23	7965		Bushing	1
24	7930		Bearing Retainer	1
25	8229		Axle Spindle (R.H.)	1
26	P-10314		O-Ring	1
27	8300		Retainer	2
28	P-11428		Felt Washer	2
29	8273		Tie Rod	1
30	P-11430		Swivel Bushing	2
31	11,165		Toggle	1
32	P-11429		Felt Washer	2
33	8301		Retainer	1
34		P-11652	Steering Gear Box Ass'y (Page 22)	1
35	P-10339		Steering Wheel	1
36	Com'1		Screw, 5/16 NC x 2" F.H.	2
37	Com'1		Nut, Cast 5/16 NC	2
38	Com'1		Nut, Full 3/4-16 NF	1
39	Com'1		Nut, Jam 3/4-16 NF	1
40	Com'1		Washer, Shakeproof 3/4"	1
41	Com'1		Nut, Cast. 1/2-20 NF	1
42	Com'1		Bolt, 1/2-20 NF x 20"	1
43	IK-713-G		Spindle	2
44	IK-738-A		Cup	2
45	IK-737-A		Seal	2
46	IKS-5014		Bearing	2
47	105434-A		Bearing	4
48	IKS-5039		Bearing	2
49	105-431-A		Pivot Spindle Carrier	2
50	105-438-A		Cap	2
51	IK-731-A		Nut	2
52	IKS-5013		Bearing	2
53	105437-A		Seal	2
54	IK-727-A		Washer Thrust	2
55	105-436-A		Nut	2
56	943-420		Plug	1
57	932-047		Cotter Pin	2
58	920-097		Lockwasher	2
59	915-011		Nut	2
60	8746		Collar	1

7C2-40'

S/N 2314 THRU 2450



No. 12376

STEERING ASSEMBLY

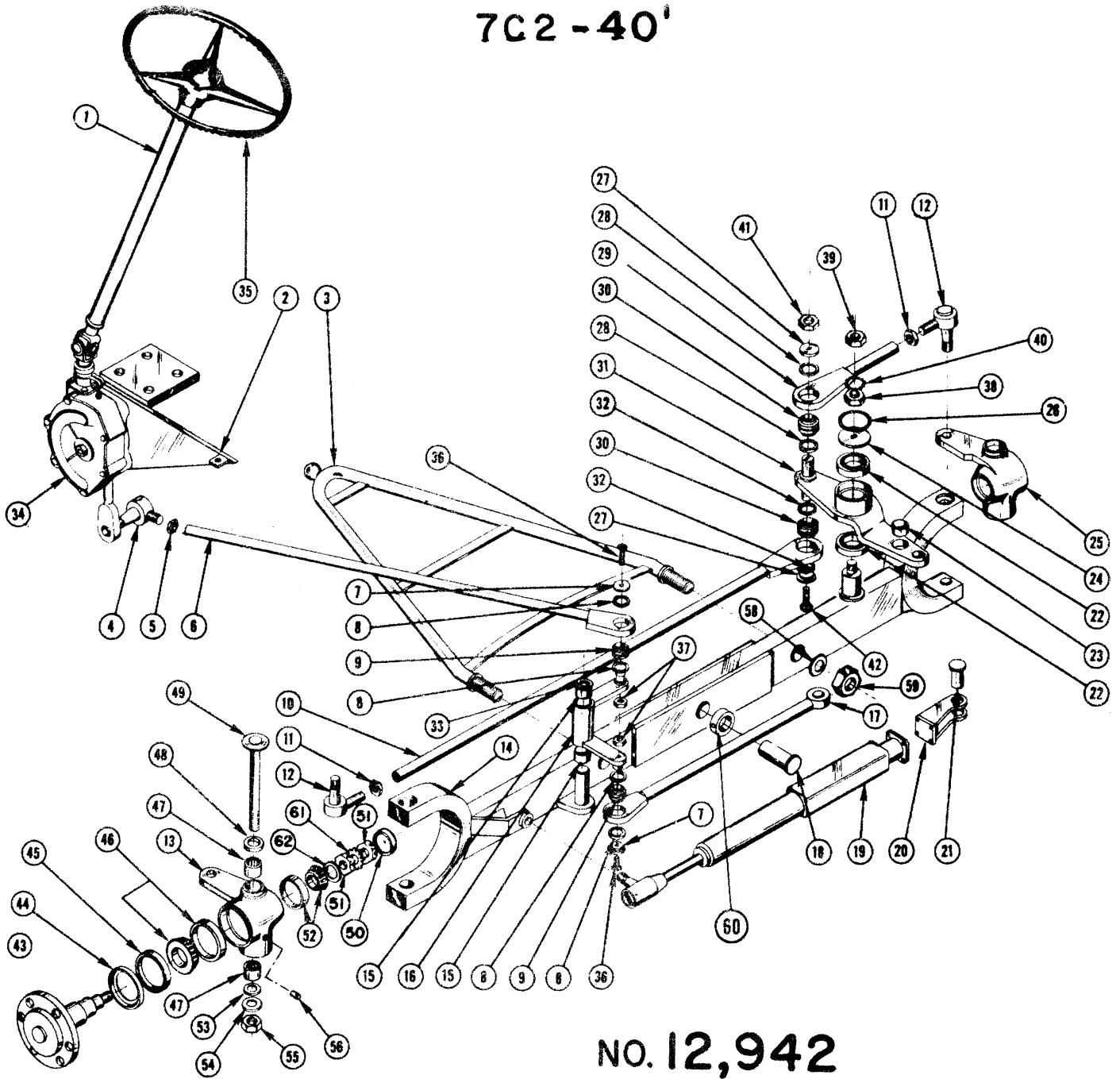
ITEM NO.	PART NO.	ASSEMBLY NO.	DESCRIPTION	NO. REQ.
1		P-11653	Steering Column Ass'y (Page 24)	1
2	1171		Steering Gear Bracket	1
3	11,090		Wishbone	1
4	P-10343		Tie Rod End	1
5	7602		Special Nut	1
6	11,188		Drag Link	1
7	8802		Retainer	2
8	P-11495		Felt Washer	4

STEERING ASSEMBLY NO 12376

ITEM NO.	PART NO.	ASSEMBLY NO.	DESCRIPTION	NO. REQ.
13	P-16012		Axle Spindle, Left Hand	1
14	11,135		Axle	1
15	5209		Bushing	2
16	8801		Bell Crank	1
17	8759		Booster Actuating Rod	1
18	11,157		Axle Pivot Pin	1
19		P-11126	Booster Assembly (Page 46)	1
20	7931		Booster Clevis	1
21	7927		Clevis Pin	1
22	P-11306		Bearing	2
23	7965		Bushing	1
24	7930		Bearing Retainer	1
25	P-15013		Axle Spindle, Right Hand	1
26	P-10314		O-Ring	1
27	8300		Retainer	2
28	P-11428		Felt Washer	2
29	8273		Tie Rod	1
30	P-11430		Swivel Bushing	2
31	11,165		Toggle	1
32	P-11429		Felt Washer	2
33	8301		Retainer	1
34	*P-11652		Steering Gear (See page 25)	1
35				
36	COM'L		Screw, 5/16-18 N.C. x 2"	2
37	COM'L		Nut, Cast. 5/16 N.C.	2
38	COM'L		Nut, 3/4-16 N.F. Full	1
39	COM'L		Nut, 3/4-16 N.F. Jam	1
40	COM'L		Washer, Shakeproof 3/4"	1
41	COM'L		Nut, Cast. 1/2-20 N.F.	1
42	COM'L		Bolt, 1/2-20 N.F. x 4"	1
43	P-17456		Spindle	2
44	P-14000		Seal	2
45	P-13999		SLEEVE	2
46	P-14001		Bearing	2
47	P-13984		Bearing	4
48	P-13985		Bearing	2
49	P-14742		Pivot Spindle Carrier	2
50	P-15963		Cap	2
51	P-13988		Nut	2
52	P-14007		Bearing	2
53	P-13990		Seal	2
54	P-13991		Washer, Thrust	2
55	P-13992		Nut	2
56	P-13993		Plug	1
57	P-13994		Cotter Pin	2
58	P-14350		Lockwasher	2
59	P-14662		Nut, Hex	2
60	8746		Collar	1
62	P-13494		TIRE	2
63	12,339 — (P-16011)		Wheel Weldment	2

*NOTE: Item #34 P-11652 Steering Gear is no longer available as a complete new assembly. If complete new assembled gear box is necessary order Bracket # 12981, P-13702 Column Assembly and P-13701 Gear Box. Pitman Arm not Included - Old one can be reused.

7C2-40¹

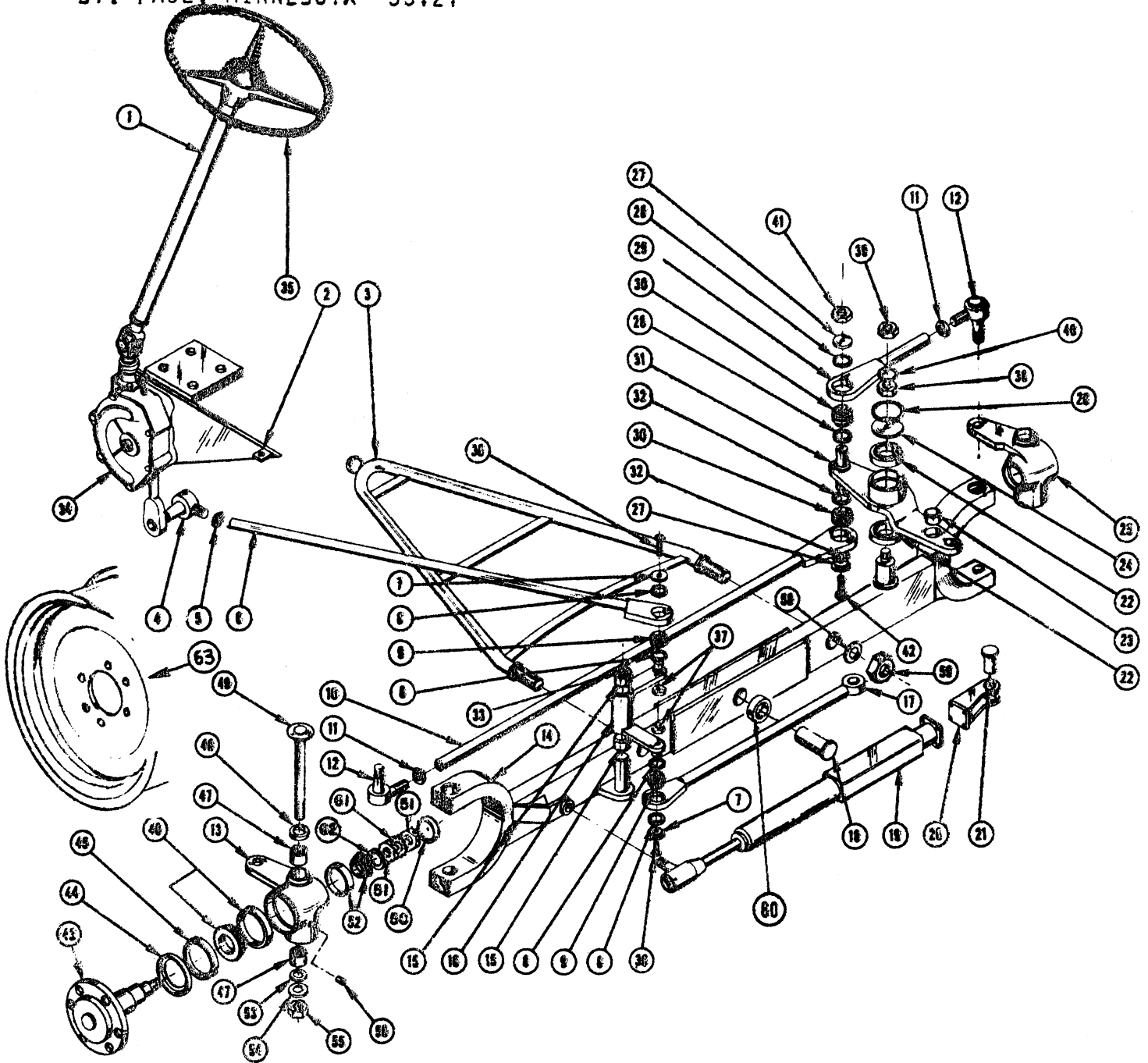


NO. 12,942
STEERING ASSEMBLY

S/N 2451 AND UP

ITEM NO.	PART NO.	ASSEMBLY NO.	DESCRIPTION	NO. REQ.
1		P-13702	Steering Column Ass'y (Page 24)	1
2	12.891		Steering Gear Bracket	1
3	11,090		Wishbone	1
4	P-10343		Tie Rod End	1
5	7602		Special Nut	1
6	11,188		Drag Link	1
7	8802		Retainer	2
8	P-11495		Felt Washer	4

ITEM NO.	PART NO.	ASSEMBLY NO.	DESCRIPTION	NO. REQ.
9	P-11496		Swivel Bushing	2
10	8275		Tie Rod	1
11	7615		Special Nut	2
12	P-10345		Tie Rod End	2
13	303025403	L.H.	Axle Spindle (LH)	1
14	11,135		Axle	1
15	5209		Bushing	2
16	8801		Bell Crank	1
17	8759		Booster Actuating Rod	1
18	11,157		Axle Pivot Pin	1
19		P-11126	Booster Assembly (Page 46)	1
20	7931		Booster Clevis	1
21	7927		Clevis Pin	1
22	P-11306		Bearing	2
23	7965		Bushing	1
24	7930		Bearing Retainer	1
25	303025411	R.H.	Axle Spindle (R.H.)	1
26	P-10314		O-Ring	1
27	8300		Retainer	2
28	P-11428		Felt Washer	2
29	8273		Tie Rod	1
30	P-11430		Swivel Bushing	2
31	11,165		Toggle	1
32	P-11429		Felt Washer	2
33	8301		Retainer	1
34	P-13701		Steering Gear	1
35	P-10339		Steering Wheel	1
36	COM'L		Screw, 5/16 NC x 2" F.H.	2
37	COM'L		Nut, Cast 5/16 N.C.	2
38	COM'L		Nut, 3/4-16 NF Full	1
39	COM'L		Nut, 3/4-16 NF, Jam	1
40	COM'L		Washer, Shakeproof 3/4"	1
41	COM'L		Nut, Cast 1/2-20 NF	1
42	COM'L		Bolt, 1/2-20 NF x 20"	1
43	303025438		Spindle	2
44	165756-A		Cup	2
45	165-757		Seal	2
46	165-804-A		Bearing	2
47	105434-A		Bearing	4
48	IKS-5039		Bearing	2
49	105-431-A		Pivot, Spindle Carrier	2
50	165-762-A		Cap	2
51	30-3026884		Nut	4
52	165-805		Bearing	2
53	105437-A		Seal	2
54	IK-727-A		Washer, Thrust	2
55	105436-A		Nut	2
56	943-420		Plug	1
57				
58	920-097		Lockwasher 1 1/4	2
59	915-011		Nut, Hex 1 1/4-12	2
60	8746		Collar	1
61	303026892		Lockwasher Steering Knuckle Spindle	2
62	303026906		Washer Steering Knuckle Spindle	2



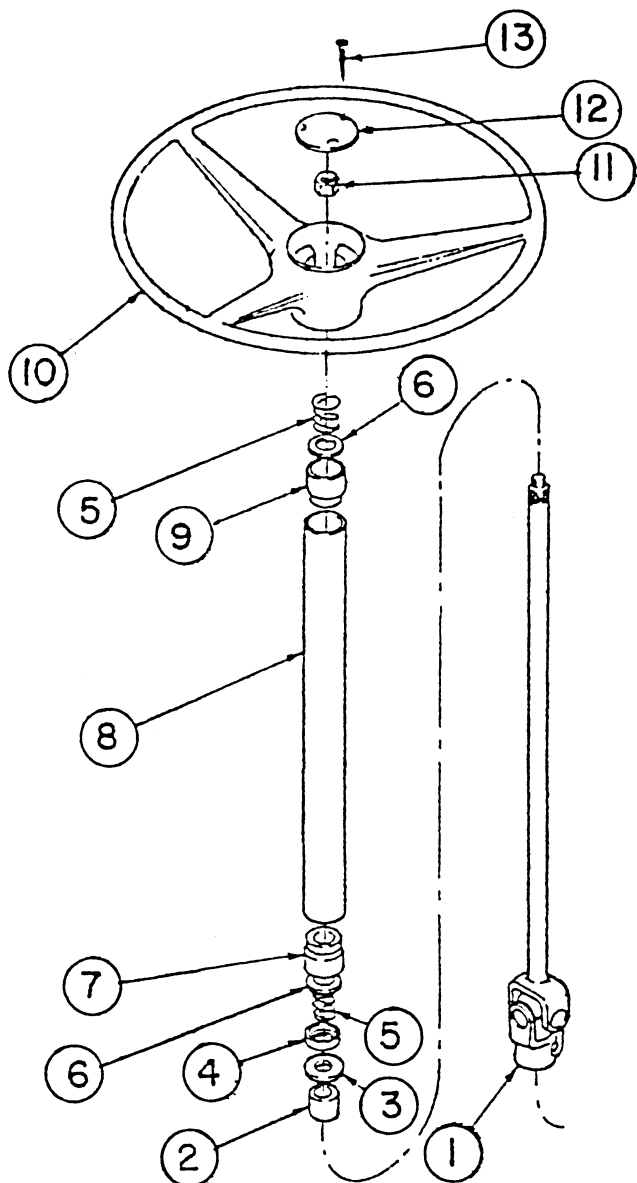
ITEM NO.	PART NO.	ASSEMBLY NO.	DESCRIPTION	NO. REQ.
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1		P-13702	Steering Column Ass'y (Page 24)	1
2	12,891		Steering Gear Bracket	1
3	11,090		Wishbone	1
4	P-10343		Tie Rod End	1
5	7602		Special Nut	1
6	11,188		Drag Link	1
7	8802		Retainer	2
8	P-11495		Felt Washer	4
9	P-11496		Swivel Bushing	2
10	8275		Tie Rod	1
11	7615		Special Nut	2
12	P-10345		Tie Rod End	2

LULL ENGINEERING COMPANY, INC.
 3045 HIGHWAY 13,
 ST. PAUL, MINNESOTA 55121

STEERING ASSEMBLY
 NO. 13,485

<u>ITEM NO.</u>	<u>PART NO.</u>	<u>ASSEMBLY NO.</u>	<u>DESCRIPTION</u>	<u>NO. REQ.</u>
13	P-16012		Axle Spindle, Left Hand	1
14	11,135		Axle	1
15	5209		Bushing	2
16	8801		Bell Crank	1
17	8759		Booster Actuating Rod	1
18	11,157		Axle Pivot Pin	1
19		P-11126	Booster Assembly (Page 46)	1
20	7931		Booster Clevis	1
21	7927		Clevis Pin	1
22	P-11306		Bearing	2
23	7965		Bushing	1
24	7930		Bearing Retainer	1
25	P-16013		Axle Spindle, Right Hand	1
26	P-10314		O-Ring	1
27	8300		Retainer	2
28	P-11428		Felt Washer	2
29	8273		Tie Rod	1
30	P-11430		Swivel Bushing	2
31	11,165		Toggle	1
32	P-11429		Felt Washer	2
33	8301		Retainer	1
34	P-13701		Steering Gear	1
35	P-10339		Steering Wheel	1
36	COM'L		Screw, 5/16-18 N.C. x 2"	2
37	COM'L		Nut, Cast 5/16 N.C.	2
38	COM'L		Nut, 3/4-16 N.F. Full	1
39	COM'L		Nut, 3/4-16 N.F. Jam	1
40	COM'L		Washer, Shakeproof 3/4"	1
41	COM'L		Nut, Cast 1/2-20 N.F.	1
42	COM'L		Bolt, 1/2-20 N.F. x 20"	1
43	P-16974		Spindle	2
44	P-13999		Cup	2
45	P-14000		Seal	2
46	P-14001		Bearing	2
47	P-13984		Bearing	4
48	P-13985		Bearing	2
49	P-14742		Pivot Spindle Carrier	2
50	P-15963		Cap	2
51	P-17188		Nut	4
52	P-14007		Bearing	2
53	P-13990		Seal	2
54	P-13991		Washer, Thrust	2
55	P-13992		Nut	2
56	P-13993		Plug	1
58	P-14350		Lockwasher	2
59	P-14662		Nut, Hex	2
60	8746		Collar	1
61	P-14039		Lockwasher, Steering Knuckle	2
62	P-14012		Washer, Steering Knuckle	2
63	12,339		Wheel Weldment	2



STEERING COLUMN ASSEMBLY

*NOTE: COLUMN & GEAR BOX NO LONGER AVAILABLE

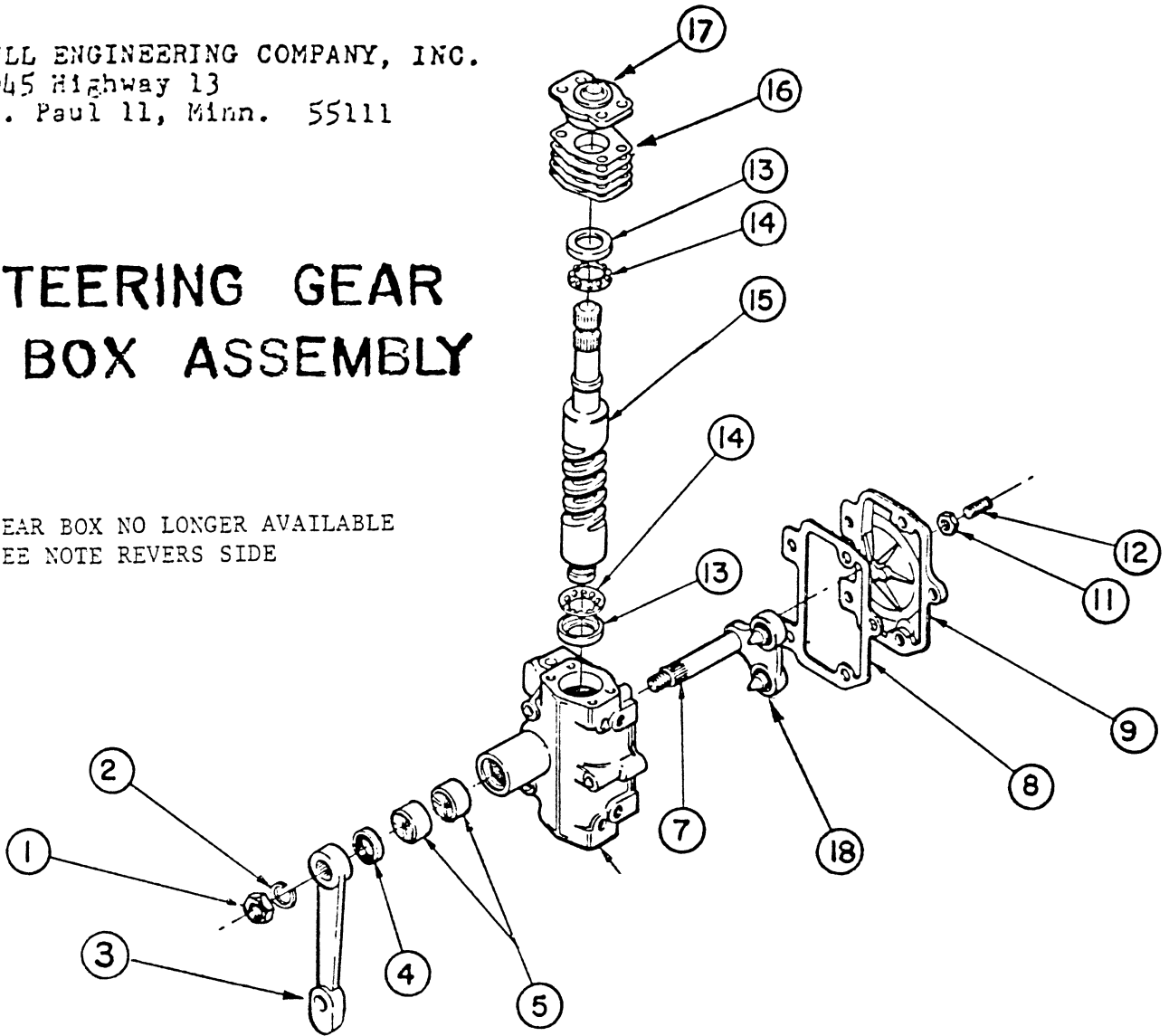
USE THE FOLLOWING PART NUMBERS
 P13702 COLUMN
 P13701 GEAR BOX
 12891C BRAKET (TO MOUNT GEAR BOX)

<u>ITEM NO.</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>	<u>NO. REQ.</u>
1	*	"U" Joint & Wheel Tube Ass'y	1
2	*	Spacer	1
3	*	Washer	1
4	*	Cup, Dust	1
5	*	Spring	2
6	*	Seat, Spring	1
7	*	Lower Column Bearing	1
8	*	Tube, Jacket	1
9	*	Upper Column Bearing	1
10	*	Steering Wheel	1
11	*	Nut, Wheel	1
12	*	Wheel Cap	1
13	*	Screw, Wood	3

LULL ENGINEERING COMPANY, INC.
 3045 Highway 13
 St. Paul 11, Minn. 55111

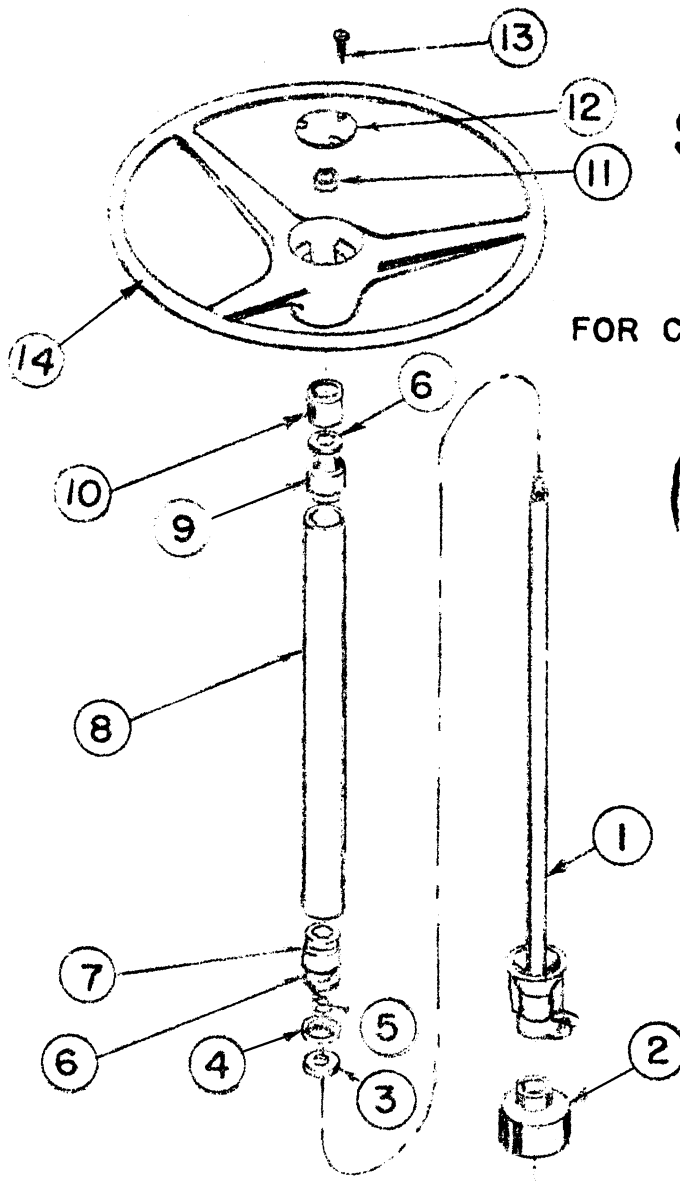
STEERING GEAR BOX ASSEMBLY

* GEAR BOX NO LONGER AVAILABLE
 SEE NOTE REVERS SIDE



<u>ITEM NO.</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>	<u>NO. REQ.</u>
1	*	Lever Shaft Nut	1
2	*	Lever Shaft Lockwasher	1
3	*	Pitman Arm	1
4	*	Oil Seal	1
5	*	Lever Shaft Bearing	2
6	*	Housing	1
7	*	Lever Shaft Ass'y	1
8	*	Gasket	1
9	*	Side Cover	1
11	*	Lock Nut	1
12	*	Adjusting Screw	1
13	*	Cup, Ball	2
14	*	Balls & Retainer	2
15	*	Cam	1
16	*	Shims	1
17	*	Upper Cover & Seal Ass'y	1
18	*	Stud Bearing Ass'y	2

STEERING COLUMN ASSEMBLY



FOR COMPLETE STEERING COLUMN ASS'Y
ORDER NO. P-13702
(COLUMN LESS STEERING WHEEL)
INCLUDES ITEMS 1 THRU 10

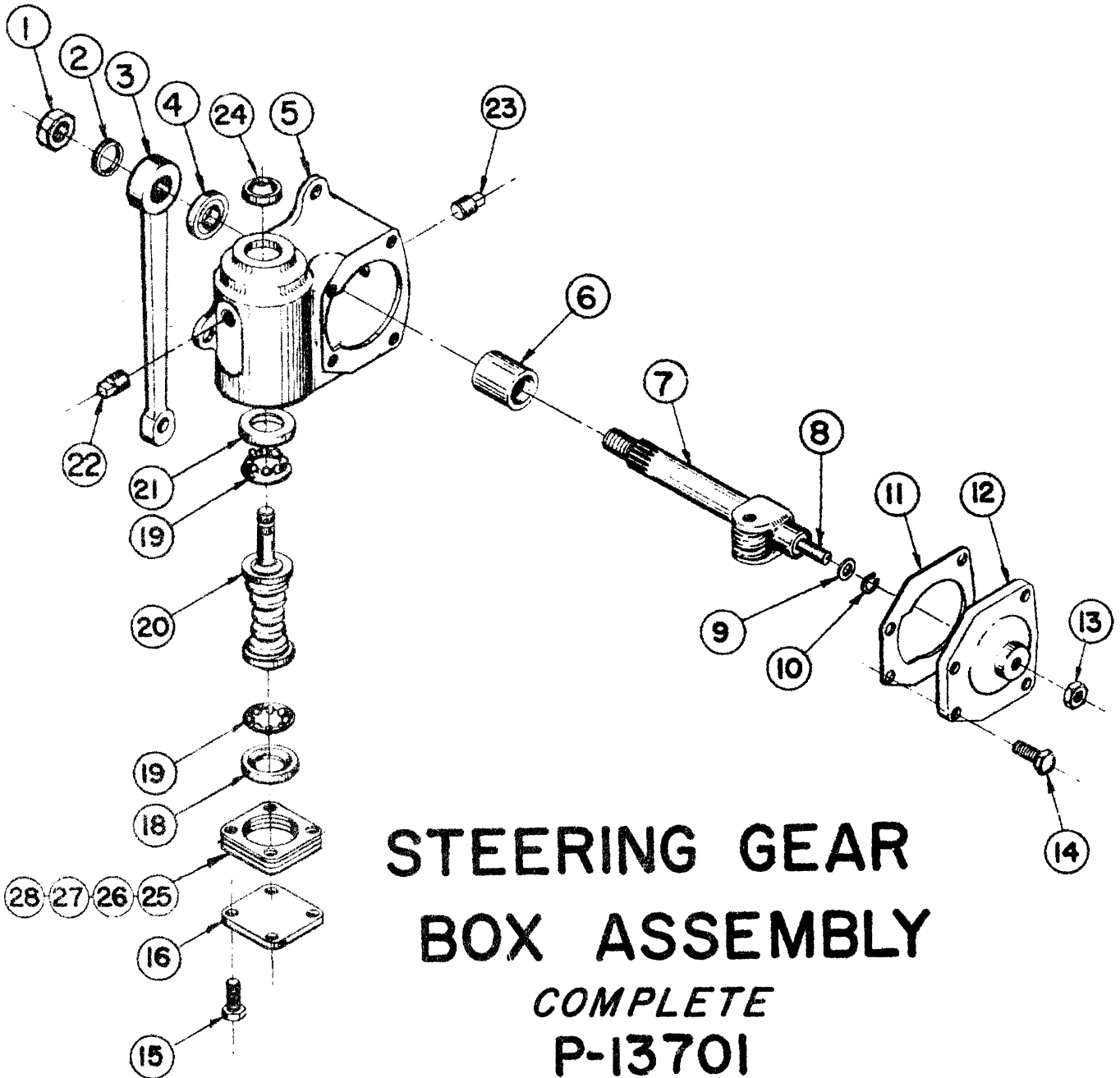
S/N 2451 AND UP

<u>ITEM NO.</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>	<u>NO. REQ.</u>
1	P-13746	"U" Joint & Wheel Tube Ass'y	1
2		Boot Rubber "U" Joint Cover	1
3	P-13747	Washer	1
4	P-13748	Dust Cup	1
5	P-13749	Spring	2
6	P-13750	Seat, Spring	1
7	P-13751	Lower Column Bearing	1
8	P-13752	Tube, Jacket	1
9	P-13753	Upper Column Bearing	1
10	P-13754	Spacer	1
11	P-12353	Nut, Wheel	1
12	P-12354	Wheel Cap	1
13	P-12355	Screw, Wood	3
14	P-10339	Wheel, Steering	1

LULL ENGINEERING COMPANY, INC.
3045 HIGHWAY 13,
ST. PAUL, MINNESOTA 55121

STEERING GEAR BOX ASS'Y NO.12940

7C2 SERIES



STEERING GEAR BOX ASSEMBLY COMPLETE P-13701

NOTE

P-13701 ASS'Y INCLUDES ITEMS
1 THRU 28 LESS ITEM NO. 3
PITMAN ARM

LULL ENGINEERING COMPANY, INC.
 3045 HIGHWAY 13,
 ST. PAUL, MINNESOTA 55121

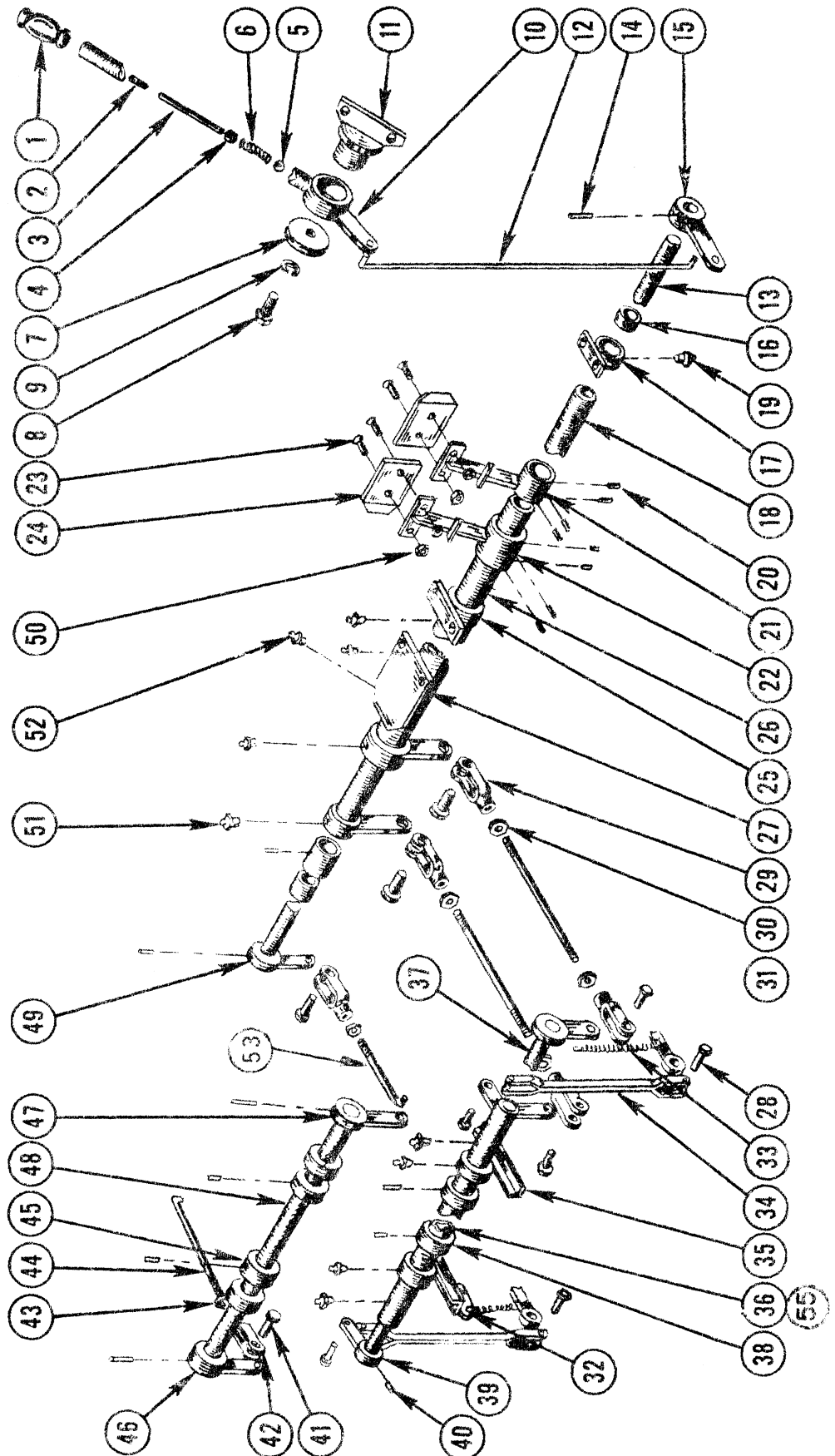
STEERING GEAR BOX ASSEMBLY
 NO. 12940

<u>ITEM NO.</u>	<u>PART NO.</u>	<u>ASSEMBLY NO.</u>	<u>Description</u>	<u>NO. Req.</u>
1	P-13715		Nut	1
2	P-13716		Lockwasher	1
3	*10,625		Pitman Arm	1
4	P-13717		Oil Seal	1
5	P-13718		Housing	1
6	P-13719		Bushing	1
7	P-13720		Shaft Assembly	1
8	P-13721		Screw, Adjusting	1
9	P-13722		Washer, Thrust	1
10	P-13723		Snap Ring	1
11	P-13724		Gasket	1
12	P-13725		Cover, Shaft	1
13	P-13726		Nut, Jam	1
14	P-13727		Screw	4
15	P-13740		Screw	4
16	P-13732		Cover, Worm	1
17				
18	P-13733		Cup, Bearing	1
19	P-13734		Ball & Cage Assembly	2
20	P-13735		Column & Worm Assembly	1
21	P-13736		Cup, Bearing	1
22	P-13737		Plug, Vent	1
23	P-13738		Plug	1
24	P-13739		Seal	1
25	P-13728		Shim, Worm Cover .002	2
26	P-13729		Shim, Worm Cover .005	1
27	P-13730		Shim, Worm Cover .010	5
28	P-13731		Shim, Worm Cover .003	1

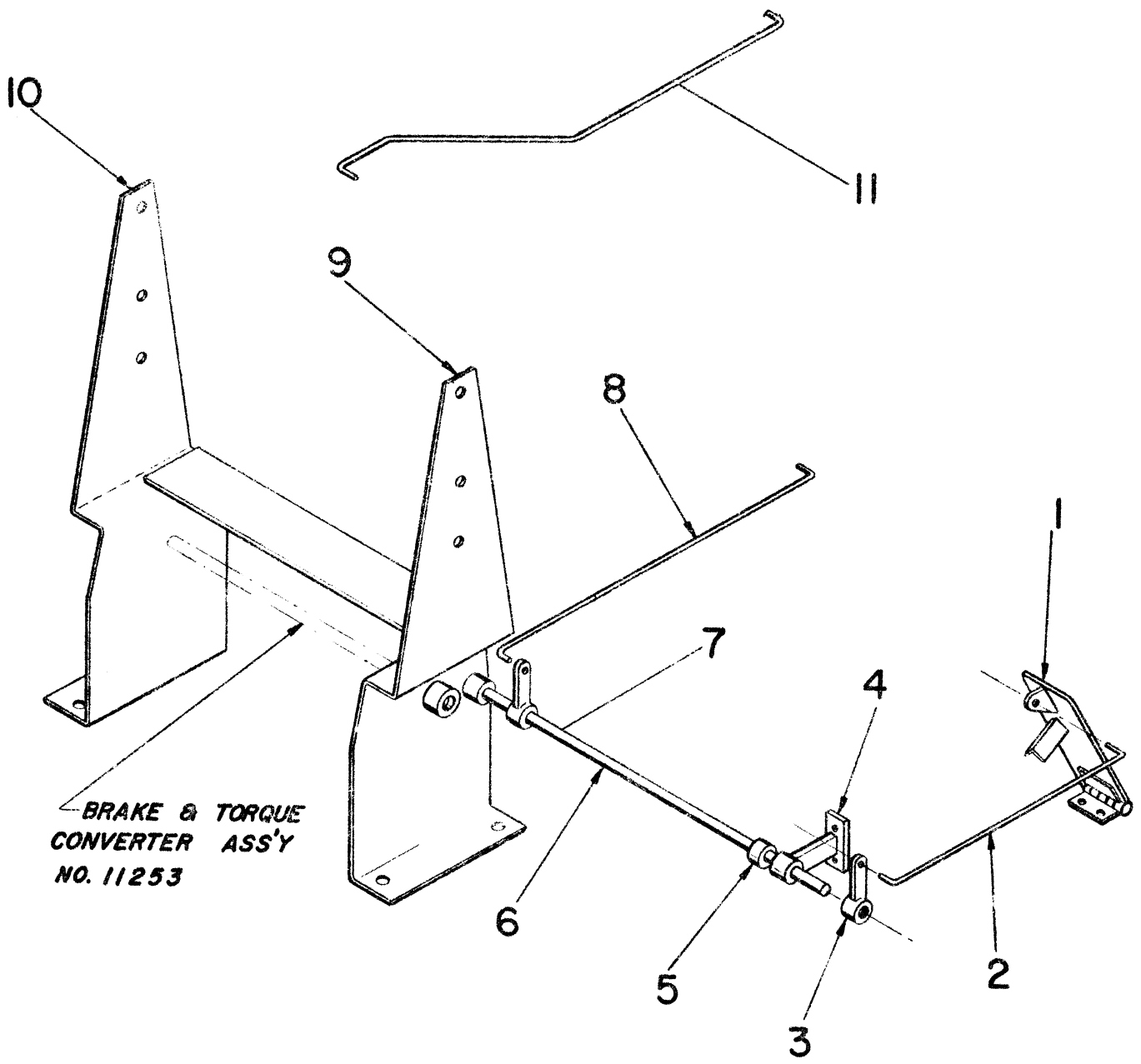
* When Ordering a Complete P-13701 Gear Box Item # 3
 10625 Pitman Arm is not included.

"A" change-E.O.1046 1/9/75

9822 SHUTTLE LEVER ASSY - ITEMS 1 THRU 11



<u>ITEM NO.</u>	<u>PART NO.</u>	<u>ASSEMBLY NO.</u>	<u>DESCRIPTION</u>	<u>NO. REQ.</u>
1	P-10194		Rubber Grip	1
2	COM'L		Setscrew, 3/8-16 NC x 1/2	1
3	P-12885		Push Rod	1
4	7435		Spring Stop	1
5	P-10039		Check Ball	1
6	7439		Spring	1
7	7434		Washer	1
8	COM'L		Bolt, 3/8-16 NC x 1/2 Long	1
9	COM'L		Lockwasher, 3/8	1
10	12,883		Control Handle	1
11	7436		Lever, Pivot	1
12	7414		Hand Lever Link	1
13	6888		Cross Shaft	1
14	P-10377		Roll Pin	4
15	7256		Arm Cross Shaft	1
16	7416		Steel Bushings	2
17	7082		Support, Left Brake	1
18	6886		Shaft, Left Brake	1
19	COM'L		Zerk Fitting, 1/8 Straight	8
20	COM'L		Setscrew, 3/8 NC x 3/8	9
21	7408		Brake Foot Pedal - Left Hand	1
22	7409		Brake Foot Pedal - Right Hand	1
23	COM'L		Flat Head Capscrew, 5/16 NC x 1	4
24	7045		Brake Pedal	2
25	7084		Support, Right Brake	1
26	6887		Shaft, Right Brake	1
27	7410		Shaft Support	1
28	P-10040		Clevis Pin	8
29	P-10193		Clevis	4
30	COM'L		Jam Nut, 3/8 NF	4
31	11,035		Rod, Brake Adjustment	2
32	7107		Lug, Brake Spring	2
33	P-10041		Brake Spring	2
34	11,034		Brake Rod	2
35	11,032		Front Brake Shaft Support	2
36	11,252		Front Brake Shaft	1
37	7100		Front Brake Rod, Right	1
38	7102		Front Brake Shaft, Collar	2
39	7105		Front Shaft Arm	1
40	COM'L		Setscrew, 1/4 NC x 1/4	8
41	P-10042		Clevis Pin	2
42	P-10043		Clevis	2
43	COM'L		Jam Nut, 5/16 NF	2
44	11,033		Link	1
45	7425		Collar	2
46	7257		Front Shaft Arm	1
47	7514		Front Shaft Arm	1
48	7259		Tractor Cross Shaft	1
49	7407		Shaft Arm	1
50	COM'L		Hex Nut, 5/16-18 NC	4
51	COM'L		Zerk Fitting, 1/8 45°	1
52	COM'L		Zerk Fitting, 1/8 90°	1
53	7306		Link	1
54	9822		Shuttle Lever Ass'y. (1 thru 11)	1
55	P-10590		Bushing	2



THROTTLE ASS'Y. 11260

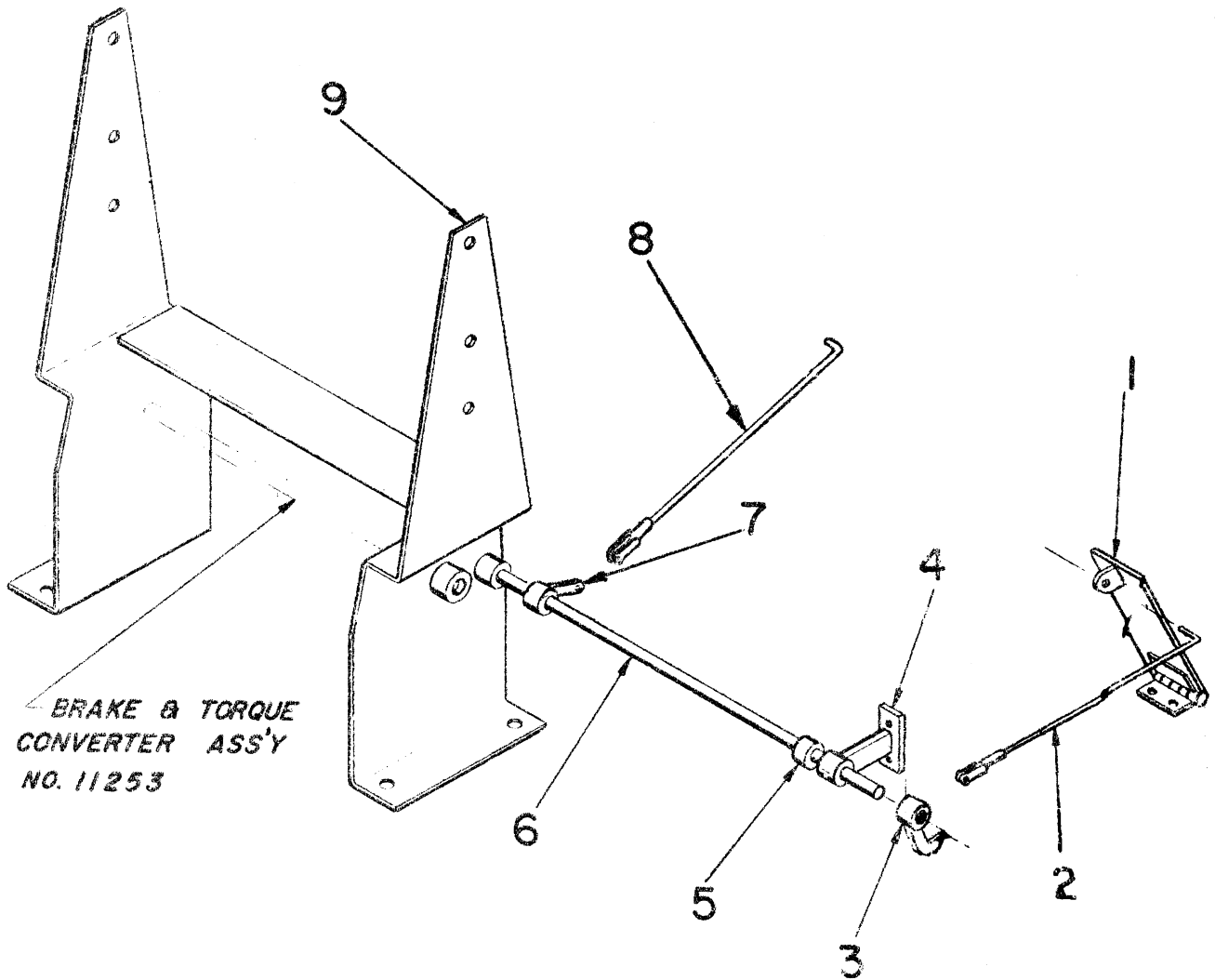
LULL ENGINEERING COMPANY, INC.
3045 HIGHWAY 13,
ST. PAUL 11, MINNESOTA 55111

THROTTLE ASSEMBLY
702 HIGH-LIFT LOADER
NO. 11,260

<u>ITEM NO.</u>	<u>PART NO.</u>	<u>ASSEMBLY NO.</u>	<u>DESCRIPTION</u>	<u>NO. REQ.</u>
1	1180		Pedal Weldment	1
2	1185		Link	1
3	1168		Arm Weldment	1
4	7400		Shaft Support	1
5	7424		Collar	1
6	11,040		Cross Shaft	1
7	11,041		Arm Weldment	1
8	11,042		Link	1
9	11,139		Support Bracket	1
10	11,138		Support Bracket	1
11	11,287		Governor Rod	1

LULL ENGINEERING COMPANY, INC.
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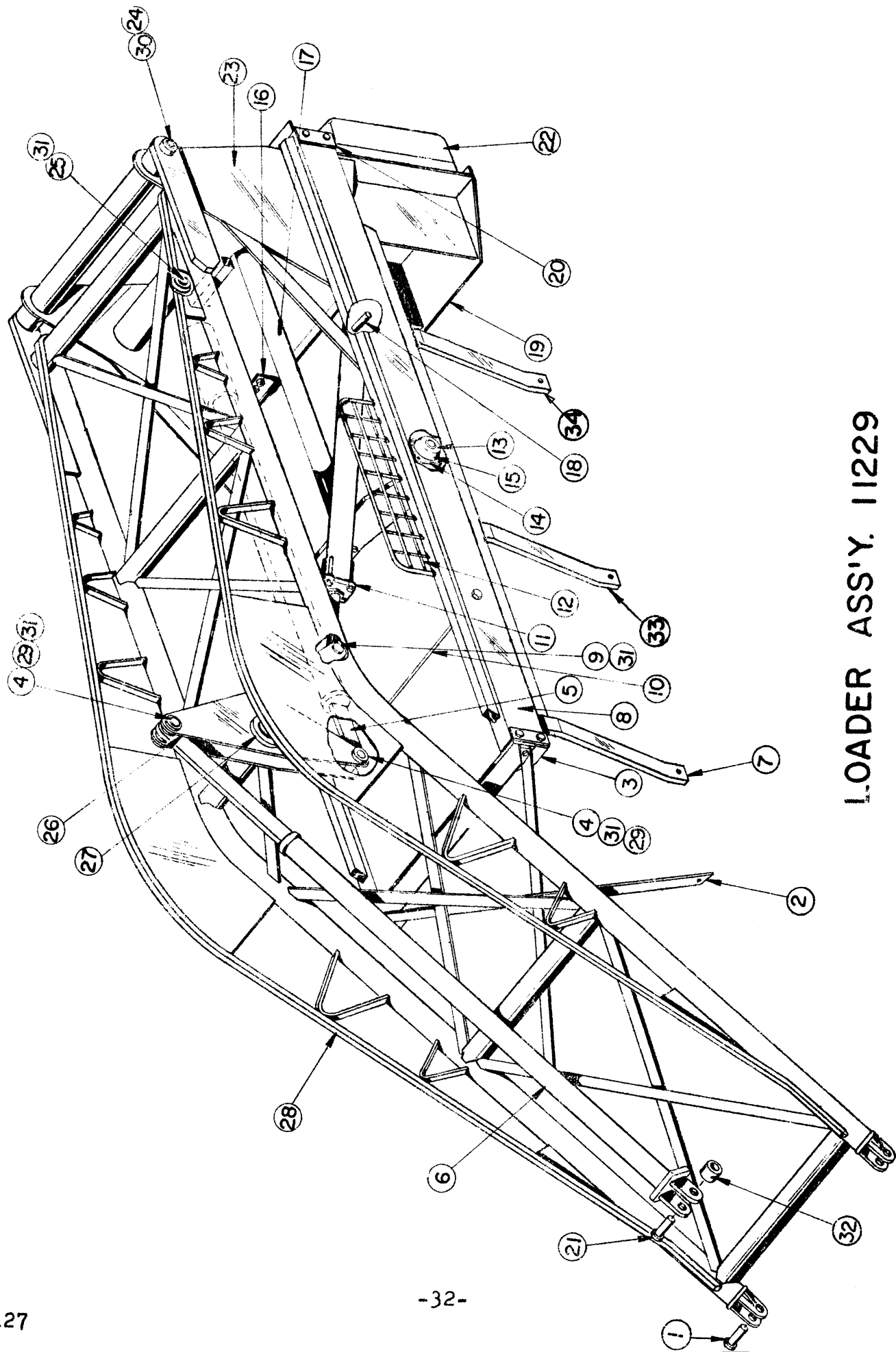
THROTTLE ASSEMBLY
NO. 12,546



LULL ENGINEERING COMPANY, INC.
3045 HIGHWAY 13,
ST. PAUL, MINNESOTA 55121

THROTTLE ASSEMBLY
NO. 12,546

<u>ITEM</u> <u>NO.</u>	<u>PART</u> <u>NO.</u>	<u>ASSEMBLY</u> <u>NO.</u>	<u>DESCRIPTION</u>	<u>NO.</u> <u>REQ.</u>
1	12,521		Pedal Weldment	1
2	12,501		Link	1
3	12,508		Arm Weldment	1
4	7400		Shaft Support	1
5	7424		Collar	1
6	11,040		Cross Shaft	1
7	12,504		Arm Weldment	1
8	12,509		Link	1
9	13,989		Support Bracket	1
10	12,497		Shaft, Governor Weld't	1
11	12,517		Hanger, Accelerator Support	1
12	12,499		Stop, Governor	1



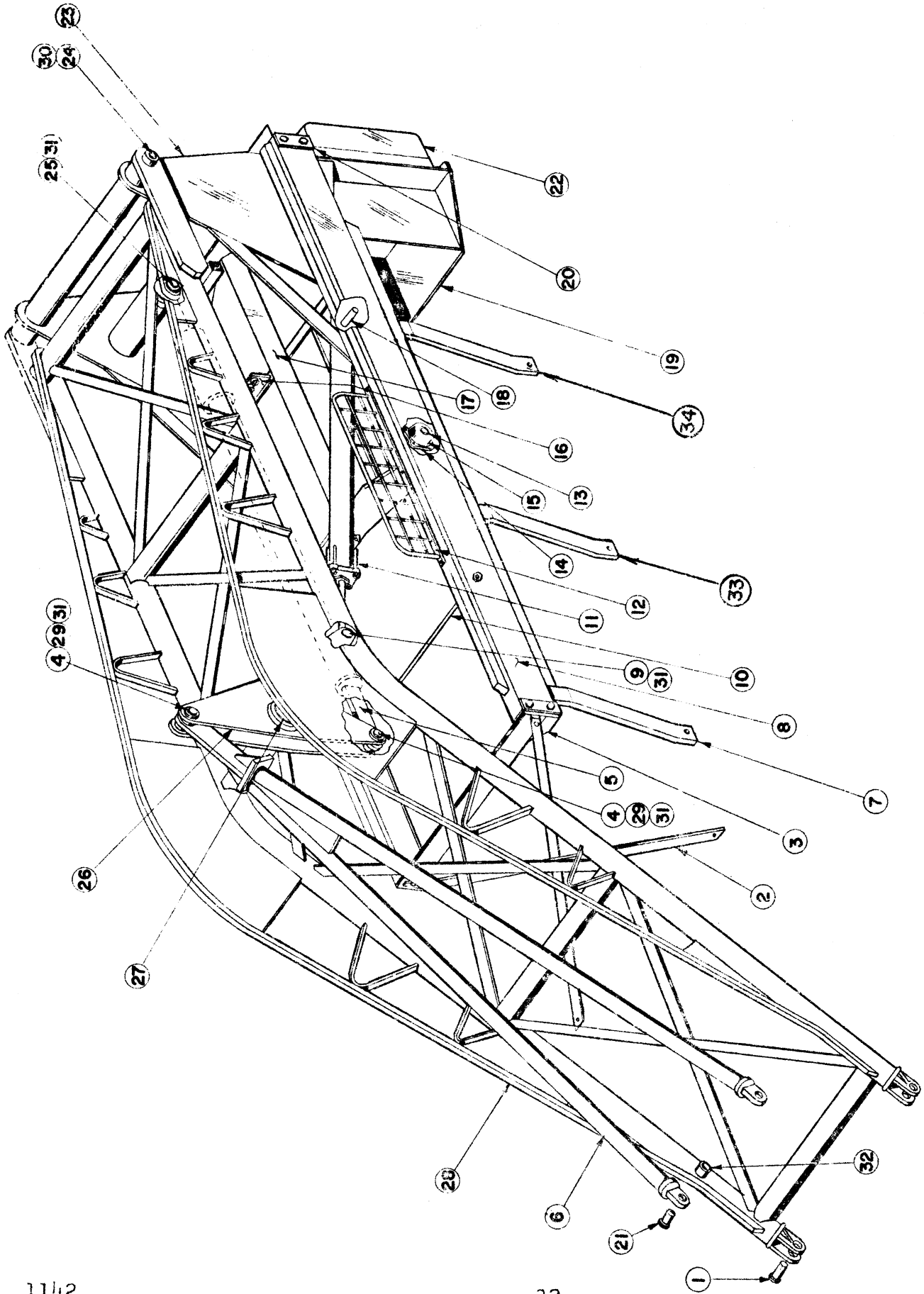
LOADER ASS'Y. 11229

LULL ENGINEERING COMPANY, INC.
 3045 HIGHWAY 13,
 ST. PAUL, MINNESOTA 55121

LOADER ASSEMBLY
 NO. 11,229

<u>ITEM NO.</u>	<u>PART NO.</u>	<u>ASSEMBLY NO.</u>		<u>NO. REQ.</u>
1	7072		Pivot Pin	2
2	11,137		X Brace, 1 LH - 1 RH	2
3	6901		Front Frame Bracket	1
4	11,129		Tilt Cylinder Pin	2
5		11,107	Tilt Cylinder Assembly	1
6	11,105		Front Parrallel Arm	1
7	11,014		Upright Supports	4
8	11,010		Side Rails	2
9	5565		Pivot Pin	2
10	11,153		Truss Rod	2
11		11,082	Hoist Cylinder Ass'y	2
12	8789		Operator Side Shield	1
13	6902		Bushing	4
14	6832		Spindle	4
15	6826		Roller	4
16	11,051		Hose Terminal	1
17		11,100	Transverse Cylinder Ass'y (Page 58)	1
18	6899		Hoist Cylinder Pin	2
19	11,064		Supply Tank	1
20	6983		Rear Support	1
21	6964		Pin	1
22	5596		Counterweight	1
23	11,130		Transfer Carriage	1
24	5544		Pivot Shaft	1
25	11,128		Pin	1
26	11,123		Toggle	1
27	11,168		Bushing	2
28	11,110		Lift Arm	1
29	2727		Bushing	2
30	11,194		Bushing	2
31	11,353		Collar	5
32	1150		Collar	1
*33	13,164		Support, Upright	1
*34	13,165		Support, Upright	1

*Before Serial Number 2457, Use 11,014.



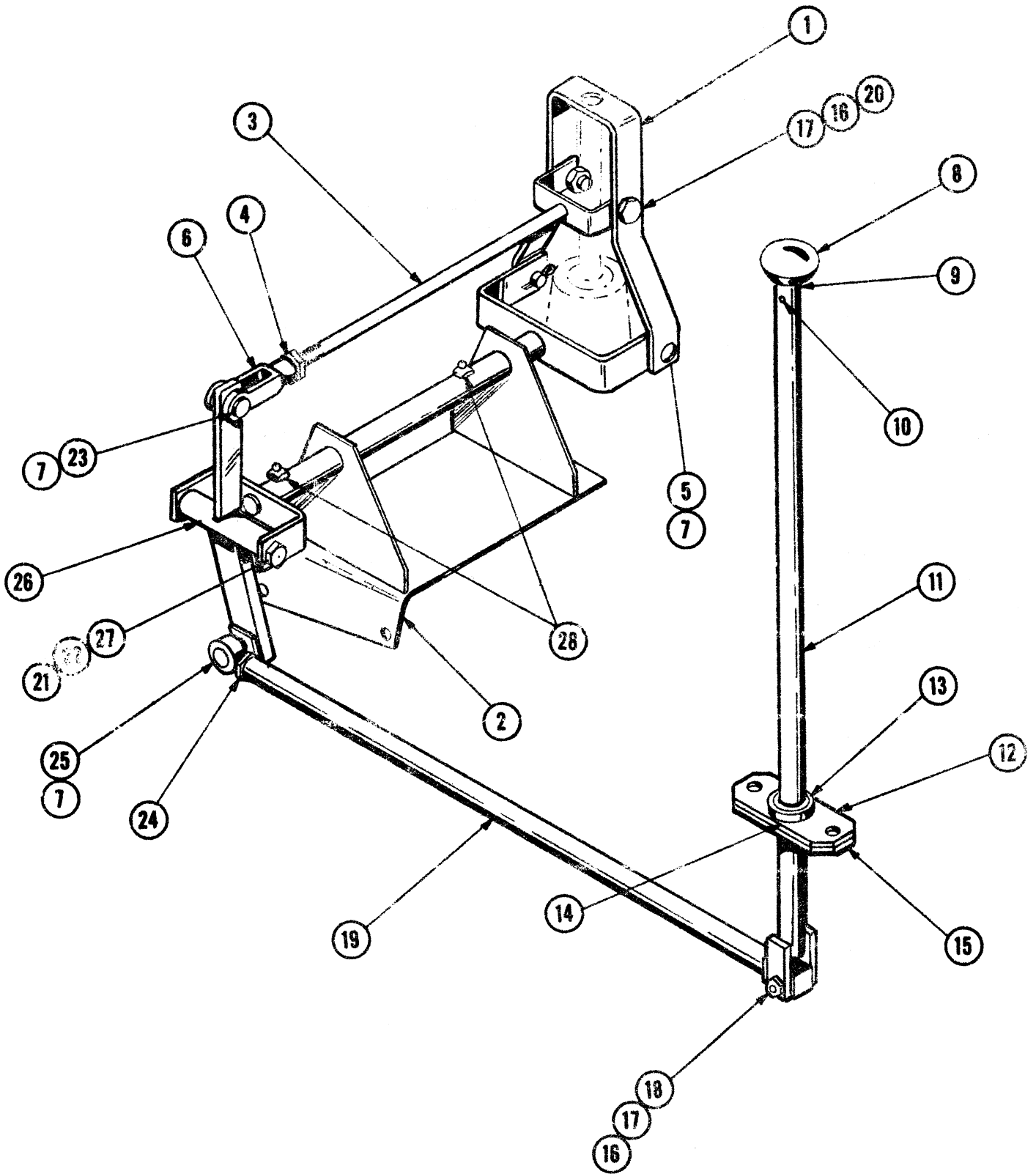
LOADER ASSEMBLY 11237

LULL ENGINEERING COMPANY, INC.
 3045 HIGHWAY 13,
 ST. PAUL, MINNESOTA 55121

LOADER ASSEMBLY
 NO. 11,237

<u>ITEM NO.</u>	<u>PART NO.</u>	<u>ASSEMBLY NO.</u>	<u>DESCRIPTION</u>	<u>NO. REQ.</u>
1	7072		Pivot Pin	2
2	11,137		X-Brace, 1 LH, 1 RH	2
3	6901		Front Frame Bracket	1
4	11,129		Tilt Cylinder Pin	2
5		11,070	Tilt Cylinder Ass'y (Page 54)	1
6	11,071		Front Parallel Arm	1
7	11,076		Upright Supports	4
8	11,010		Side Rails	2
9	5565		Pivot Pin	2
10	11,153		Truss Rod	2
11		11,069	Hoist Cylinder Ass'y (Page 56)	2
12	8789		Operator Side Shield	1
13	6902		Bushing	4
14	6832		Spindle	4
15	6826		Roller	4
16	11,051		Hose Terminal	1
17		11,073	Transverse Cyl. Ass'y (Page 58)	1
18	11,206		Hoist Cylinder Pin	2
19	11,186		Supply Tank	1
20	6983		Rear Support	1
21	5640		Pin	2
22	5596		Counterweight	1
23	11,068		Transfer Carriage	1
24	5620		Pivot Shaft	1
25	11,128		Pin	1
26	11,036		Toggle	1
27	11,168		Bushing	2
28	11,060		Lift Arm	1
29	2727		Bushing	2
30	11,195		Bushing	2
31	11,353		Collar	5
32	5641		Bushing	2
33	*13,135		Support Bar	1
34	*13,134		Support Bar	1

* Before Serial Number 2456, Use 11,076.

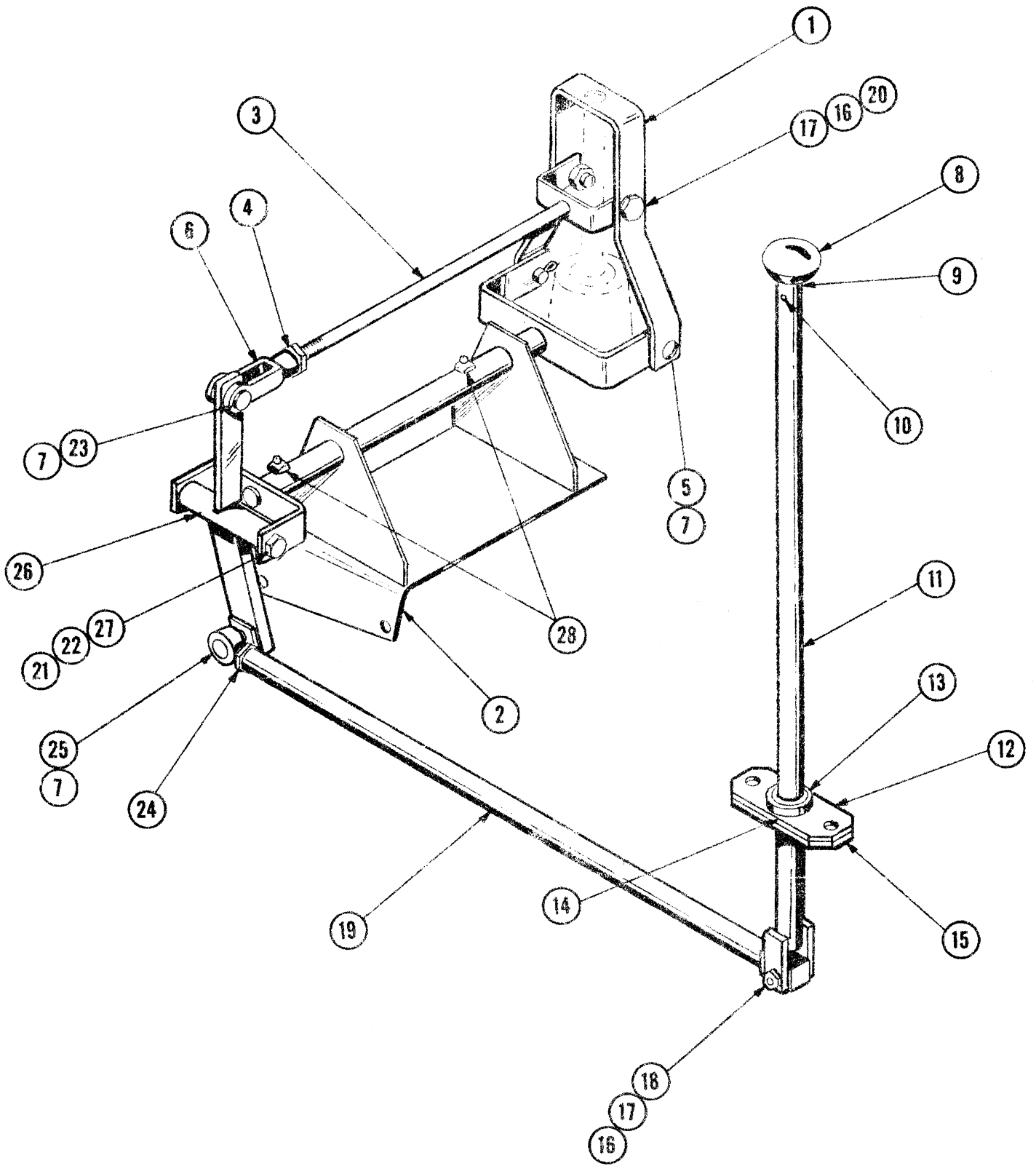


SHIFTING ASS'Y. 11250

LULL ENGINEERING COMPANY, INC.
 3045 HIGHWAY 13,
 ST. PAUL 11, MINNESOTA 55111

SHIFTING ASSEMBLY
 702-31' HIGH-LIFT
 NO. 11,250

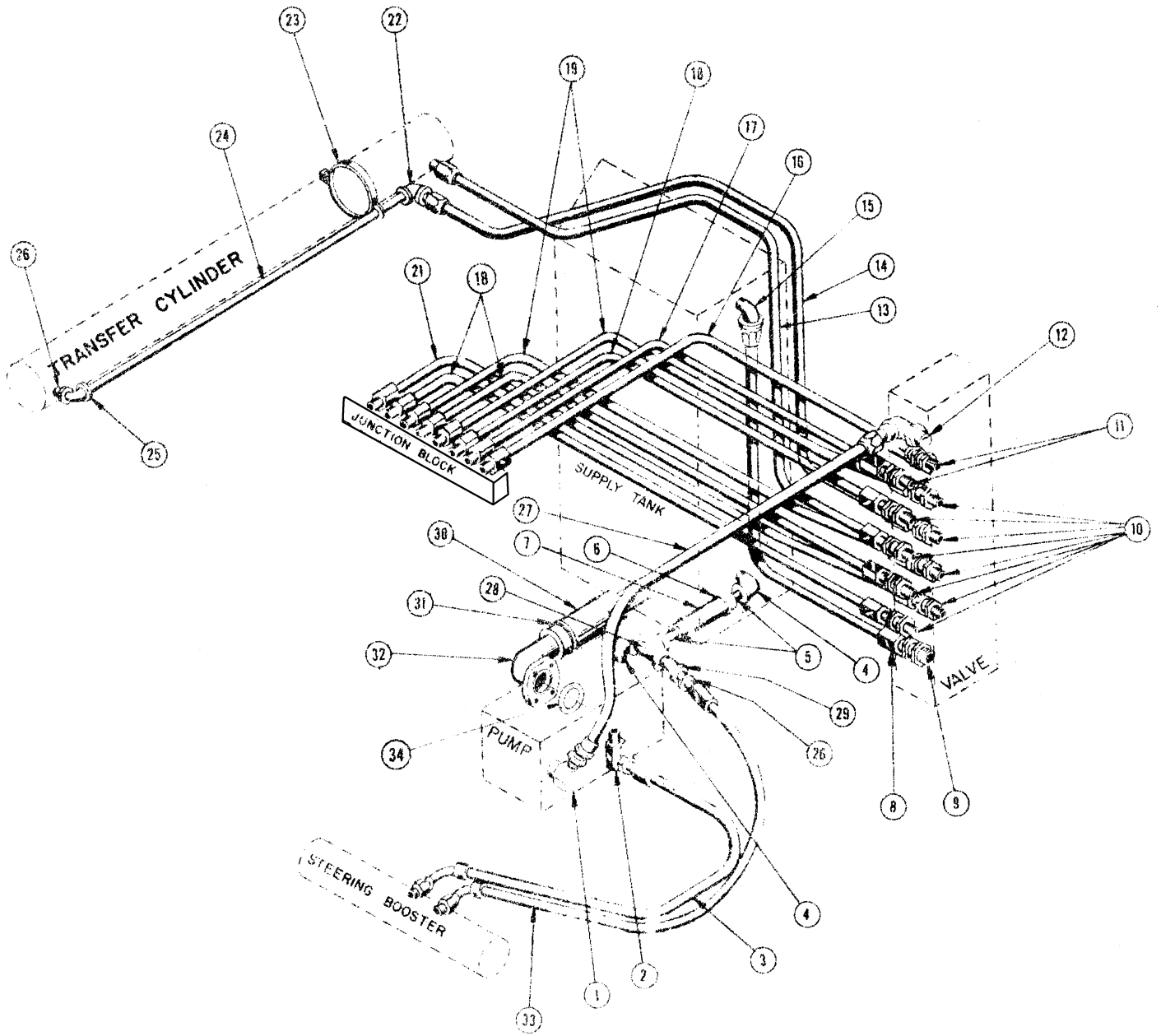
<u>ITEM NO.</u>	<u>PART NO.</u>	<u>ASSEMBLY NO.</u>	<u>DESCRIPTION</u>	<u>NO. REQ.</u>
1	11,249		Clevis for Shifting	1
2	11,160		Mounting Plate Assembly	1
3	7232		Upper Link	1
4	COM'L		Jam Nut 1/2" NF	1
5	7593		Pin	2
6	P-10333		Clevis	1
7	COM'L		Cotter Pin 1/8" x 3/4"	2
8	P-10336		Shift Knob	1
9	7614		Stud	1
10	P-10348		Roll Pin	1
11	7419		Shifting Lever	1
12	7238		Mounting Plate Assembly	1
13	7093		Pivot Ball	1
14	P-10379		Roll Pin	1
15	7357		Lower Support Plate	1
16	COM'L		Shakeproof Washer 3/8"	3
17	COM'L		Jam Nuts 3/8" N.C.	4
18	COM'L		Bolt 3/8 x 2 1/4" N.C.	1
19	11,156		Shifting Link	1
20	COM'L		Capscrew 3/8 NC x 1"	1
21	COM'L		Jam Nut 1/2" N.C.	1
22	COM'L		Shakeproof Washer 1/2"	1
23	P-10334		Clevis Pin	1
24	7602		Special Nut	1
25	P-10343		Tie Rod End	1
26	7251		Pivot Assembly	1
27	COM'L		Bolt 1/2" NC x 5" long	1
28	COM'L		Self Tapping Grease Fitting	2



SHIFTING ASSEMBLY 11251

SHIFTING ASSEMBLY
NO. 11,251

ITEM	PART	DESCRIPTION	RE'Q.
1	11,249	Clevis for Shifting	1
2	11,232	Mounting Plate Assembly	1
3	7232	Upper Link	1
4	COM'L	Jam Nut 1/2" NF	1
5	7593	Pin	2
6	P-10333	Clevis 1/2"	1
7	COM'L	Cotter Pin 1/8" x 3/4"	2
8	P-10336	Shift Knob	1
9	7614	Stud	1
10	P-10348	Roll Pin	1
11	7419	Shifting Lever	1
12	7238	Mounting Plate Assembly	1
13	7093	Pivot Ball	1
14	P-10379	Roll Pin	1
15	7357	Lower Support Plate	1
16	COM'L	Shakeproof Washer 3/8"	3
17	COM'L	Jam Nuts 3/8" NC	4
18	COM'L	Bolt 3/8" x 2 1/4" NC	1
19	11,156	Shifting Link	1
20	COM'L	Capscrew 3/8" NC x 1"	1
21	COM'L	Jam Nut 1/2" NC	1
22	COM'L	Shakeproof Washer 1/2"	1
23	P-10334	Clevis Pin 1/2" x 1"	1
24	7602	Special Nut	1
25	P-10343	Tie Rod End	1
26	7251	Pivot Assembly	1
27	COM'L	Bolt 1/2" NC x 5" Long	1
28	COM'L	Self Tapping Grease Fitting	2



HYDRAULIC SYSTEM (PUMP TO VALVE) 11302

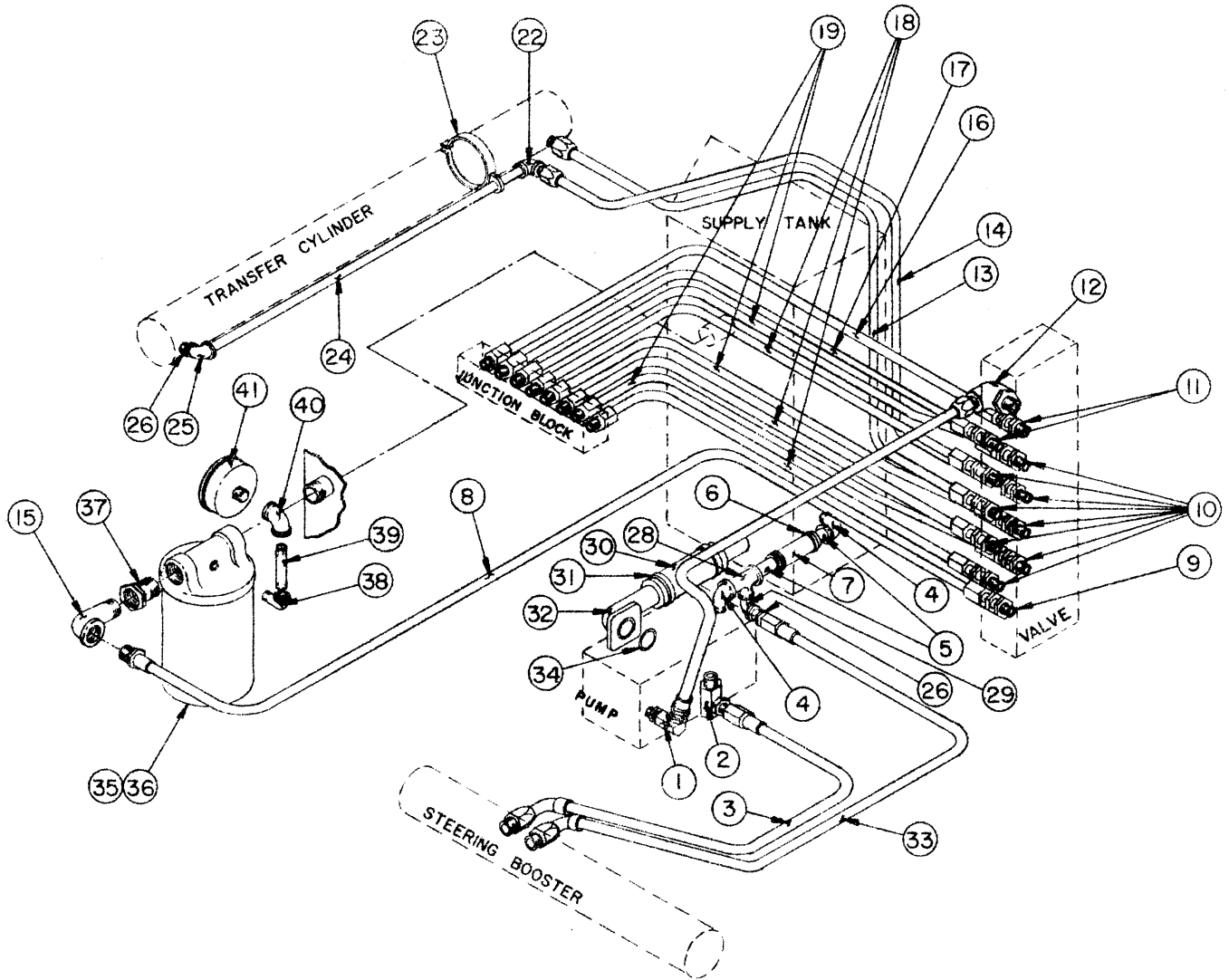
LULL ENGINEERING COMPANY, INC.
 3045 Highway 13
 St. Paul, Minnesota 55121

HYDRAULIC SYSTEM
 PUMP TO VALVES
 NO. 11,302

<u>ITEM NO.</u>	<u>PART NO.</u>	<u>ASSEMBLY NO.</u>	<u>DESCRIPTION</u>	<u>NO. REQ.</u>
1	P-12912		Elbow	1
2	P-11497		Swivel Fitting	1
3	P-11498		Hose	1
4	P-10111		Street Ell	2
5	9544		Nipple	2
6	P-10178		Hose Clamp	2
7	COM'L		Hose 3/4 ID x 7" Radiator	1
8	P-12910		Hose	1
9	P-12909		Swivel Fitting	1
10	P-12908		Swivel Fitting	8
11	P-12907		Swivel Fitting	2
12	P-12911		Elbow	1
13	P-10272		Hose	1
14	P-11501		Hose	1
15	P-10101		Street Ell	1
16	P-10276		Hose	1
17	P-10274		Hose	1
18	P-10451		Hose	3
19	P-10390		Hose	2
20				
21	P-11436		Hose	1
22	P-10225		Elbow	1
23	612		Cylinder Pipe Clamp	1
24	N-10276		Pipe 3/8 X Str. x 56"	1
25	P-10117		Street Ell	1
26	P-10120		Reducing Bushing	2
27	P-12968		Hose	1
28	P-11058		Service Tee	1
29	P-10191		Street Ell	1
30	COM'L		Hose 1 1/2 ID x 9" Radiator	1
31	P-10602		Clamp	1
32	10,915		Elbow	1
33	P-11602		Hose	1
34	P-12971		O-Ring	1

LULL ENGINEERING COMPANY, INC.
3045 HIGHWAY 13,
ST. PAUL, MINNESOTA 55121

HYDRAULIC SYSTEM ASSEMBLY
PUMP TO VALVE
NO. 11,302



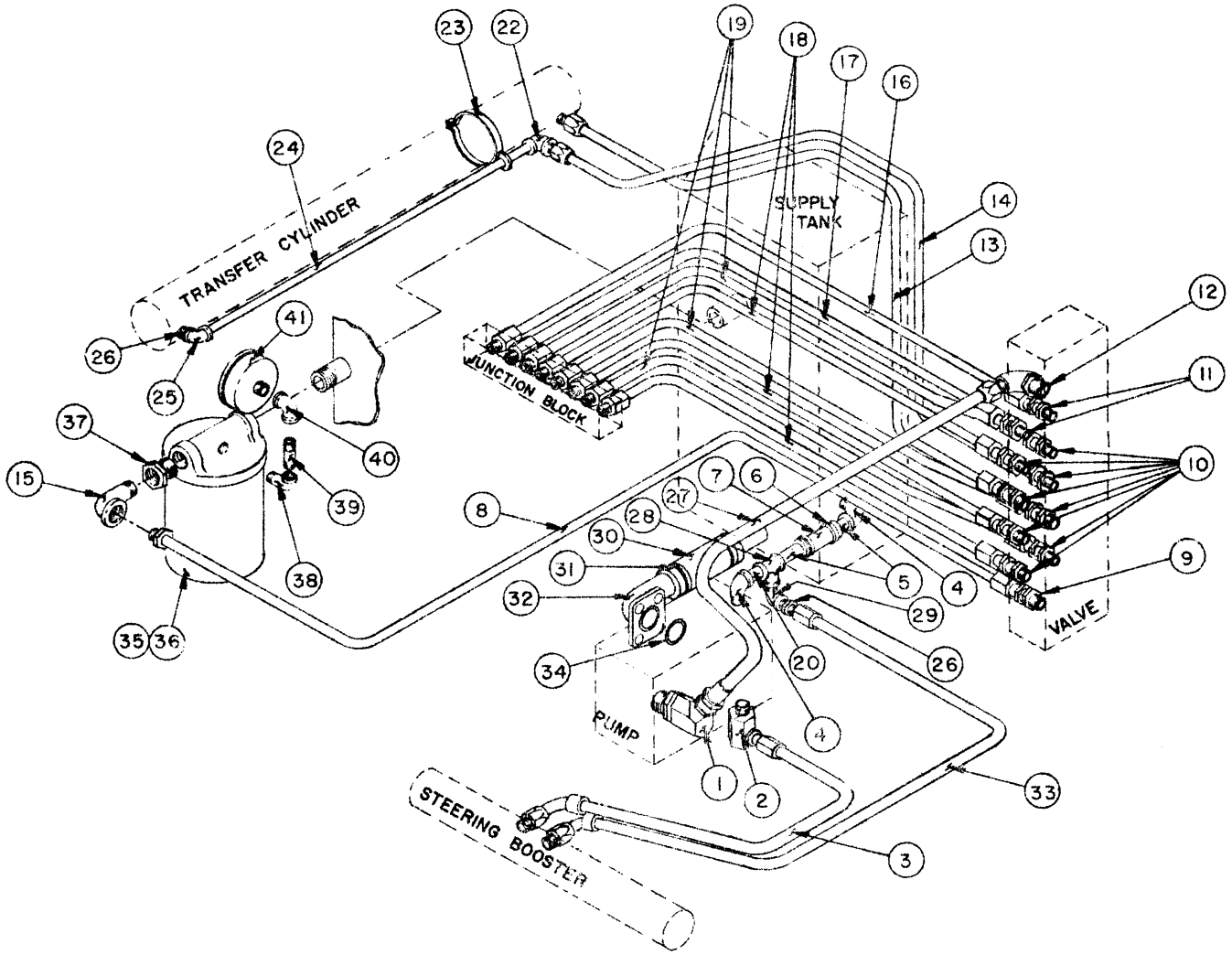
LULL ENGINEERING COMPANY, INC.
 3045 HIGHWAY 13,
 ST. PAUL, MINNESOTA 55121

HYDRAULIC SYSTEM ASSEMBLY
 PUMP TO VALVE
 NO. 11,302

<u>ITEM NO.</u>	<u>PART NO.</u>	<u>ASSEMBLY NO.</u>	<u>DESCRIPTION</u>	<u>NO. REQ.</u>
1	P-12912		Elbow	1
2	P-11497		Fitting	1
3	P-14917		Hose	1
4	P-10111		Street Ell	2
5	9544		Nipple	2
6	P-10178		Hose	2
7	COM'L		Hose	1
8	P-13023		Hose	1
9	P-12909		Fitting, Swivel	1
10	P-12908		Fitting, Swivel	8
11	P-12907		Fitting, Swivel	2
12	P-12911		Elbow	1
13	P-10272		Hose	1
14	P-11501		Hose	1
15	P-10101		Street Ell	1
16	P-10276		Hose	1
17	P-10274		Hose	1
18	P-10451		Hose	3
19	P-10390		Hose	3
20				
21				
22	P-10225		Elbow	1
23	612		Cylinder Pipe Clamp	1
24	N-10276		Pipe	1
25	P-10117		Street Ell	1
26	P-10120		Bushing, Reducing	2
27	P-12968		Hose	1
28	P-11058		Service Tee	1
29	P-10191		Street Ell	1
30	COM'L		Hose	1
31	P-10602		Clamp	1
32	10,915		Elbow	1
33	P-17177		Hose	1
34	P-12971		O-Ring	1
35	P-13587		Filter	1
36	P-13597		Filter Element	1
37	P-10059		Bushing, Reducing	1
38	P-10201		Street Ell	1
39	P-10757		Nipple	1
40	P-10223		Elbow	1
41	P-13588		Gauge	1

LULL ENGINEERING COMPANY, INC.
3045 HIGHWAY 13,
ST. PAUL, MINNESOTA 55121

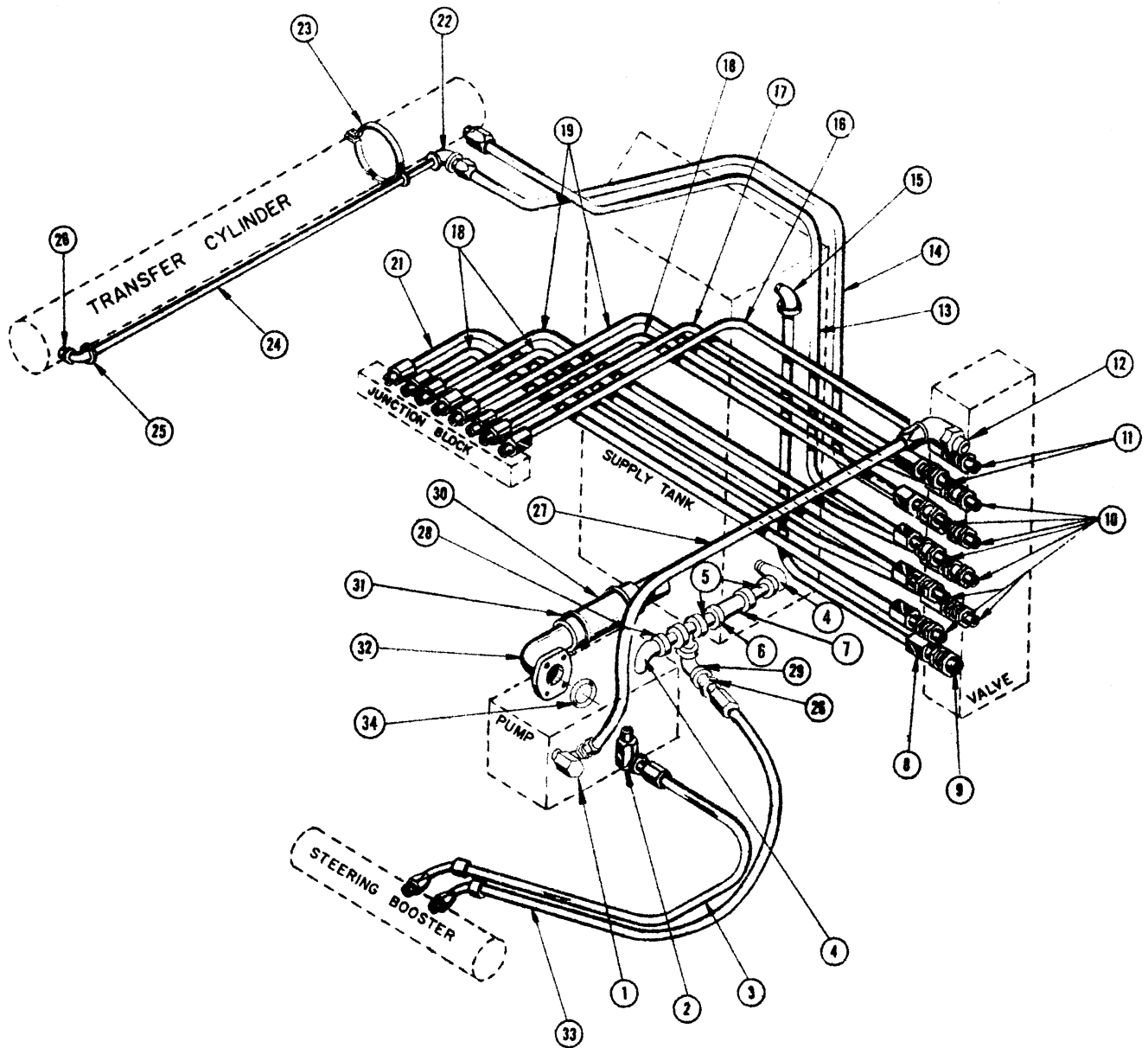
HYDRAULIC SYSTEM ASSEMBLY
PUMP TO VALVE
NO. 11,303



LULL ENGINEERING COMPANY, INC.
 3045 HIGHWAY 13,
 ST. PAUL, MINNESOTA 55121

HYDRAULIC SYSTEM ASSEMBLY
 PUMP TO VALVE
 NO. 11,303

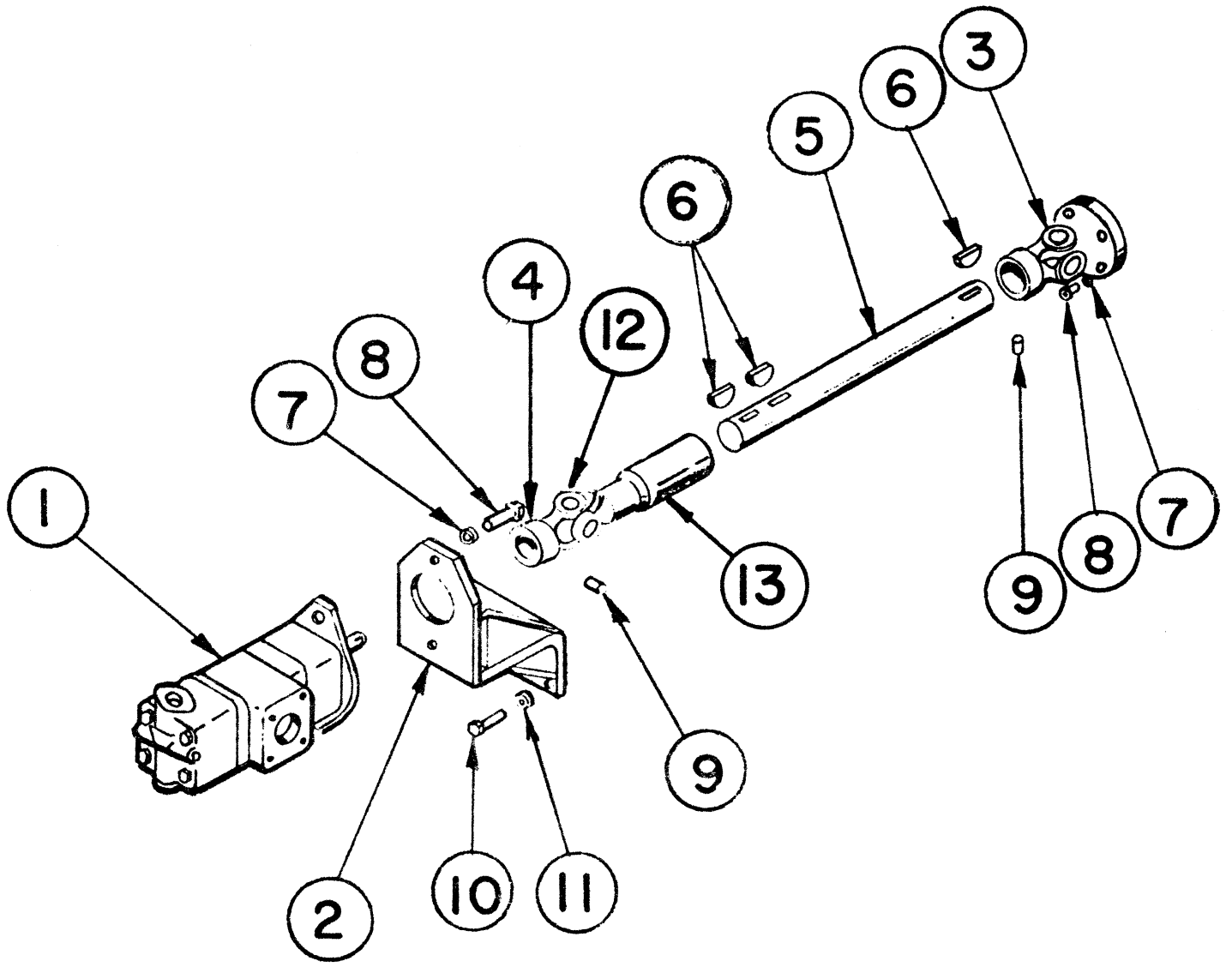
<u>ITEM NO.</u>	<u>PART NO.</u>	<u>ASSEMBLY NO.</u>	<u>DESCRIPTION</u>	<u>NO. REQ.</u>
1	P-12912		Elbow	1
2	P-11497		Fitting	1
3	P-14917		Hose	1
4	P-10111		Street Ell	2
5	9544		Nipple	2
6	P-10178		Hose Clamp	2
7	COM'L		Hose	1
8	P-13023		Hose	1
9	P-12909		Fitting, Swivel	1
10	P-12908		Fitting, Swivel	8
11	P-12907		Fitting, Swivel	2
12	P-12911		Elbow	1
13	P-10272		Hose	1
14	P-11501		Hose	1
15	P-10101		Street Ell	1
16	P-10276		Hose	1
17	P-10274		Hose	1
18	P-10451		Hose	3
19	P-10390		Hose	3
20	P-10938		Nipple	1
21				
22	P-10225		Elbow	1
23	612		Cylinder Pipe Clamp	1
24	N-10183		Pipe	1
25	P-10117		Street Ell	1
26	P-10120		Bushing, Reducing	2
27	P-10417		Hose	1
28	P-10107		Tee	1
29	P-10191		Street Ell	1
30	COM'L		Hose	1
31	P-10602		Clamp	1
32	11,299		Elbow	1
33	P-17177		Hose	1
34	P-12971		O-Ring	1
35	P-13587		Filter	1
36	P-13597		Filter Element	1
37	P-10059		Reducing Bushing	1
38	P-10201		Street Ell	1
39	P-10757		Nipple	1
40	P-10223		Elbow	1
41	P-13588		Gauge	1



**HYDRAULIC SYSTEM (PUMP TO VALVE)
(11303)**

HYDRAULIC SYSTEM
PUMP TO VALVES
NO. 11,303

ITEM	PART	DESCRIPTION	RE'Q.
1	P-12912	Elbow	1
2	P-11497	Swivel Fitting	1
3	P-11498	Hose	1
4	P-10111	Street Ell	2
5	9544	Nipple	2
6	P-10178	Hose Clamp	2
7	COM'L	Hose 3/4" I.D. x 8" Radiator	1
8	P-12910	Hose	1
9	P-12909	Swivel Fitting	1
10	P-12908	Swivel Fitting	8
11	P-12907	Swivel Fitting	2
12	P-12911	Elbow	1
13	P-10272	Hose	1
14	P-11501	Hose	1
15	P-10101	Street Ell	1
16	P-10276	Hose	1
17	P-10274	Hose	1
18	P-10451	Hose	1
19	P-10390	Hose	2
20	P-10938	Nipple	1
21	P-11436	Hose	1
22	P-10225	Elbow	1
23	612	Cylinder Pipe Clamp	1
24	N-10183	Pipe 3/8 X Strong x 54"	1
25	P-10117	Street Ell	1
26	P-10120	Reducing Bushing	2
27	P-10417	Hose	1
28	P-10107	Tee	1
29	P-10191	Street Ell	1
30	COM'L	Hose 1 1/2 I.D. x 9" Radiator	1
31	P-10602	Clamp	1
32	11,299	Elbow	1
33	P-11602	Hose	1
34	P-12971	O-Ring	1



PUMP AND DRIVE ASS'Y. 11205

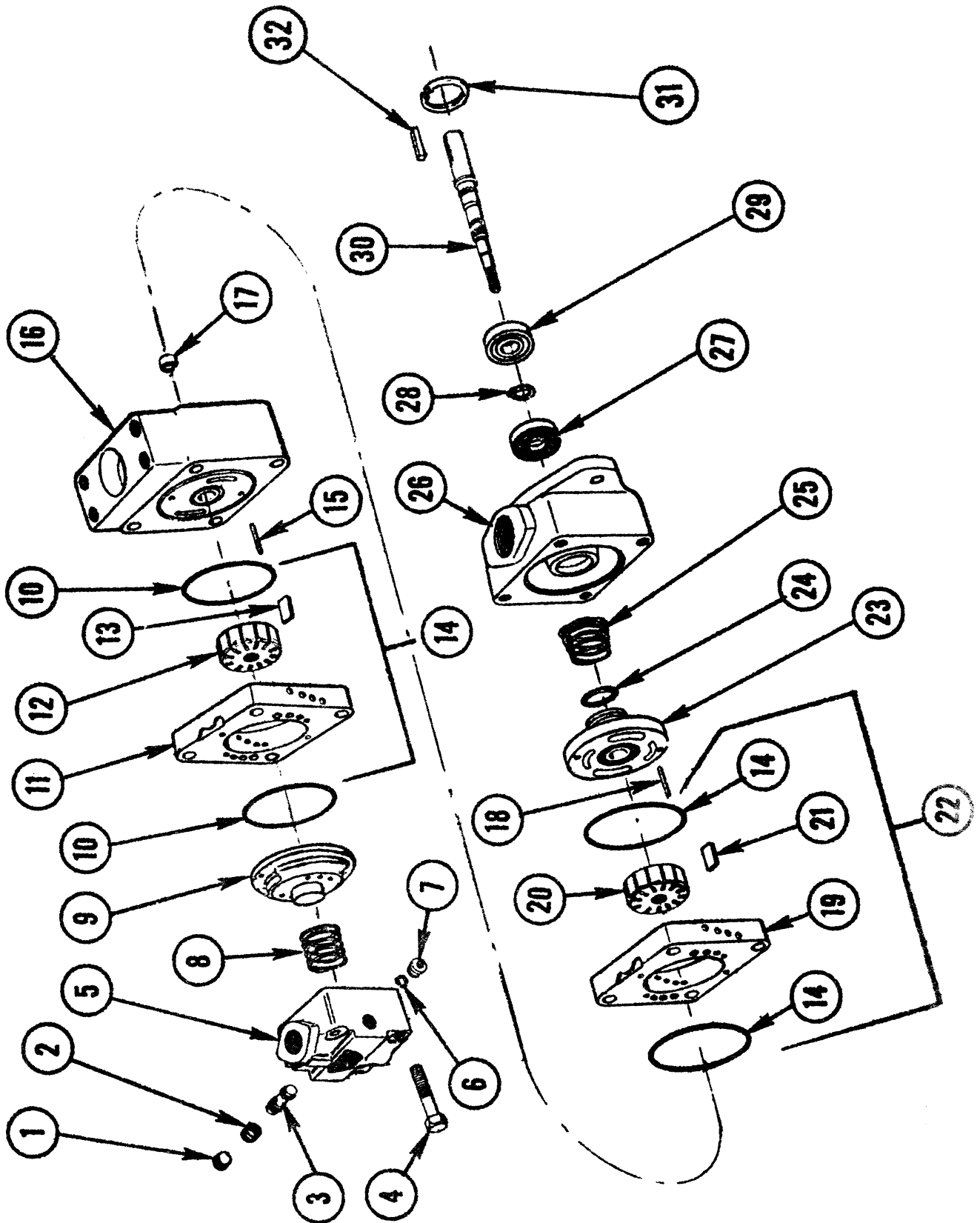
LULL ENGINEERING COMPANY, INC.
 3045 HIGHWAY 13,
 ST. PAUL, MINNESOTA 55121

HYDRAULIC PUMP & DRIVE ASS'Y
 NO. 11,205

<u>ITEM NO.</u>	<u>PART NO.</u>	<u>ASSEMBLY NO.</u>	<u>DESCRIPTION</u>	<u>NO. REQ.</u>
1		*P-13631	Pump (Page 44)	1
2	11,197		Pump Support	1
3	7185		Fan Pulley Adapter	1
4	P-13700		End Yoke	1
5	3518		Pump Drive Shaft	1
6	P-10517		Key	3
7	COM'L		Shakeproof Washer, 1/2"	2
8	COM'L		Capscrew, 1/2-13 NC x 1 1/4" Long Hex Head	2
9	COM'L		Setscrew, 3/8-16 NC x 3/8" Long	2
10	COM'L		Capscrew, 1/2-13 NC x 1 1/4" Hex Head	3
11	COM'L		Lockwasher, 1/2"	3
12	P-13699		Cross	1
13	P-13698		Slip Joint	1

* S/N 2001 Thru 2466 - use P-12905.

HYDRAULIC PUMP ASS'Y
P-12905

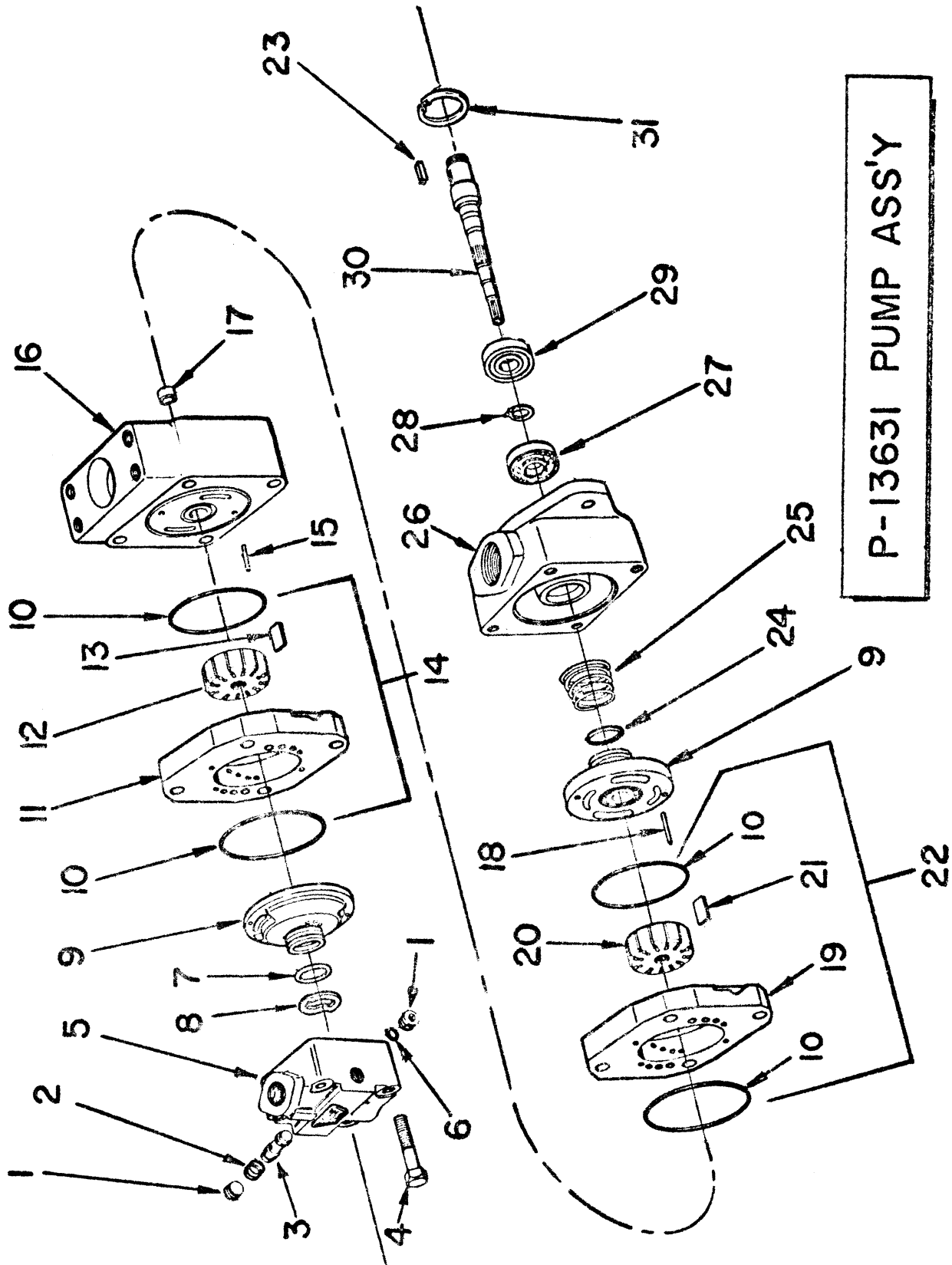


PUMP ASSEMBLY
P-12905

ITEM	PART	DESCRIPTION	RE'Q
1	P-12204	Plug	1
2	P-12914	Spring	1
3	P-12915	Valve Sub Ass'y	1
4	P-12916	Screw	4
5	P-12917	Cover	1
6	P-12205	Snap Ring	1
7	P-12204	Plug	1
8	P-12919	Spring	1
9	P-12920	Pressure Plate	1
10	* P-12192	O-Ring	4
11	P-12913	Ring	1
12	P-12918	Rotor	1
13	P-12922	Vane Kit (12 Vanes)	1
14	P-12923	Service Kit	1
15	P-12924	Pin	2
16	P-12925	Body - Includes P-12926 Bushing	1
17	P-12926	Bushing	1
18	P-12927	Pin	2
19	P-12928	Ring	1
20	P-12929	Rotor	1
21	P-12930	Vane Kit (12 Vanes)	1
22	P-12931	Service Kit	1
23	P-12932	Pressure Plate	1
24	* P-12210	O-Ring	1
25	P-12933	Spring	1
26	P-12934	Outlet Body	1
27	* P-12444	Seal	1
28	P-12935	Snap Ring	1
29	P-12936	Bearing	1
30	P-12937	Shaft	1
31	P-12938	Snap Ring	1
32	P-12939	Key	1
33	P-12940	Seal Kit	1

* These Parts Are Included in Seal Kit
P-12940

LULL ENGINEERING COMPANY, INC.
3045 HIGHWAY 13,
ST. PAUL, MINNESOTA 55121



P-13631 PUMP ASS'Y

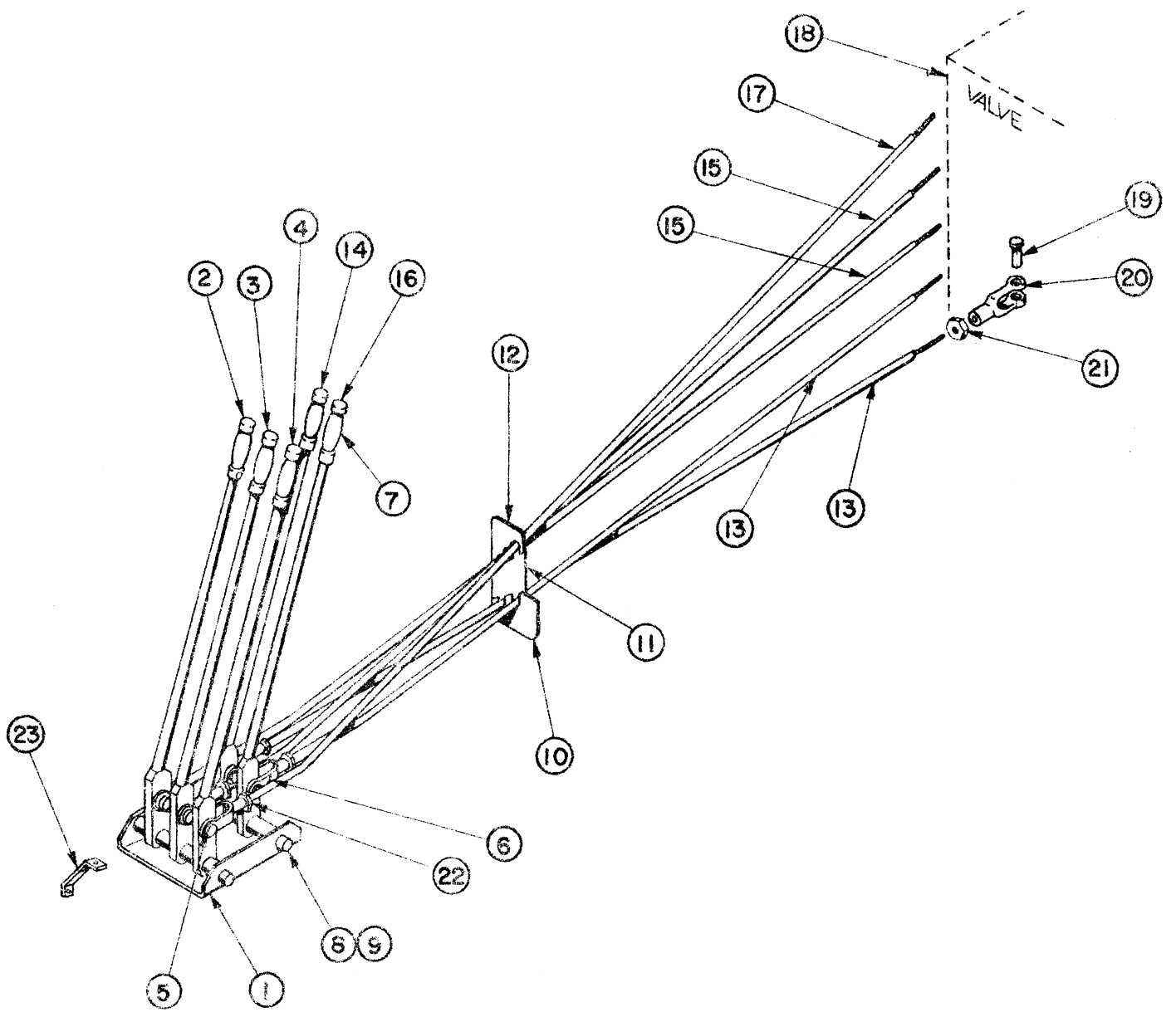
LULL ENGINEERING COMPANY, INC.
 3045 HIGHWAY 13,
 ST. PAUL, MINNESOTA 55121

PUMP ASSEMBLY
 P-13631

<u>ITEM NO.</u>	<u>PART NO.</u>	<u>ASSEMBLY NO.</u>	<u>DESCRIPTION</u>	<u>NO. REQ.</u>
1	P-12204		Plug	2
2	P-12914		Spring	1
3	P-12915		Valve Sub Assembly	1
4	P-13638		Screw	4
5	P-13636		Cover	1
6	P-12205		Snap Ring	1
7	*P-12210		O-Ring	1
8	P-13656		Washer	1
9	P-13661		Pressure Plate	2
10	*P-12192		O-Ring	4
11	P-13644		Ring	1
12	P-13655		Rotor	1
13	P-13648		Vane Kit (12 Vanes)	1
14	P-13660		Kit	1
15	P-13651		Pin	2
16	P-12925		Body (Includes P-12926 Bushing	1
17	P-12926		Bushing	1
18	P-12927		Pin	2
19	P-13643		Ring	1
20	P-13653		Rotor	1
21	P-13646		Vane Kit (12 Vanes)	1
22	P-13658		Kit	1
23	P-12939		Key	1
24	*P-12210		O-Ring	1
25	P-12933		Spring	1
26	P-12934		Body (Outlet)	1
27	*P-12444		Seal, Shaft	1
28	P-12935		Snap Ring	1
29	P-12936		Bearing	1
30	P-12937		Shaft	1
31	P-12938		Snap Ring	1
32	P-12940		Seal Kit	1

*Included in P-12940 Seal Kit.

<u>ITEM NO.</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
1.	P-12224	Washer
2.	P-12225	O-Ring
3.	P-12226	Valve Spool
4.	P-12227	Body Sub Assembly
5.	P-12228	O-Ring, 3 Req'd.
6.	P-12229	O-Ring
7.	P-12230	Nut
8.	P-12231	Cylinder Sub Assembly
9.	P-12232	Seal
10.	P-12233	Washer
11.	P-12234	Gasket Kit
12.	P-12235	Retainer
13.	P-12236	Wiper Ring
14.	P-12237	Scraper
15.	P-12238	Snap Ring
16.	P-12239	Nut
17.	P-12240	Nut
18.	P-12241	Spring
19.	P-12242	Shield
20.	P-12243	Dust Cover
21.	P-12244	Ball Stud
22.	P-12245	Housing
23.	P-12246	Ball Stud Seat
24.	P-12247	Spring
25.	P-12248	Plug
26.	P-12249	Cotter Pin
27.	P-12250	Screw
28.	P-12251	Spring
29.	P-12252	Spacer
30.	P-12253	Ball
31.	P-12254	Valve
32.	P-12255	O-Ring
33.	P-12256	Snap Ring
34.	P-12257	Flange Housing
35.	P-12258	Plug
36.	P-12259	Seat
37.	P-12260	Spring
38.	P-12261	Spacer
39.	P-12262	Screw
40.	P-12263	Washer
41.	P-12264	Sleeve
42.	P-12265	Dust Cover
43.	P-12267	Stud, 4 Req'd.
44.	P-12268	Nut
45.	P-12269	Ball Stud
46.	P-13505	Kit



VALVE CONTROL ASS'Y. 11263

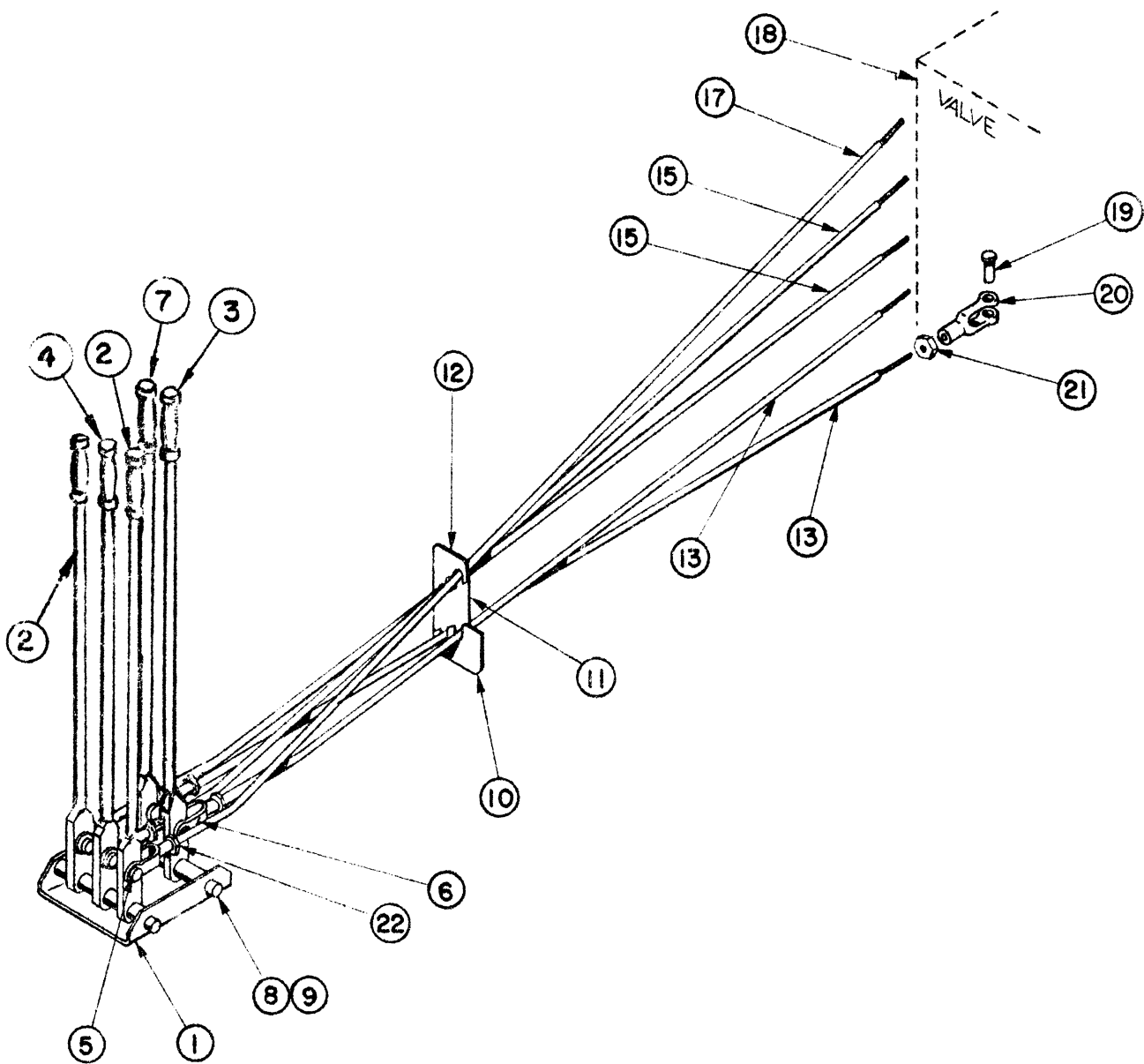
VALVE CONTROL ASSEMBLY
NO. 11,263

ITEM	PART	DESCRIPTION	RE'Q.
1	11,127	Valve Handle Bracket	1
2	11,255	Valve Control Handle	1
3	11,217	Valve Control Handle	1
4	11,218	Valve Control Handle	1
5	P-10514	Clevis Pin	5
6	P-10333	Clevis	5
7	P-10012	Rubber Handle Grip	5
8	8785	Pivot Shaft	2
9	8786	Spacer	1
10	11,029	Valve Rod Stabilizer	1
11	10,923	Center	1
12	10,922	Top	1
13	11,304	Valve Control Rod	2
14	11,219	Valve Control Handle	2
15	11,223	Valve Control Rod	2
16	11,254	Valve Control Handle	1
17	11,224	Valve Control Rod	1
18	10,950	Valve Ass'y (Page 52)	1
19	P-10040	Clevis Pin	5
20	P-10193	Clevis	5
21	COM'L	Jam Nut 3/8-24 NF	5
22	COM'L	Jam Nut 1/2-20 NF	5
23	11,030	Support	2

LULL ENGINEERING COMPANY, INC.
 3045 HIGHWAY 13,
 ST. PAUL 11, MINNESOTA 55111

VALVE CONTROL ASSEMBLY
 7C2-31' HIGH-LIFT
 NO. 11,262

<u>ITEM</u> <u>NO.</u>	<u>PART</u> <u>NO.</u>	<u>ASSEMBLY</u> <u>NO.</u>	<u>DESCRIPTION</u>	<u>NO.</u> <u>REQ.</u>
1	11,127		Valve Handle Bracket	1
2	11,255		Valve Control Handle	1
3	11,217		Valve Control Handle	1
4	11,218		Valve Control Handle	1
5	P-10514		Clevis Pin	5
6	P-10333		Clevis	5
7	P-10012		Rubber Handle Grip	5
8	8785		Pivot Shaft	2
9	8786		Spacer	1
10	11,029		Valve Rod Stabilizer	1
11	10,923		Center	1
12	10,922		Top	1
13	11,221		Valve Control Rod	2
14	11,219		Valve Control Handle	1
15	11,220		Valve Control Rod	2
16	11,254		Valve Control Handle	1
17	11,222		Valve Control Rod	1
18		10,950	Valve Ass'y (Page 52)	1
19	P-10040		Clevis Pin	5
20	P-10193		Clevis	5
21	COM'L		Jam Nut 3/8-24 NF	5
22	COM'L		Jam Nut 1/2-20 NF	5
23	11,030		Bracket Support	1



VALVE CONTROL ASS'Y. 13142

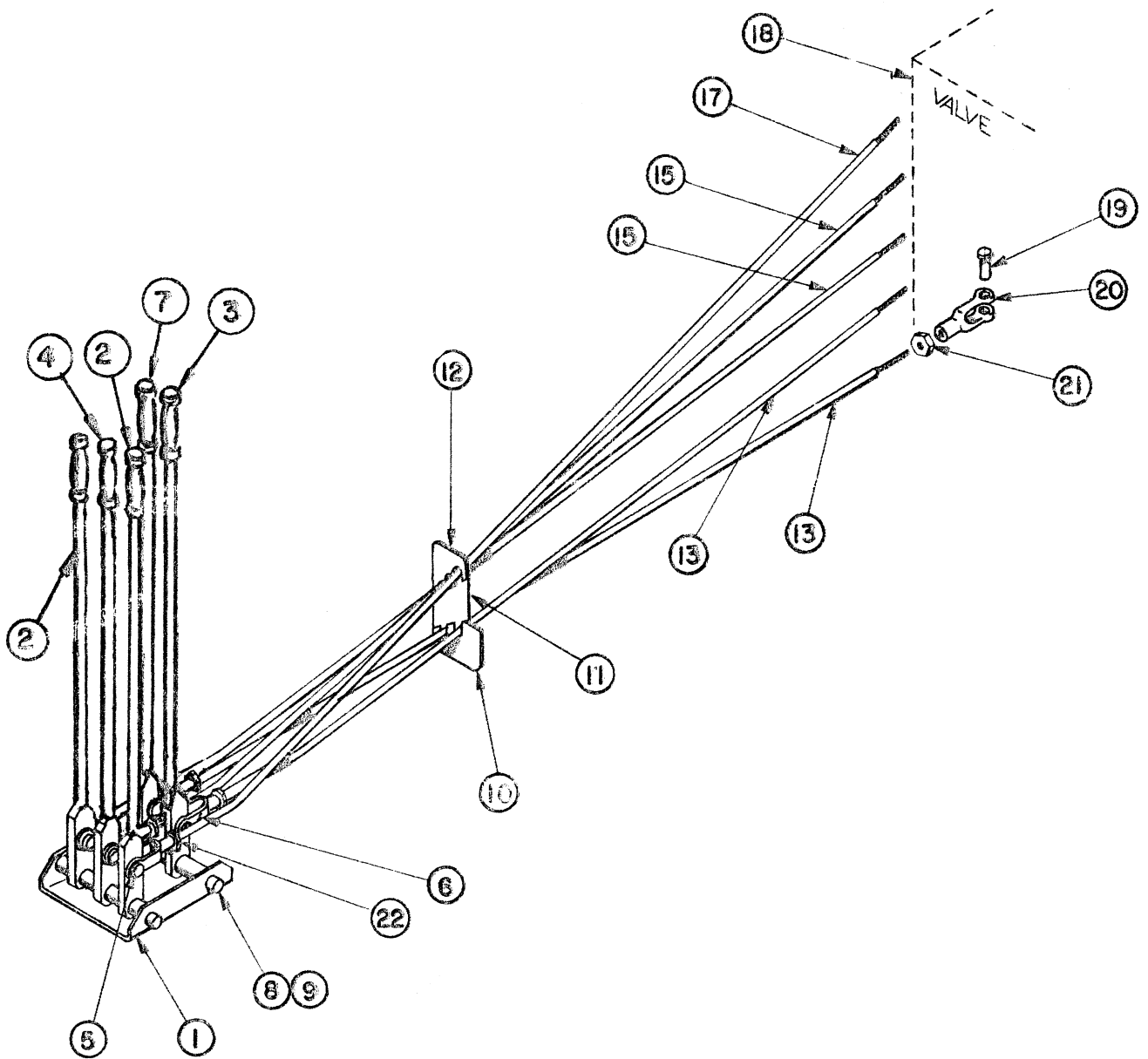
LULL ENGINEERING COMPANY, INC.
 3045 HIGHWAY 13,
 ST. PAUL, MINNESOTA 55121

VALVE CONTROL ASSEMBLY
 NO. 13,142

<u>ITEM NO.</u>	<u>PART NO.</u>	<u>ASSEMBLY NO.</u>	<u>DESCRIPTION</u>	<u>NO. REQ.</u>
1	11,127		Valve Handle Bracket	1
2	8726		Valve Control Handle	1
3	8727		Valve Control Handle	1
4	8728		Valve Control Handle	1
5	P-10514		Clevis Pin	5
6	P-10333		Clevis	5
7	P-10012		Rubber Handle Grip	5
8	8785		Pivot Shaft	2
9	8786		Spacer	1
10	11,029		Valve Rod Stabilizer	1
11	10,923		Center	1
12	10,922		Top	1
13	11,304		Valve Control Rod	2
14				
15	11,223		Valve Control Rod	2
16				
17	11,224		Valve Control Rod	1
18		10,950	Valve Assembly (Page 52)	1
19	P-10040		Clevis Pin	5
20	P-10193		Clevis	5
21	COM'L		Jam Nut, 3/8-24 NF	5
22	COM'L		Jam Nut, 1/2-20 NF	5

LULL ENGINEERING COMPANY, INC.
3045 HIGHWAY 13,
ST. PAUL, MINNESOTA 55121

VALVE CONTROL ASSEMBLY
NO. 13,480

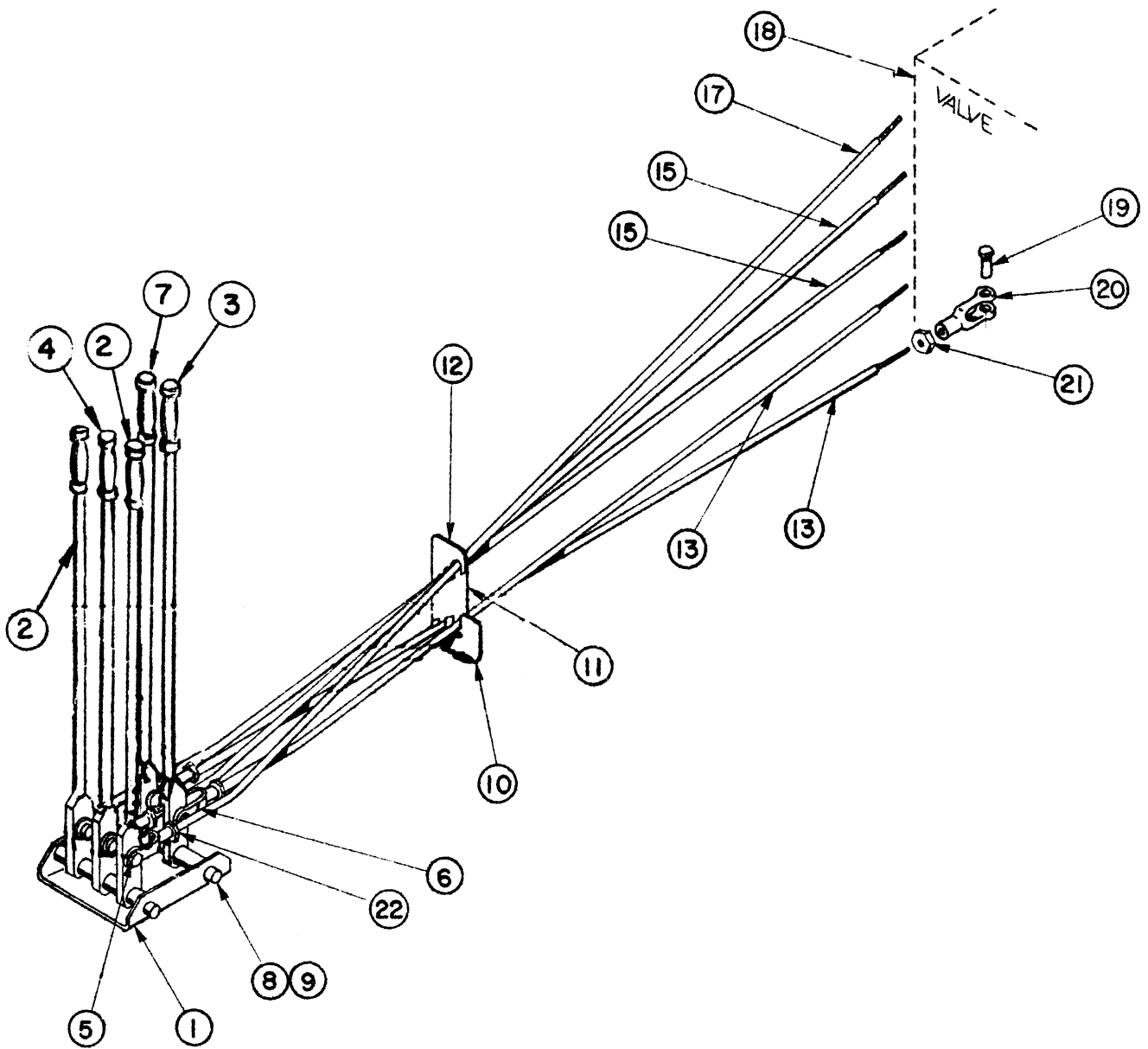


7C2-40'

LULL ENGINEERING COMPANY, INC.
 3045 HIGHWAY 13,
 ST. PAUL, MINNESOTA 55121

VALVE CONTROL ASSEMBLY
 NO. 13,480

<u>ITEM NO.</u>	<u>PART NO.</u>	<u>ASSEMBLY NO.</u>	<u>DESCRIPTION</u>	<u>NO. REQ.</u>
1	8784		Valve Handle Bracket	1
2	8726		Valve Control Handle	1
3	8727		Valve Control Handle	1
4	8728		Valve Control Handle	1
5	P-10514		Clevis Pin	5
6	P-10333		Clevis	5
7	P-10012		Rubber Handle Grip	5
8	8785		Pivot Shaft	2
9	8786		Spacer	1
10	11,029		Valve Rod Stabilizer	1
11	10,923		Center	1
12	10,922		Top	1
13	11,304		Valve Control Rod	2
14				
15	11,223		Valve Control Rod	2
16				
17	11,224		Valve Control Rod	1
18		10,950	Valve Assembly (Page 52)	1
19	P-10040		Clevis Pin	5
20	P-10193		Clevis	5
21	COM'L		Jam Nut, 3/8-24 NF	5
22	COM'L		Jam Nut, 1/2-20 NF	5



VALVE CONTROL ASS'Y. 13187

S/N 2467 and UP

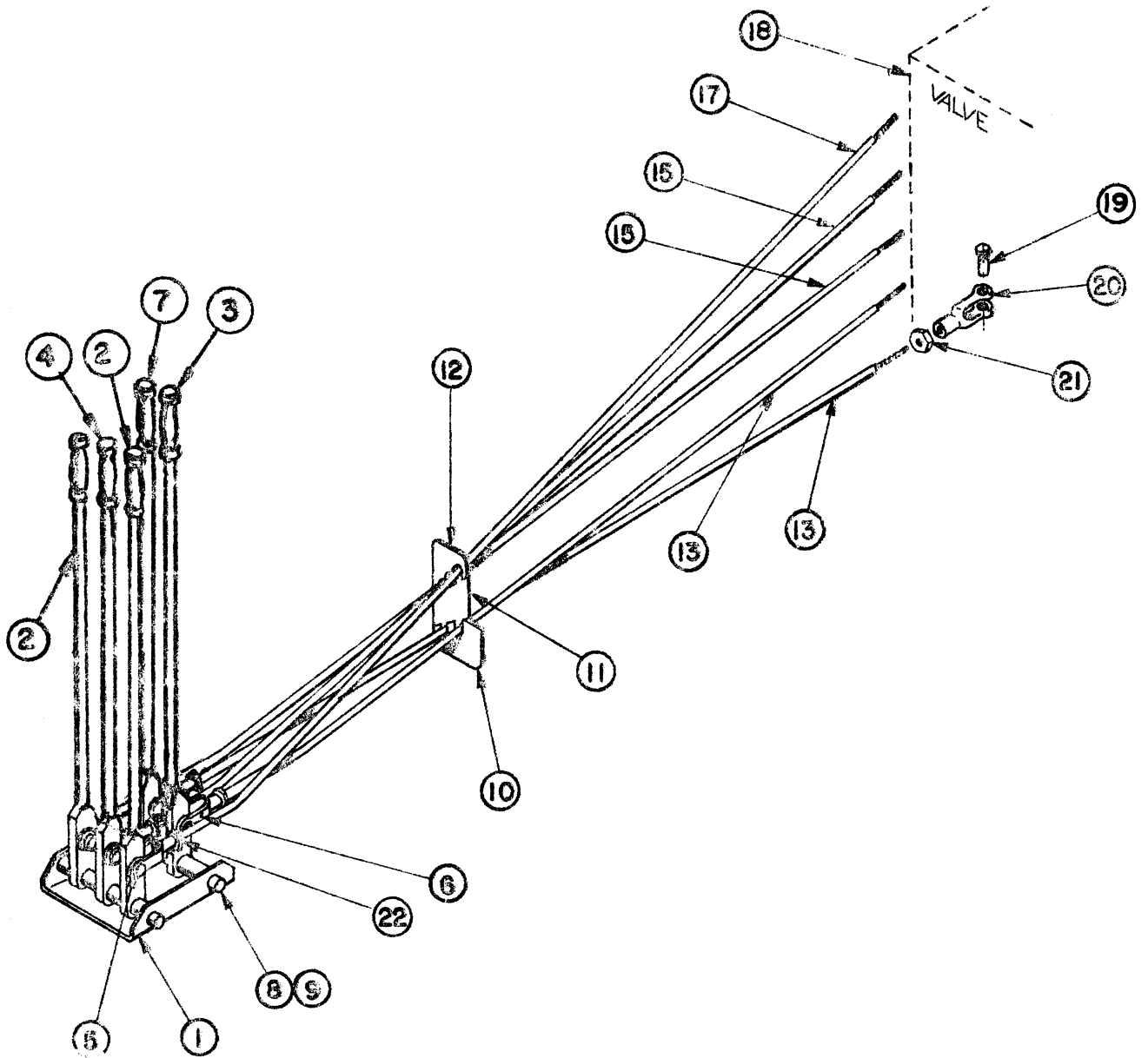
LULL ENGINEERING COMPANY, INC.
 3045 HIGHWAY 13,
 ST. PAUL, MINNESOTA 55121

VALVE CONTROL ASSEMBLY
 NO. 13,187

<u>ITEM NO.</u>	<u>PART NO.</u>	<u>ASSEMBLY NO.</u>	<u>DESCRIPTION</u>	<u>NO. REQ.</u>
1	11,127		Valve Handle Bracket	1
2	8726		Valve Control Handle	1
3	8727		Valve Control Handle	1
4	8728		Valve Control Handle	1
5	P-10514		Clevis Pin	5
6	P-10333		Clevis	5
7	P-10012		Rubber Handle Grip	5
8	8785		Pivot Shaft	2
9	8786		Spacer	1
10	11,029		Valve Rod Stabilizer	1
11	10,923		Center	1
12	10,922		Top	1
13	11,221		Valve Control Rod	2
14				
15	11,220		Valve Control Rod	2
16				
17	11,222		Valve Control Rod	1
18		10,950	Valve Assembly (Page 52)	1
19	P-10040		Clevis Pin	5
20	P-10193		Clevis	5
21	COM'L		Jam Nut, 3/8-24 NF	5
22	COM'L		Jam Nut, 1/2-20 NF	5

LULL ENGINEERING COMPANY, INC.
3045 HIGHWAY 13,
ST. PAUL. MINNESOTA 55121

VALVE CONTROL ASSEMBLY
NO. 13,479



7C2-31'

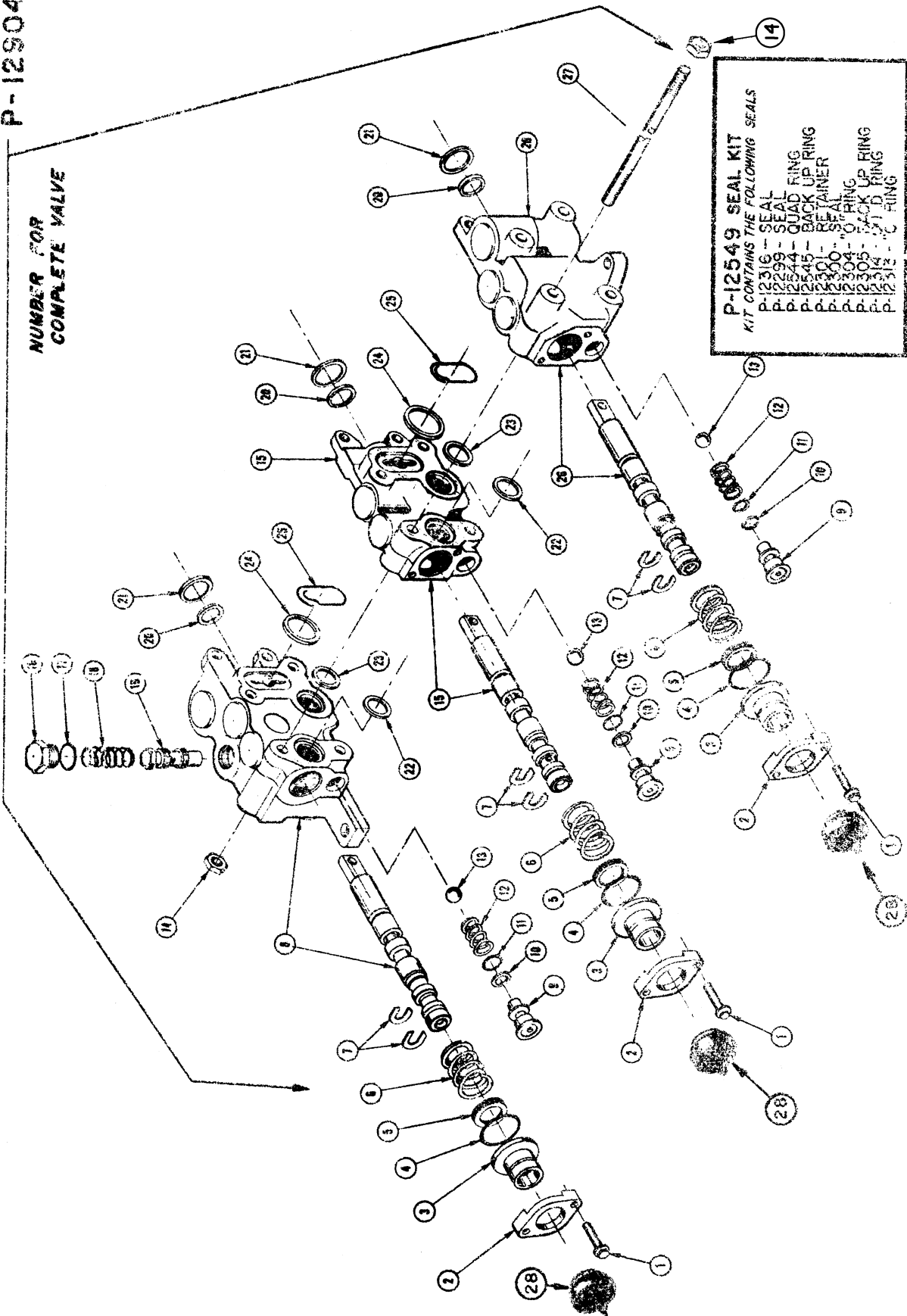
LULL ENGINEERING COMPANY, INC.
 3045 HIGHWAY 13,
 ST. PAUL, MINNESOTA 55121

VALVE CONTROL ASSEMBLY
 NO. 13,479

<u>ITEM NO.</u>	<u>PART NO.</u>	<u>ASSEMBLY NO.</u>	<u>DESCRIPTION</u>	<u>NO. REQ.</u>
1	8784		Valve Handle Bracket	1
2	8726		Valve Control Handle	1
3	8727		Valve Control Handle	1
4	8728		Valve Control Handle	1
5	P-10514		Clevis Pin	5
6	P-10333		Clevis	5
7	P-10012		Rubber Handle Grip	5
8	8785		Pivot Shaft	2
9	8786		Spacer	1
10	11,029		Valve Rod Stabilizer	1
11	10,923		Center	1
12	10,922		Top	1
13	11,221		Valve Control Rod	2
14				
15	11,220		Valve Control Rod	2
16				
17	11,222		Valve Control Rod	1
18		10,950	Valve Assembly (Page 52)	1
19	P-10040		Clevis Pin	5
20	P-10193		Clevis	5
21	COM'L		Jam Nut, 3/8-24 N.F.	5
22	COM'L		Jam Nut, 1/2-20 N.F.	5

P-12904

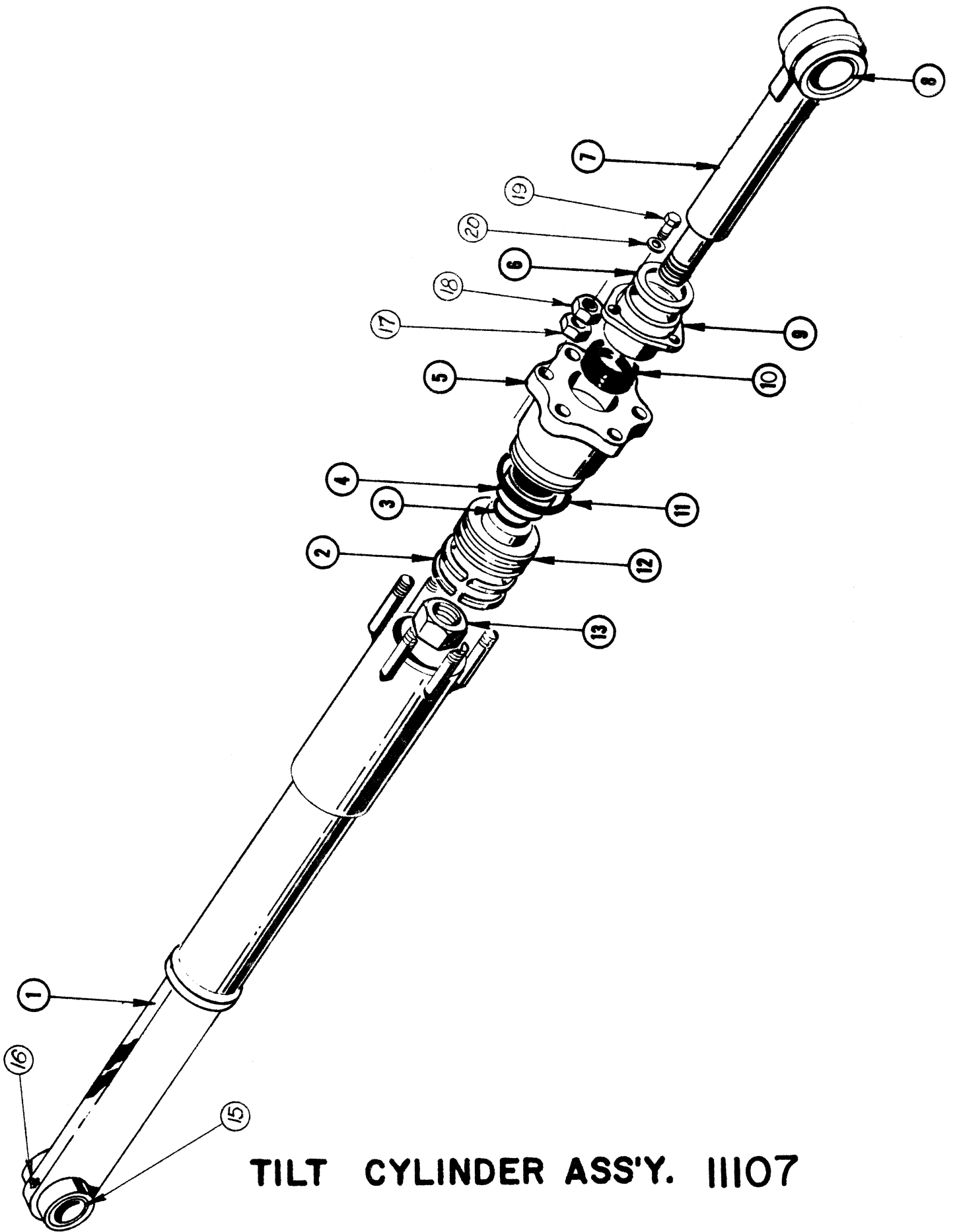
NUMBER FOR
 COMPLETE VALVE



VALVE ASSEMBLY
NO. 10,950

ITEM	PART	DESCRIPTION	RE'Q.
1	P-12311	Screw	10
2	P-12312	Retainer	10
3	P-12310	Sleeve	10
4	* P-12313	O-Ring	10
5	* P-12314	Quad Ring	10
6	P-12315	Spring	10
7	P-12309	C-Washer	10
8	P-12546	Section & Spool	10
9	P-12306	Plug	10
10	* P-12305	Back Up Ring	10
11	* P-12304	O-Ring	10
12	P-12303	Spring	10
13	P-12302	Ball	10
14	P-12307	Nut	10
15	P-12547	Section & Spool	10
16	P-12285	Plug	10
17	P-12295	O-Ring	10
18	P-12296	Spring	10
19	P-12541	Valve Control	10
20	* P-12544	Quad Ring	10
21	* P-12545	Back Up Ring	10
22	* P-12316	Seal	10
23	* P-12300	Seal	10
24	* P-12299	Seal	10
25	* P-12301	Retainer	10
26	P-12548	Section & Spool	10
27	P-12543	Stud	10
28	P-13317	Dust Cover	10

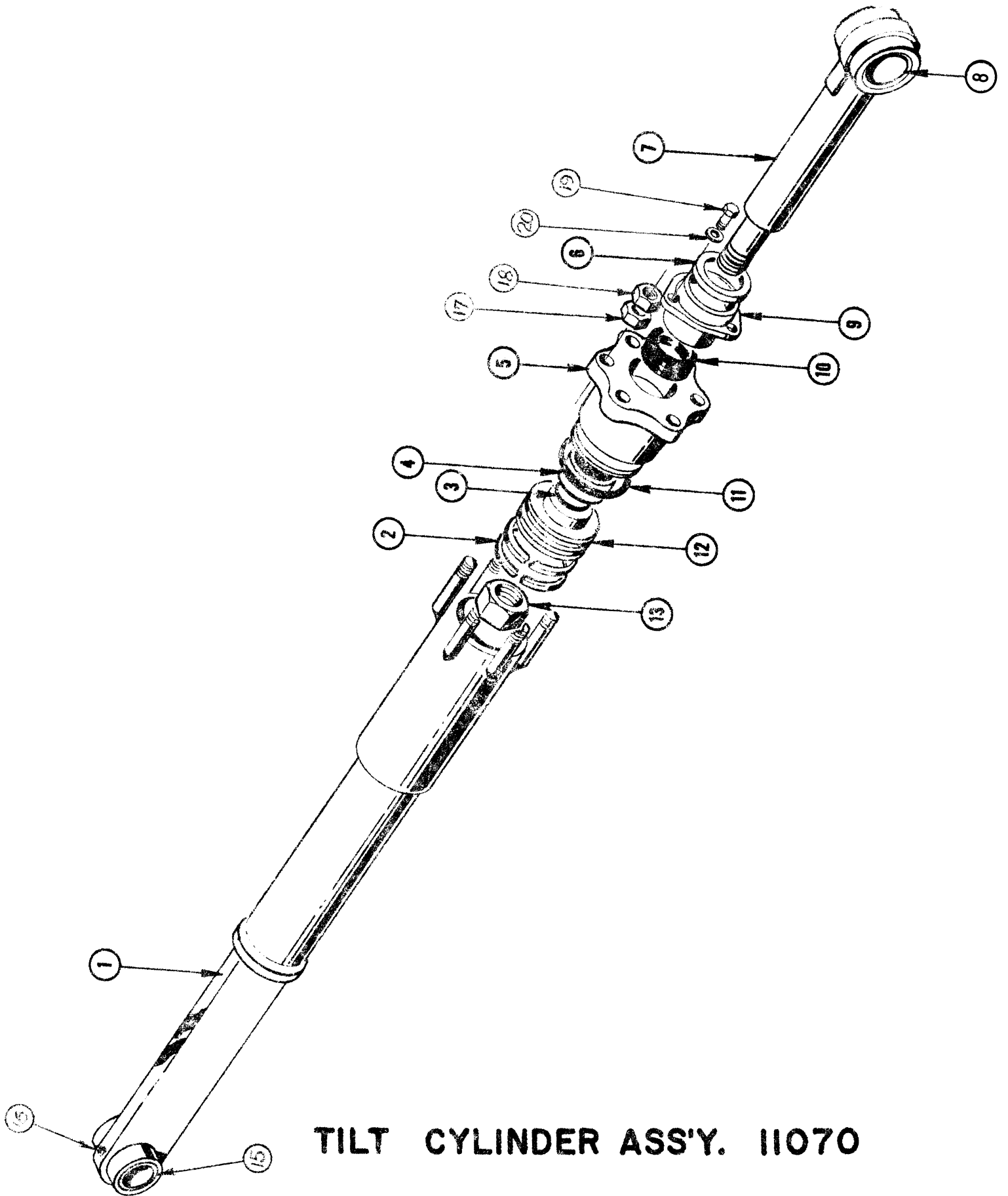
* Included in P-12549 Seal Kit



TILT CYLINDER ASS'Y. III07



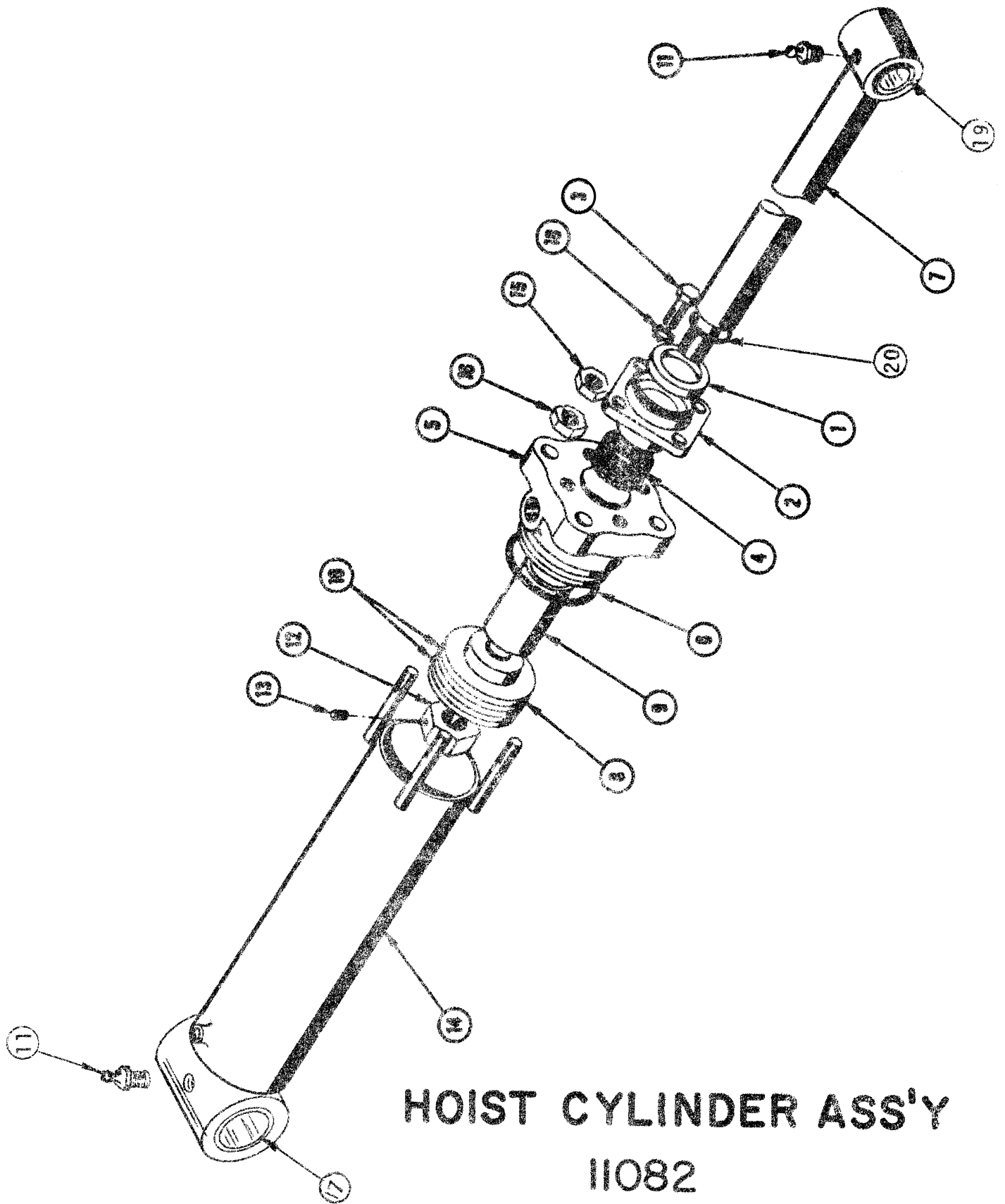
REF.	PART NO.	DESCRIPTION	REQ.
		TILT CYLINDER ASSEMBLY - 7C2-31' NO. 11,107	
1	11,104	Tube Weldment	1
2	P-15312	Ring Assembly	2
3	P-11576	O-Ring	1
4	N-10246	Spacer	1
5	U-110	Head	1
6	P-10307	Klozures	1
7	8774	Piston Rod	1
8	7313	Bushing	1
9	U-107	Gland	1
10	P-10304	V-Packing	1
11	P-10317	O-Ring	1
12	9221	Piston	1
13	215	Special Nut	1
14	COM'L	Setscrew, 1/4-20 N.C. x 3/8 Cup Point	1
15	2727	Bushing	1
16	COM'L	Zerk Fitting, 1/8" N.P.T.	1
17	COM'L	Hex Nut, 1/2-20 N.F.	6
18	COM'L	Jam Nut, 1/2-20 N.F. Jam	6
19	COM'L	Capscrew, 3/8-16 N.C. x 1" Hex	3
20	COM'L	Washer, Shakeproof 3/8	3



TILT CYLINDER ASS'Y. 11070



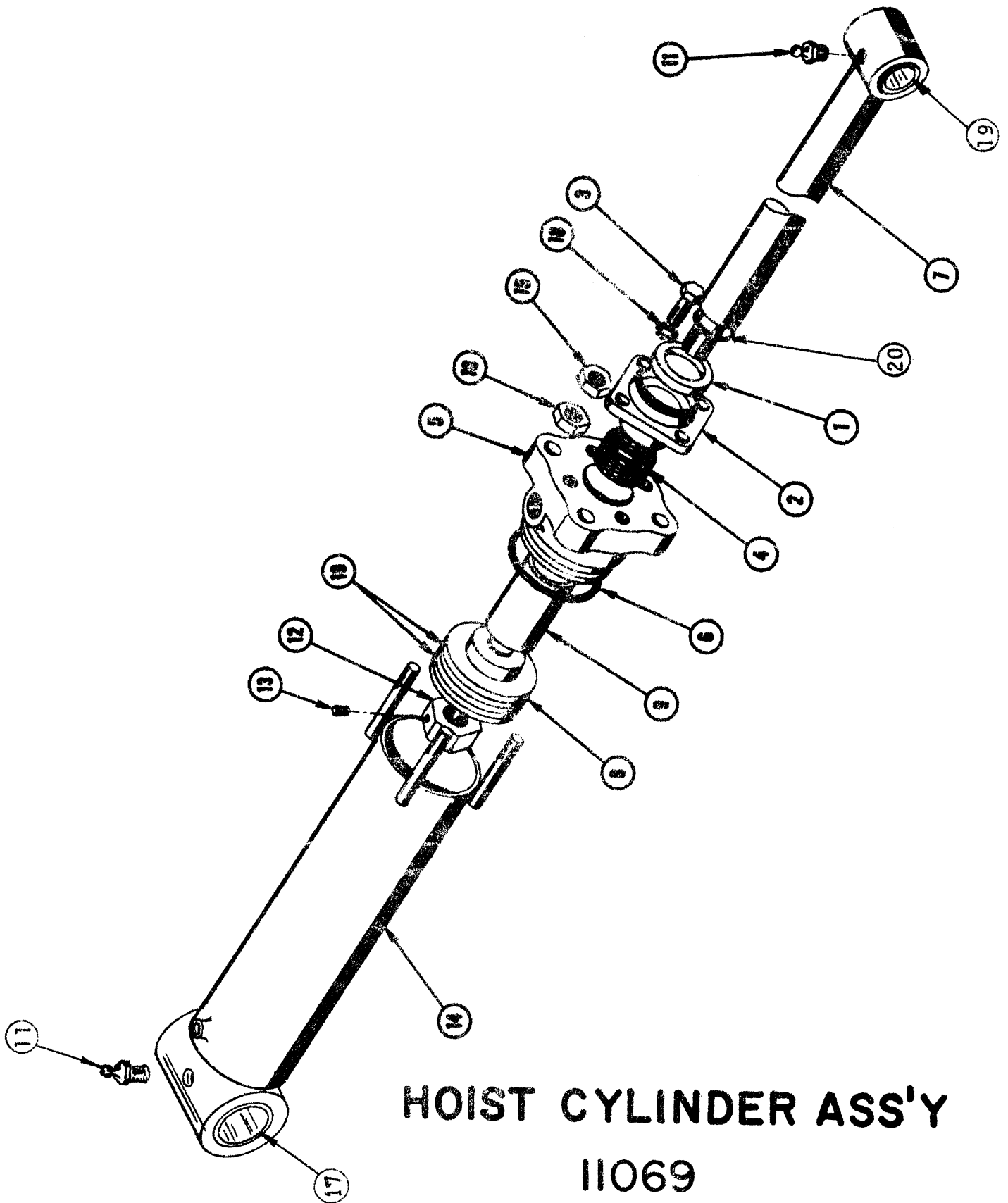
REF.	PART NO.	DESCRIPTION	REQ.
		TILT CYLINDER ASS'Y - 7C2-40' NO. 11,070	
1	11,187	Tube Weldment	1
2	P-11286	Piston Ring Assembly	2
3	P-11576	O-Ring	1
4	N-10322	Spacer	1
5	548	Cylinder Head	1
6	P-10504	Wiper	1
7	1138	Piston Rod Weldment	1
8	7313	Bushing	1
9	553	Gland	1
10	P-10503	V-Packing	1
11	P-11576	O-Ring	1
12	9550	Piston	1
13	215	Special Nut	1
14	COM'L	Setscrew, 1/4"-20 NC x 3/8 Cup Point	1
15	2727	Bushing	1
16	COM'L	Zerk Fitting, 1/8 N.P.T.	1
17	COM'L	Nut, Hex 1/2-20 N.F.	6
18	COM'L	Nut, Jam Hex 1/2-20 N.F.	6
19	COM'L	Capscrew, 3/8"-16 N.C. x 1" Long	3
20	COM'L	Washer, Shakeproof 3/8"	3



**HOIST CYLINDER ASS'Y
11082**



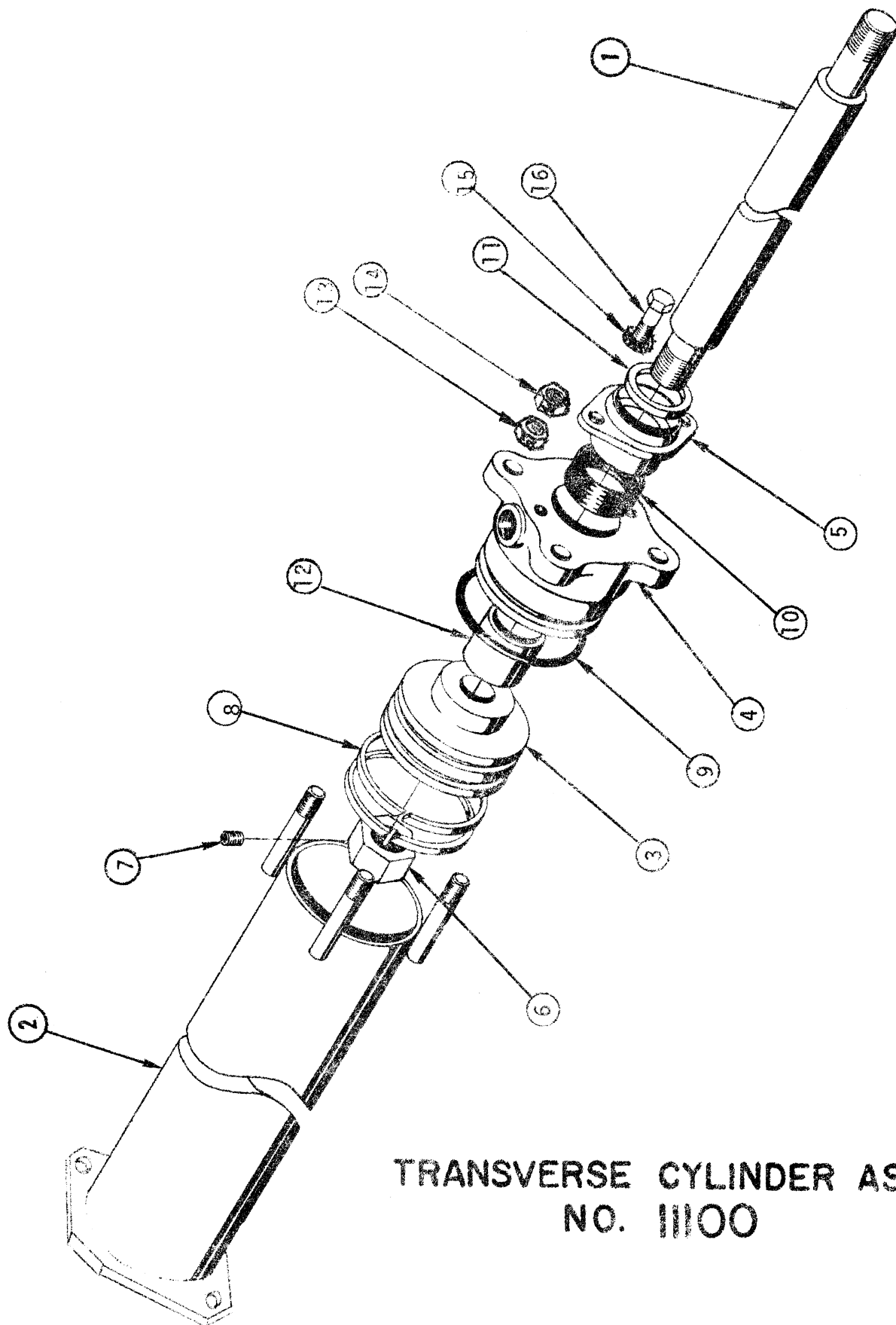
REF.	PART NO.	DESCRIPTION	REQ.
		HOIST CYLINDER ASSEMBLY 7C2-31' NO. 11,082	
1	P-10504	Klozure	1
2	521	Gland	1
3	COM'L	Capscrew, 5/16 N.C. x 1 1/2" Long	4
4	P-10503	V-Packing	1
5	1033	Head	1
6	P-10317	O-Ring	1
7	11,083	Piston Rod	1
8	549	Piston	1
9	N-10324	Spacer	1
10	P-11347	Ring Assembly	2
11	COM'L	Zerk Fitting	2
12	222	Nut, Special	1
13	COM'L	Setscrew, 1/4-20 N.C. x 3/8 Cup Point	1
14	11,084	Cylinder Tube Weldment	1
15	COM'L	Nut, Jam 1/2 N.F.	4
16	COM'L	Nut, Hex 1/2 N.F.	4
17	4873	Bushing	1
18	COM'L	Washer, Shakeproof 5/16	4
19	3304	Bushing	1
20	P-13191	O-Ring	1



**HOIST CYLINDER ASS'Y
11069**



REF	PART NO.	DESCRIPTION	REQ
		HOIST CYLINDER ASSEMBLY 702-40' NO. 11,069	
1	P-10504	Klosure	1
2	521	Gland	1
3	COM'L	Capscrew, 5/16 N.F. x 1 1/2	4
4	P-10503	V-Packing	1
5	1033	Head	1
6	P-10317	O-Ring	1
7	11,184	Piston Rod	1
8	549	Piston	1
9	N-10323	Spacer	1
10	P-11347	Ring Assembly	2
11	COM'L	Zerk Fitting, 1/8 N.P.T.	2
12	222	Nut, Special	1
13	COM'L	Setscrew, 1/4-20 N.C. x 3/8 Cup Point	1
14	11,185	Cylinder Tube Weldment	1
15	COM'L	Nut, Jam 1/2 N.F.	4
16	COM'L	Nut, Hex 1/2 N.F.	4
17	4873	Bushing	1
18	COM'L	Washer, Shakeproof 5/16	4
19	3304	Bushing	1
20	P-13191	O-Ring	1

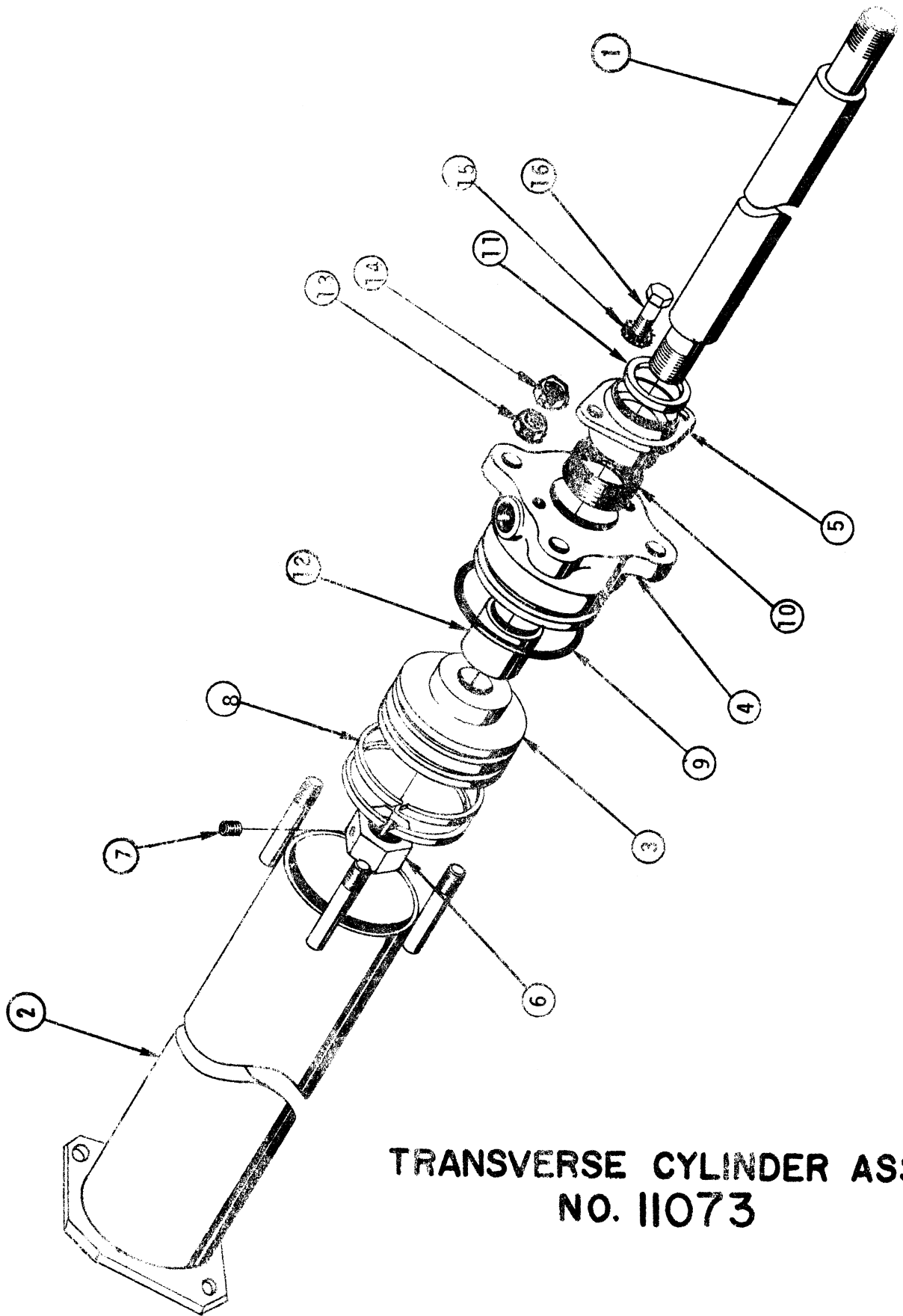


TRANSVERSE CYLINDER ASSY
NO. III00

LULL ENGINEERING COMPANY, INC.
 3045 HIGHWAY 13,
 ST. PAUL, MINNESOTA 55121

TRANSVERSE CYLINDER ASS'Y
 NO. 11,100

<u>ITEM NO.</u>	<u>PART NO.</u>	<u>ASSEMBLY NO.</u>	<u>DESCRIPTION</u>	<u>NO. REQ.</u>
1	11,099		Piston Rod	1
2	11,098		Cylinder Tube Weldment	1
3	551		Piston	1
4	1028		Head	1
5	1032		Gland	1
6	222		Nut, Special	1
7	COM'L		Setscrew, 1/4" NC x 3/8" Cup Pt.	1
8	P-11346		Ring Assembly	2
9	P-10314		O-Ring	1
10	P-10306		V-Packing	1
11	P-10308		Klozure, Wiper	1
12	N-10230		Spacer	1
13	COM'L		Nut, Full 1/2 NF	4
14	COM'L		Nut, Jam 1/2 NF	4
15	COM'L		Washer, Shakeproof 3/8	2
16	COM'L		Capscrew, 3/8 NC x 1" Long	2

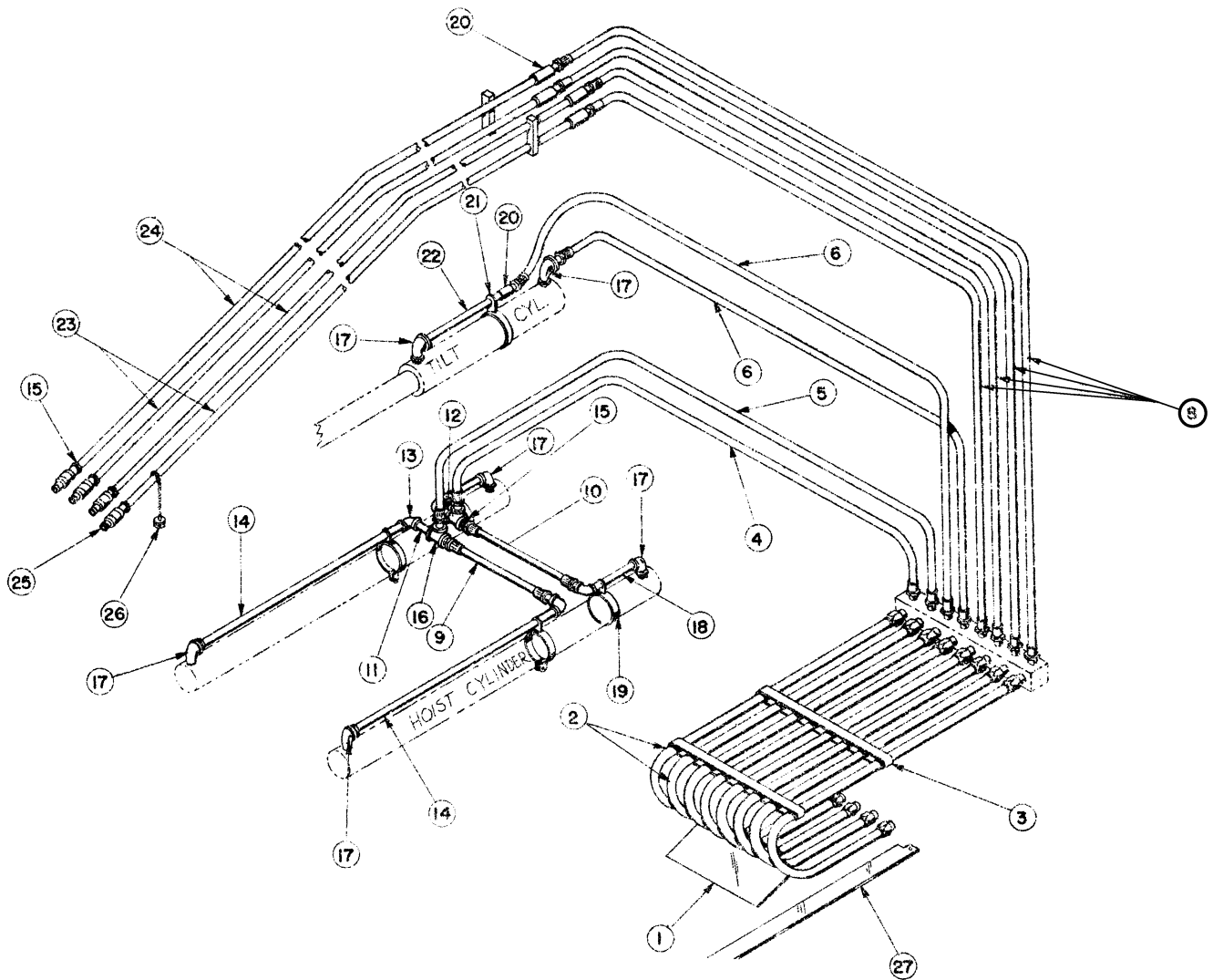


**TRANSVERSE CYLINDER ASS'Y
NO. 11073**

LULL ENGINEERING COMPANY, INC.
 8045 HIGHWAY 13,
 ST. PAUL, MINNESOTA 55121

TRANSVERSE CYLINDER ASS'Y
 NO. 11,073

<u>ITEM NO.</u>	<u>PART NO.</u>	<u>ASSEMBLY NO.</u>	<u>DESCRIPTION</u>	<u>NO. REQ.</u>
1	11,074		Piston Rod	1
2	11,075		Cylinder Tube Weldment	1
3	551		Piston	1
4	1028		Head	1
5	1032		Gland	1
6	222		Nut, Special	1
7	COM'L		Setscrew, 1/4" NC x 3/8 Cup Pt.	1
8	P-11346		Ring Assembly	2
9	P-10314		O-Ring	1
10	P-10306		V-Packing	1
11	P-10308		Klozure, Wiper	1
12	N-10151		Spacer	1
13	COM'L		Nut, Full 1/2 NF	4
14	COM'L		Nut, Jam 1/2 NF	4
15	COM'L		Washer, Shakeproof 3/8	2
16	COM'L		Capscrew, 3/8 NC x 1" Long	2



**HYDRAULIC SYSTEM ASS'Y.
(JUNCTION BLOCK TO LIFT ARM)**

LULL ENGINEERING COMPANY, INC.
 3045 HIGHWAY 13,
 ST. PAUL, MINNESOTA 55121

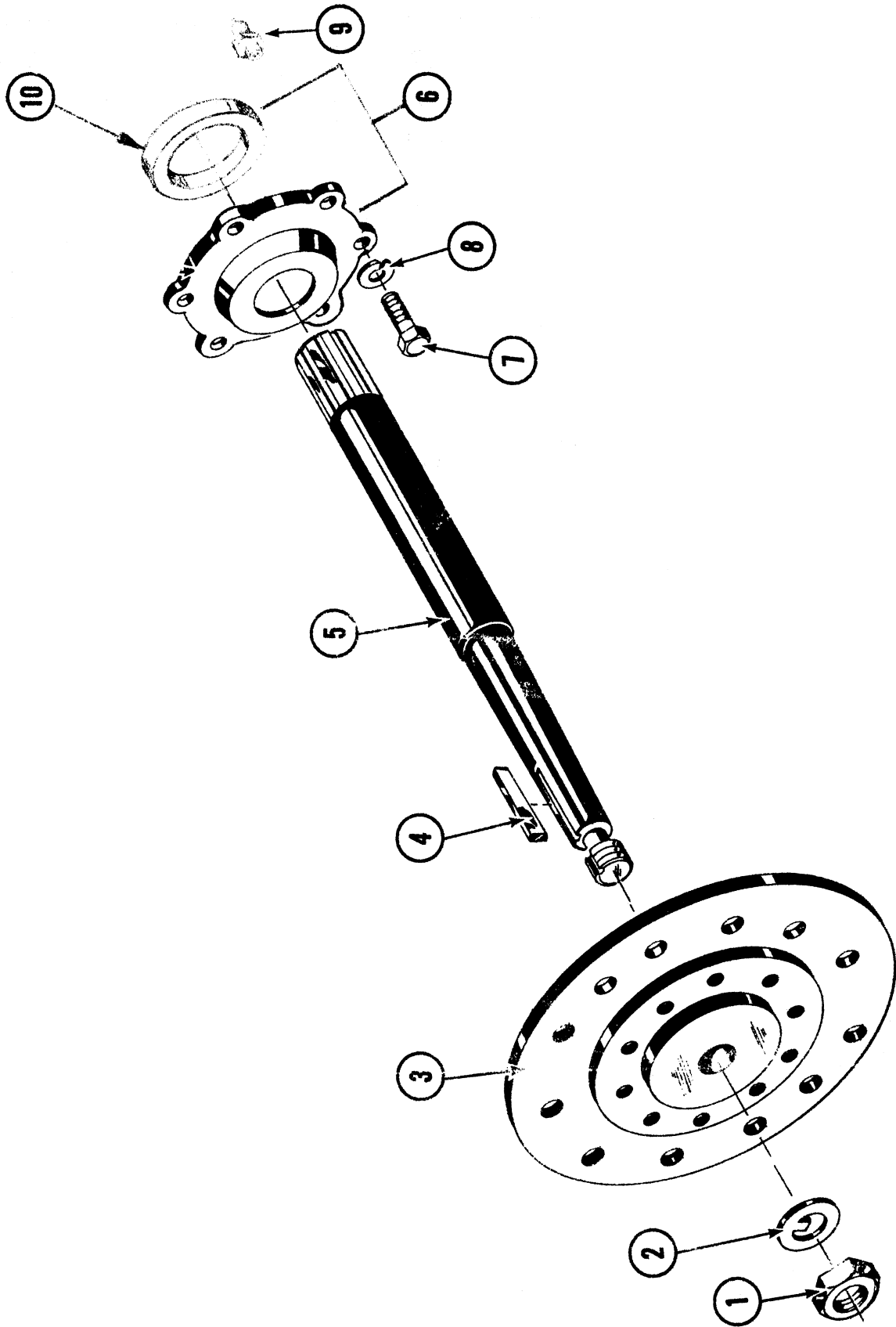
HYDRAULIC SYSTEM
 MODEL 7C2-31'
 NO. 11,313

<u>ITEM NO.</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>	<u>NO. REQ.</u>
1	P-11538	Hose	6
2	P-11299	Hose	2
3	1149	Hose Strap	2
4	P-11505	Hose	1
5	P-11506	Hose	1
6	P-10292	Hose	2
7	P-12969	Fitting	2
8	P-11319	Hose	4
9	P-11541	Hose	1
10	P-11308	Hose	1
11	P-10794	Nipple	1
12	P-10884	Nipple	1
13	P-10225	Elbow	5
14	N-10272	Pipe, 3/8 x 46"	2
15	P-10120	Reducing Bushing	8
16	P-10107	Tee	2
17	P-10117	Street Ell	4
18	P-10888	Pipe	2
19	563	Cylinder Pipe Clamp	4
20	P-10328	Coupling	5
21	613	Cylinder Pipe Clamp	1
22	N-10270	Pipe, 3/8 X Str. x 11"	1
23	N-10153	Pipe, 3/8 X Str. x 16 Ft. 3 Inches	2
24	N-10152	Pipe, 3/8 X Str. x 16 Ft. 4 Inches	2
25	P-11354	Coupling, Female	4
26	P-13516	Dust Cap	4
27	11,155	Hose Support	1
28	6611	Clamp	6
29 "A"	15109	Restrictor 3/32"	1
30	14119	Junction Block Assy	1

<u>REVISION</u>	<u>E.C.O. NO.</u>
"A"	1105

HYDRAULIC SYSTEM
NO. 11,312

ITEM	PART	DESCRIPTION	RE'Q.
1	P-11538	Hose	6
2	P-11299	Hose	2
3	1149	Hose Strap	2
4	P-11639	Hose	1
5	P-11640	Hose	1
6	P-10499	Hose	2
7			
8	P-11319	Hose	4
9	P-11541	Hose	1
10	P-11308	Hose	1
11	P-10794	Nipple	1
12	P-10884	Nipple	1
13	P-10225	Elbow	5
14	N-10274	Pipe, 3/8 x 58"	2
15	P-10120	Reducing Bushing	8
16	P-11642	Tee	2
17	P-10117	Street Ell	4
18	N-10182	Pipe, 3/8 X Strong x 10"	2
19	563	Cylinder Pipe Clamp	4
20	P-10328	Coupling	5
21	613	Cylinder Pipe Clamp	1
22	N-10275	Pipe 3/8 X Strong x 13"	1
23	N-10184	Pipe 3/8 X Strong x 19' 11"	2
24	N-10185	Pipe 3/8 X Strong x 20' 1"	2
25	P-10258	Coupling	4
26	P-10259	Dust Cap	4
27	11,155	Hose Support	1

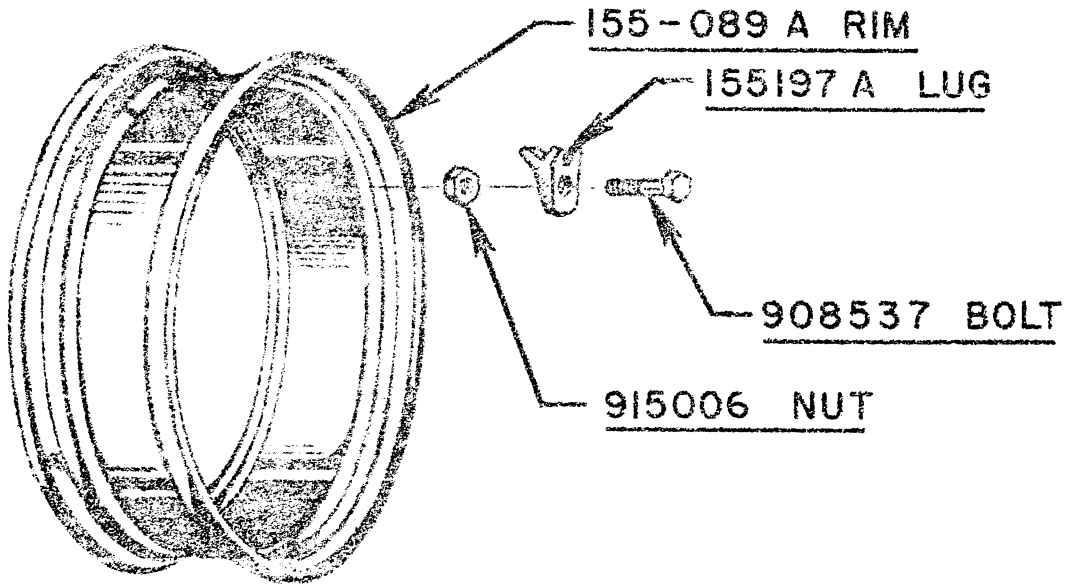


7C2 DRIVE WHEEL AXLE SHAFT & HUB

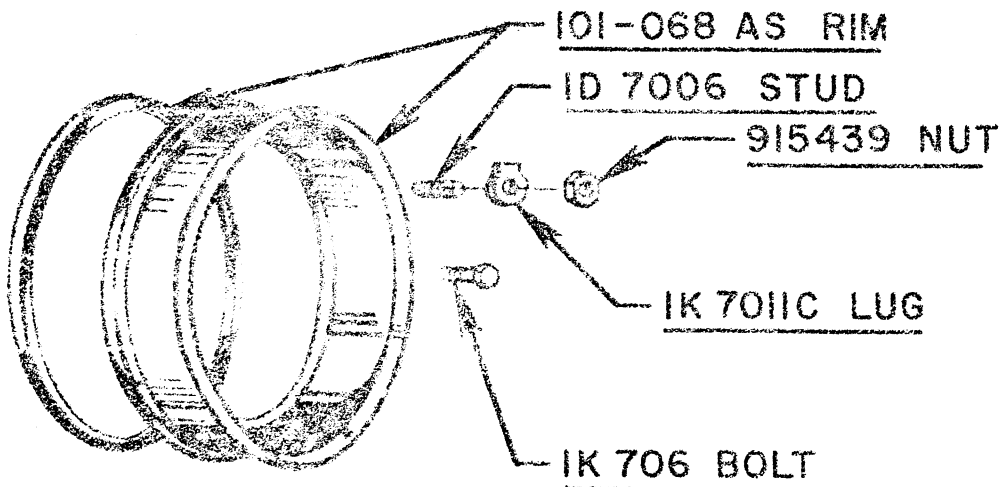


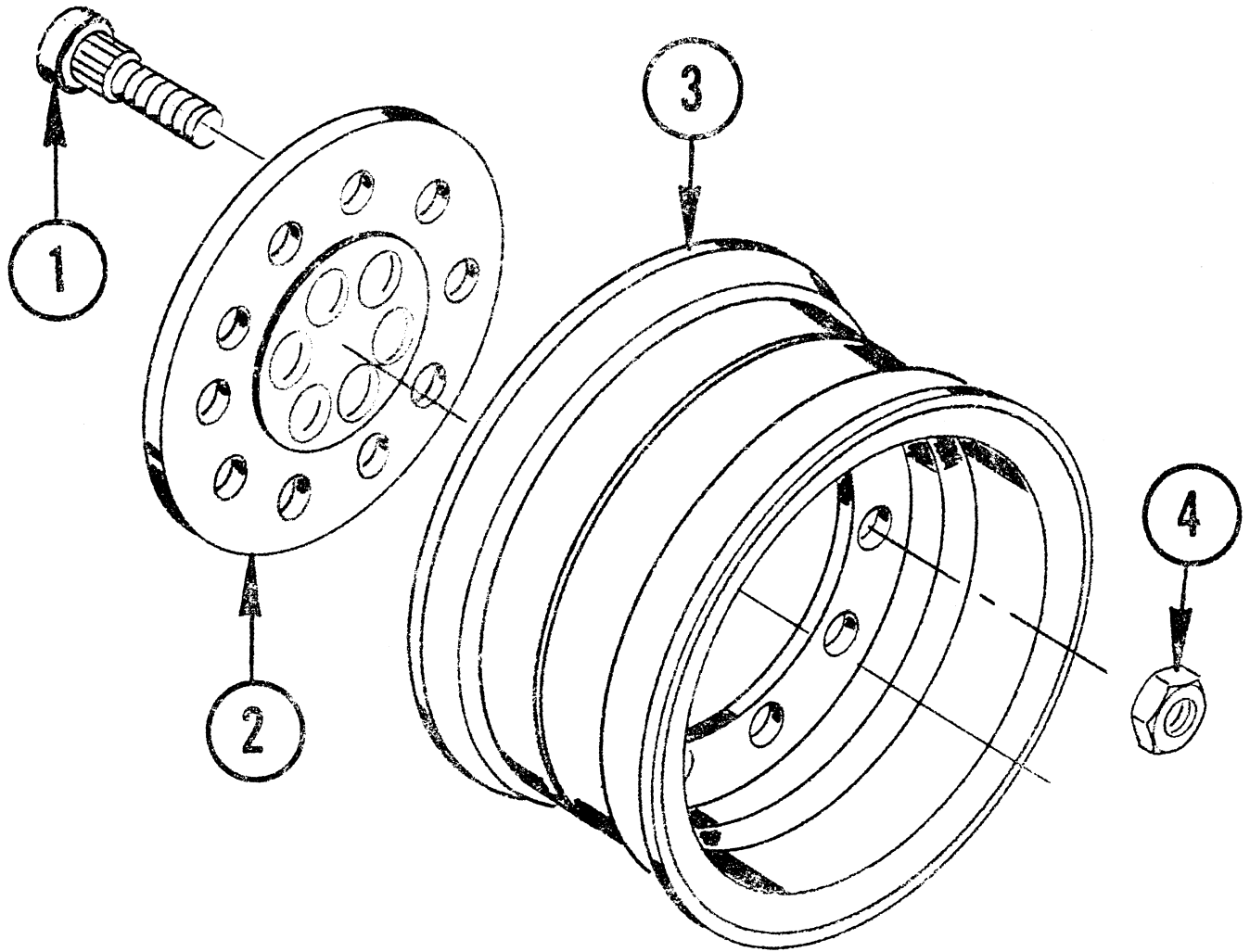
REF.	PART NO.	DESCRIPTION	REQ.
		702 DRIVE WHEEL AXLE SHAFT AND WHEEL HUB.	
1 2 3 4 5 6 7 8 9 10	IK711 IK1449 155-200A 1F1451 166-418A 1KS701A 908333 920-083 939017 K1443	Nut Lockwasher Wheel Key Axle Shaft Cap Capscrew Lockwasher Grease Fitting Oil Seal	1 1 1 1 1 1 6 6 1 1

DRIVE WHEEL RIMS



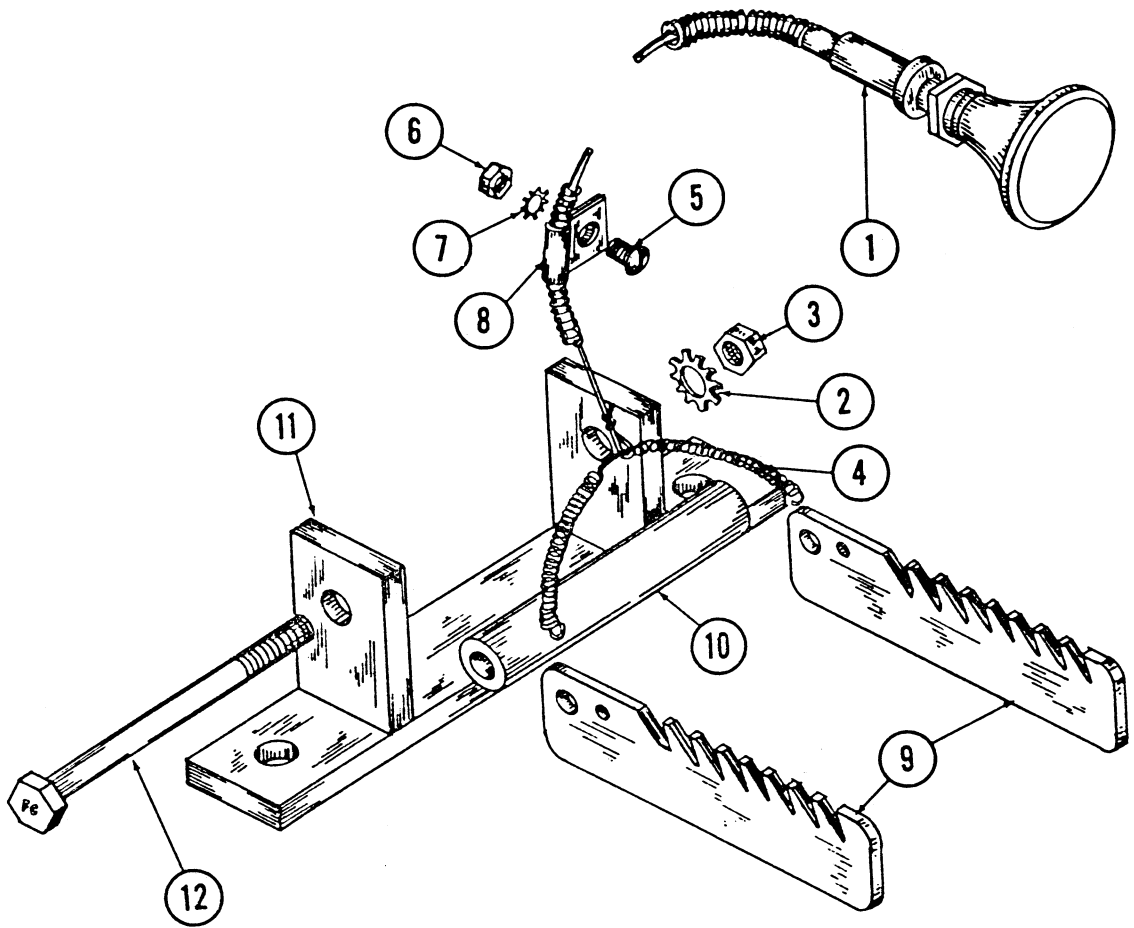
STEERING WHEEL RIMS





RIM/WHEEL ASSEMBLY
 (HIGH-FLOTATION TIRE)
 NO. 11,564

<u>ITEM NO.</u>	<u>PART NO.</u>	<u>ASSEMBLY NO.</u>	<u>DESCRIPTION</u>	<u>NO. REQ.</u>
1	155306-A		Stud	10
2	167256-A		Wheel Center	1
3	164308-A		High-Flotation Rim	1
4	155307-A		Nut	10



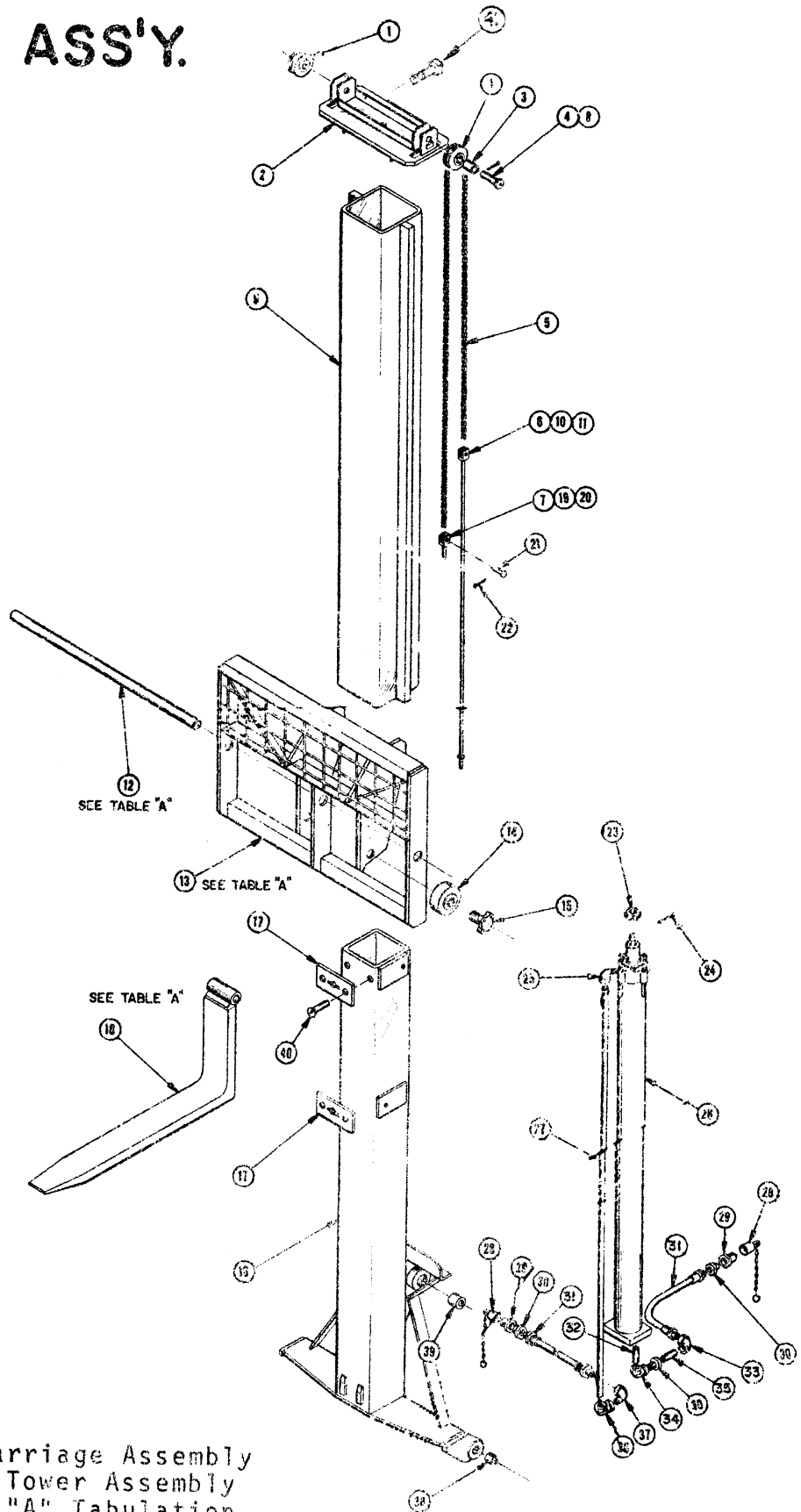
<u>ITEM NO.</u>	<u>PART NO.</u>	<u>ASSEMBLY NO.</u>	<u>DESCRIPTION OF PART</u>	<u>NO. REQ.</u>
1	P10007		Control Cable	1
2	Coml.		Shakeproof Washer 5/16"	1
3	Coml.		Hex. Jam Nut 5/16"-18 NC	1
4	P10008		Spring	1
5	Coml.		Screw 10-24 NC x 1/2" Lg.	1
6	Coml.		Hex. Nut 10-24 NC	1
7	Coml.		Lock Washer 3/16"	1
8	P10009		Clamp, Cable	1
9	7152		Brake Pedal Stop	2
10	7395		Pipe Spacer	1
11	7396		Brake Lock Bracket	1
12	Coml.		Hex. Cap Screw 5/16"-18 NC x 3-3/4"	1

NO. 1265

TOWER ASS'Y.

TABLE A

ASS'Y. NO.	DESCRIPTION	CARRIAGE NO.	FORK NO.	FORK LENGTH	SHAFT NO.
11610	Side Tilt Carriage Ass'y.	11609	* 11,290	42"	11331
11742	5' Wide West Coast C. Ass'y.	11731	* 11,290	42"	11365
11751	Instant Shift Fork C. Ass'y.	11747	* 13,079	42"	11752
11743	Standard Carriage Ass'y.	11744	* 11,290	42"	11369
11796	5' W. West C. Side Tilt Ass'y.	11783	* 11,290	42"	11776

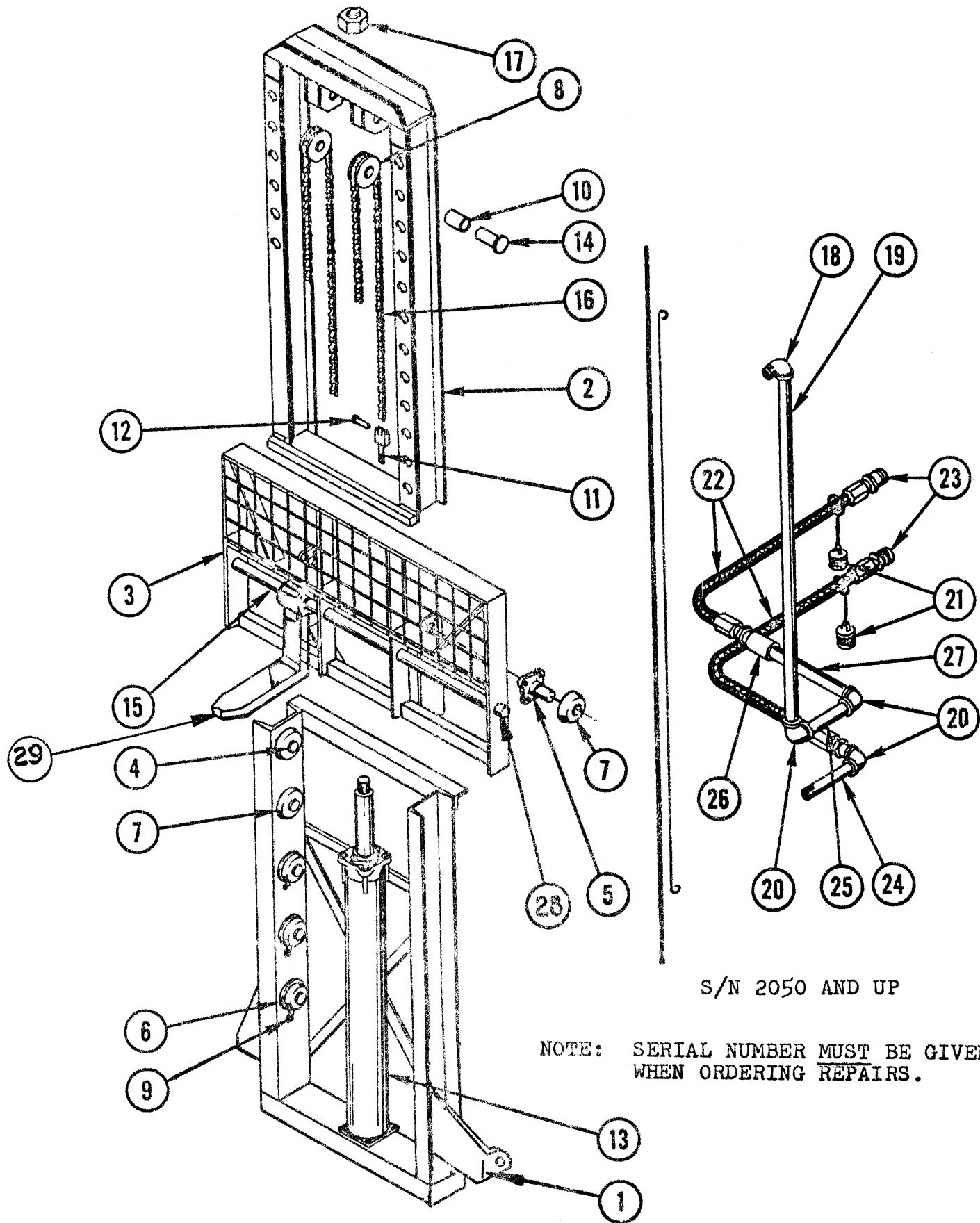


NOTE: For Required Carriage Assembly Used With This Tower Assembly Refer to Table "A" Tabulation.

LULL ENGINEERING COMPANY, INC.
 3045 HIGHWAY 13,
 ST. PAUL, MINNESOTA 55121

TELESCOPIC TOWER ASS'Y
 NO. 1265

<u>ITEM NO.</u>	<u>PART NO.</u>	<u>ASSEMBLY NO.</u>	<u>DESCRIPTION</u>	<u>NO. REQ.</u>
1	7203		Chain Pulley	2
2	6878		Chain Pulley Bracket	1
3	7214		Bushing	2
4	7075		Pin	2
5	P-11661		Chain	2
6	1116		Chain Link	2
7	7203-63		Chain Anchor	2
8	COM'L		Cotter Pin 3/16" Dia. x 1 3/4" long	2
9	6875		Yoke Weldment	1
10	COM'L		Washer, Starlock 1/2	2
11	COM'L		Hex Nut 1/2 N.F.	4
12	See Table "A"		Shaft	1
13	See Table "A"		Carriage	1
14	6860		Roller	4
15	11,272		Spindle	2
16	6865		Upright Frame	1
17	6911		Bronze Wear Plate	4
18	See Table "A"		Fork	2
19	COM'L		Hex Nut 5/8 N.F.	4
20	COM'L		Washer, Starlock 5/8	2
21	7078		Anchor Pin	4
22	COM'L		Cotter Pin 1/16 Dia. x 3/4"	2
23	COM'L		Finished Hex Castle Nut 1" N.F.	1
24	COM'L		Cotter Pin 1/8 Dia. x 2" Long	1
25	P-17361		Street Ell	1
26		6959	Cylinder Assembly (Page 68)	1
27	P-12982		Pipe	1
28	P-10325		Dust Cap	2
29	P-11353		Coupling (Male)	2
30	P-10120		Reducing Bushing	3
31	P-10395		Hose	2
32	P-10937		Nipple	1
33	P-10225		Elbow	1
34	P-10227		Elbow	1
35	P-10885		Nipple	1
36	P-10225		Elbow	1
37	P-10117		Elbow	1
38	7338		Bushing	2
39	6974		Bushing	2
40	COM'L		Slotted Flathead Capscrew 1/2 NC x 1	8
41	P-13517		Capscrew	4



S/N 2050 AND UP

NOTE: SERIAL NUMBER MUST BE GIVEN WHEN ORDERING REPAIRS.

TELESCOPIC TOWER

11,293

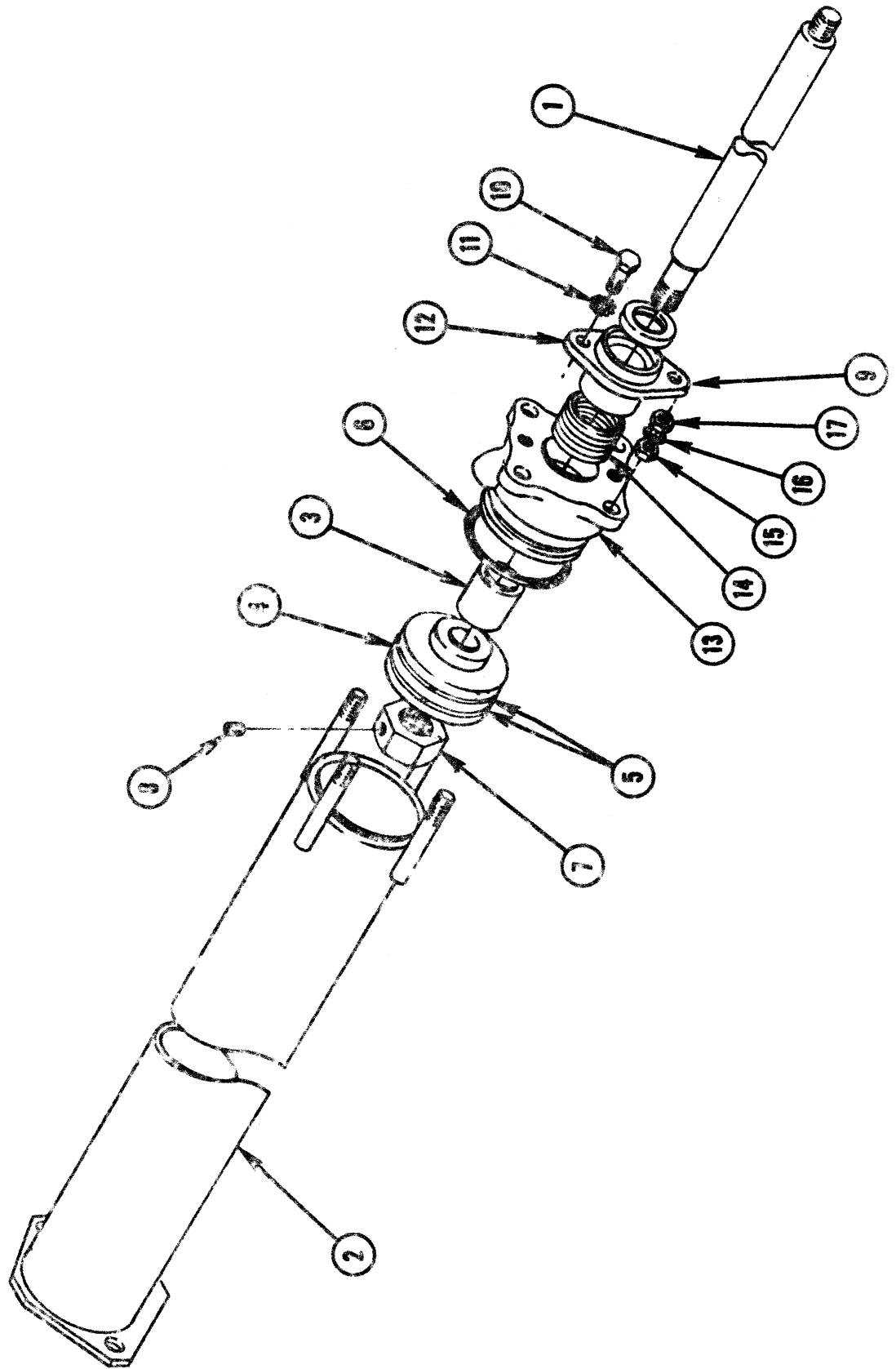
LULL ENGINEERING COMPANY, INC.
 3045 HIGHWAY 13,
 ST. PAUL, MINNESOTA 55121

TELESCOPIC TOWER ASSEMBLY
 NO. 11,293
 S/N 2050 & UP

<u>ITEM NO.</u>	<u>PART NO.</u>	<u>ASSEMBLY NO.</u>	<u>DESCRIPTION</u>	<u>NO. REQ.</u>
1	11,056		Upright Frame	1
2	7833		Yoke	1
3	1479		Special Wide West Coast Carriage	1
	11,367		Carriage, Side Tilt	1
4	7618		Frame, Spindle	10
5	11,387		Carriage, Spindle	4
6	7033		Flange, Roller	8
7	7034		Plain Roller	8
8	7203		Chain Pulley	2
9	7151		Roller Clip	8
10	7214		Bushing	2
11	7207		Chain Anchor	4
12	7078		Chain Anchor Pin	4
13	8336		Cylinder Assembly (Page 68)	1
14	7075		Chain Pulley Pin	2
15	11,363		Fork Tine Shaft	1
16	P-11649		Chain	2
17	222		Special Nut	1
18	P-10111		Street Ell	1
19	N-10045		Pipe	1
20	P-10227		Elbow	3
21	P-10325		Dust Cap	2
22	P-10395		Hose	2
23	P-10324		Male Tip	2
24	P-10283		Nipple	1
25	P-10282		Nipple	1
26	P-10260		Coupling	1
27	P-10394		Nipple	1
28	COM'L		Cotter Pin, 3/8 Dia. x 2 1/2"	2
29	13,279		Forks	2

LULL ENGINEERING COMPANY, INC.
3045 HIGHWAY 13
ST. PAUL, MINNESOTA 55111

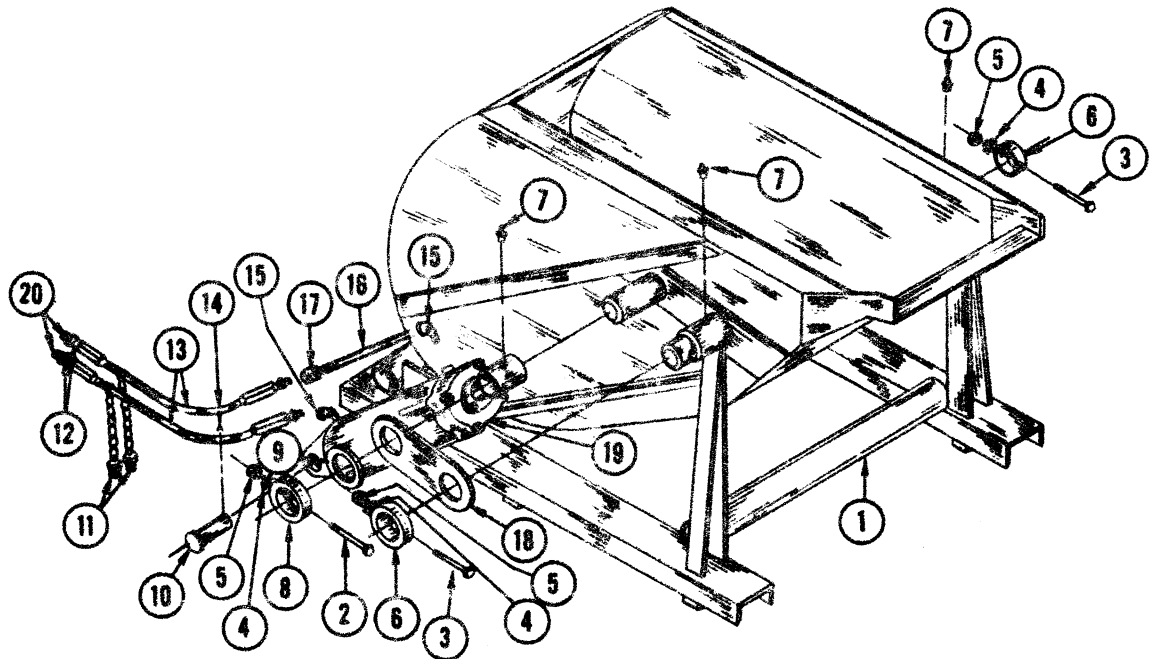
3 1/2" ID CYLINDER ASS'Y.
NO. 6959



LULL ENGINEERING COMPANY, INC.
3045 HIGHWAY 13
ST. PAUL, MINNESOTA 55111

3 1/2" ID CYLINDER ASS'Y.
NO. 6959

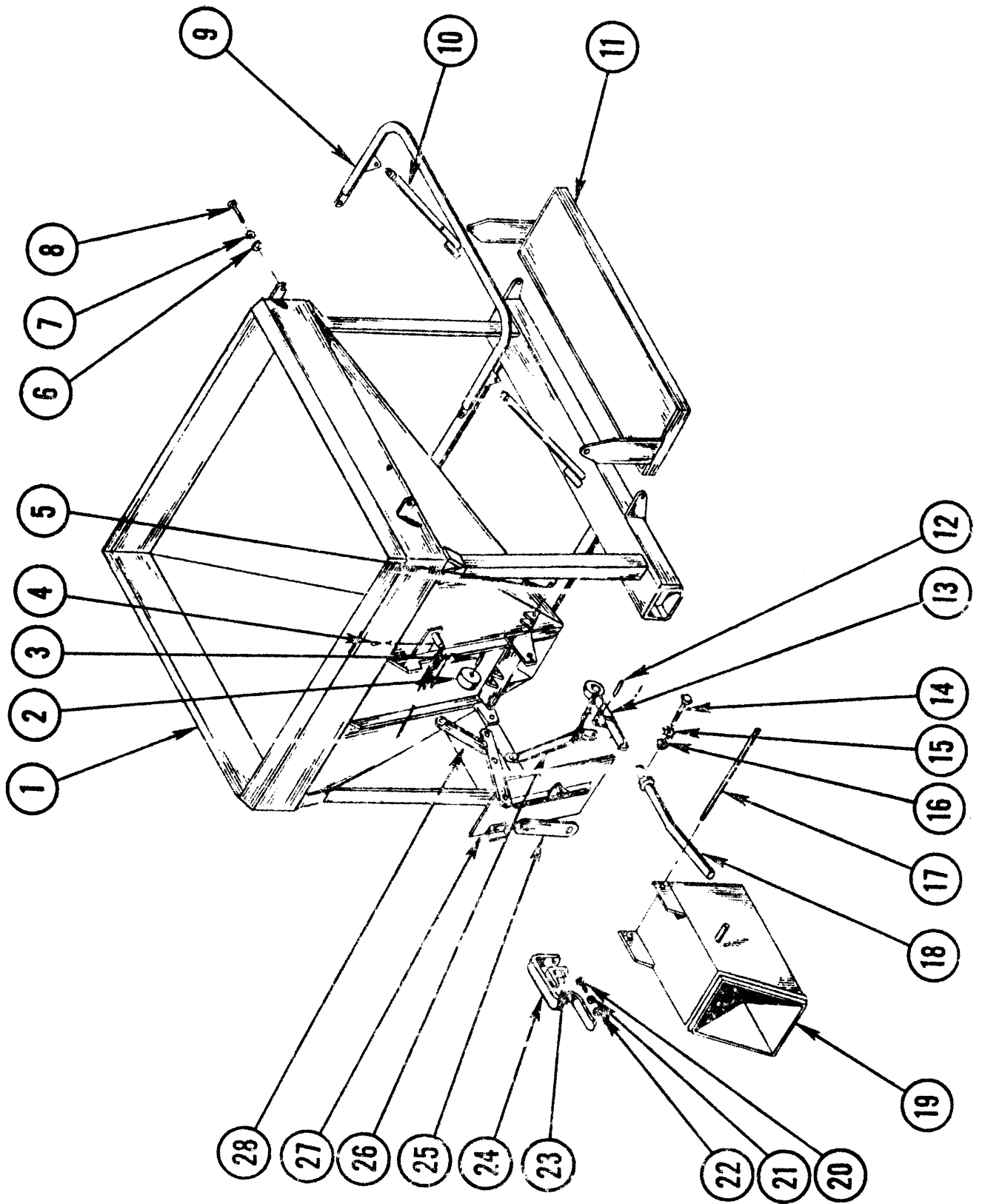
<u>ITEM NO.</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>	<u>NO. REQ.</u>
1	6963	Piston Rod	1
2	6961	Cylinder Tube	1
3	N-10204	Spacer	1
4	550	Piston	1
5	P-11292	Piston Ring Assembly	2
6	P-10315	O-Ring	1
7	222	Special Nut	1
8	COML.	Setscrew, 1/4 NC x 3/8 Cup Pt.	1
9	P-10303	Klozure	1
10	COML.	Capscrew, 3/8 NC x 1	2
11	COML.	Shakeproof Washer, 3/8"	2
12	1023	Gland	1
13	1034	Cylinder Head	1
14	P-10305	V-Packing	1
15	COML.	Hex Nut, 7/16 NF	4
16	COML.	Shakeproof Washer, 7/16"	4
17	COML.	Jam Nut, 7/16 NF	4



<u>ITEM NO.</u>	<u>PART NO.</u>	<u>ASSEMBLY NO.</u>	<u>DESCRIPTION</u>	<u>NO. REQ.</u>
1	4080		Concrete Bucket & Frame Ass'y	1
2	COM'L		Capscrew, 1/4-20 NC x 2 Hex	1
3	COM'L		Capscrew, 1/4-20 NC x 2 1/4 Hex	2
4	COM'L		Washer, Shakeproof 1/4	3
5	COM'L		Nut, Hex 1/4-20 NC	3
6	7451		Collar, Bracket	2
7	COM'L		Zerk Fitting 1/8 Str.	3
8	7450		Collar	1
9	COM'L		Washer, 1" I.D.	As Req.
10	7452		Pin, Lower Pivot	1
11	P-10325		Dust Cap, Male Tip	2
12	P-10120		Reducing Bushing	2
13	P-10327		Hose	2
14	COM'L		Cotterpin, 5/32 x 1 1/2	1
15	P-10117		Street Elbow	2
16	N-10321		Pipe	1
17	P-10328		Coupling	1
18	7449		Link, Cylinder Pivot	1
19		5980	Cylinder Assembly (Page 88)	1
20	P-11353		Male Tip-Quick Coupler	2

LOLL ENGINEERING COMPANY, INC.
3045 HIGHWAY 13,
ST. PAUL 11, MINNESOTA

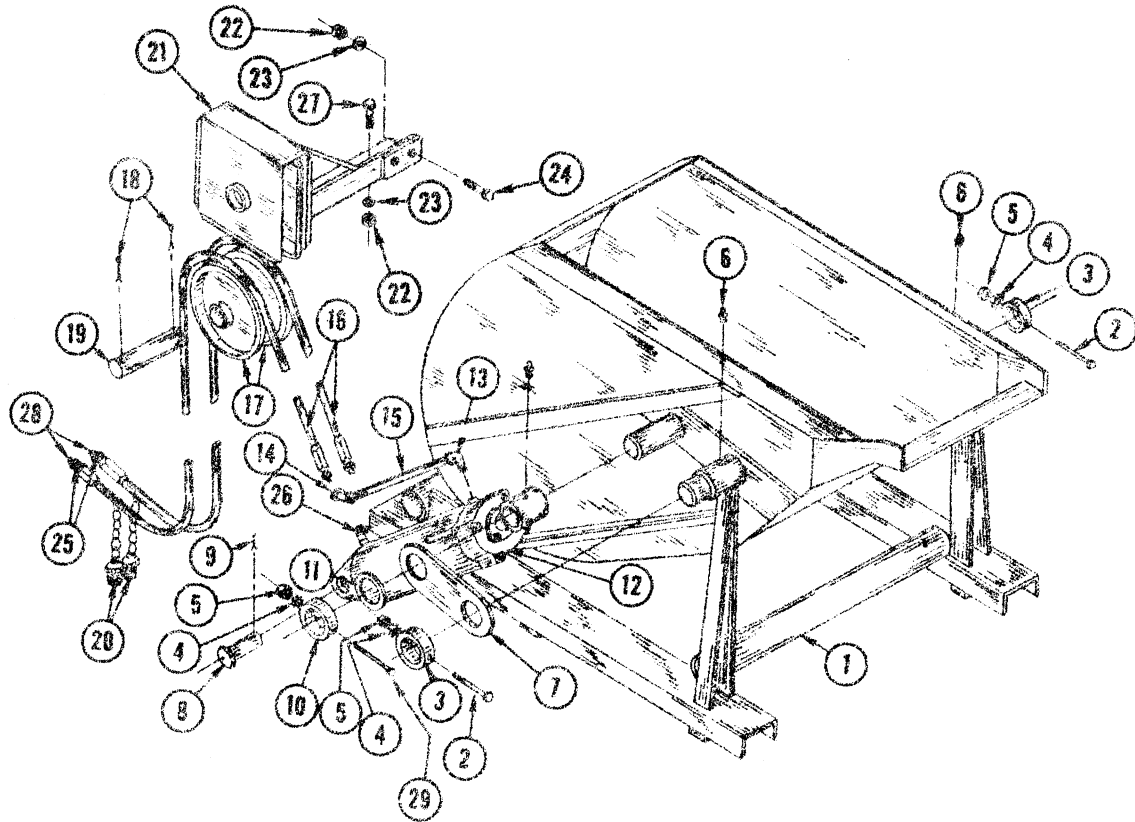
CONCRETE HOPPER
(LIFT ARM CARRIAGE)
NO. 4100



LULL ENGINEERING COMPANY, INC.
 3045 HIGHWAY 13,
 ST. PAUL 11, MINNESOTA 55111

CONCRETE HOPPER ASSEMBLY
 NO. 4100
 MODEL 8-A

<u>ITEM NO.</u>	<u>PART NO.</u>	<u>ASSEMBLY NO.</u>	<u>DESCRIPTION</u>	<u>NO. REQ.</u>
1	4099		Hopper	1
2	7634		Door Roller	1
3	7651		Pivot Pin	1
4	COM'L		Cotter Pin, 3/16 x 1 1/4	12
5	7626		Pivot Pin, Lower	1
6	COM'L		Nut, 3/8-16 NC Hex	8
7	COM'L		Shakeproof Washer, 3/8	8
8	COM'L		Capscrew, 3/8-16 NC x 1 Hex Hd	8
9	7335		Hand Rail	1
10	7333		Support Bar	2
11	7330		Platform	1
12	7651		Pivot Pin	1
13	7675		Lower Handle	1
14	COM'L		Capscrew, 1/4-20 NC x 1 3/4 Hex Hd.	1
15	COM'L		Shakeproof Washer, 1/4	2
16	COM'L		Nut, 1/4-20 NC Hex	2
17	7639		Pivot Pin, Chute	1
18	7663		Handle	1
19	7662		Chute	1
20	COM'L		Capscrew, 1/4-20 NC x 3/4 Hex Hd.	2
21	COM'L		Shakeproof Washer 1/4	1
22	COM'L		Nut 1/4-20 NC Hex	1
23	7510		Stiffener, Spring	1
24	7354		Spring Catch	1
25	7631		Door Link	1
26	7627		Hand Lever Link	1
27	7664		Door	1
28	7665		Hand Lever	1



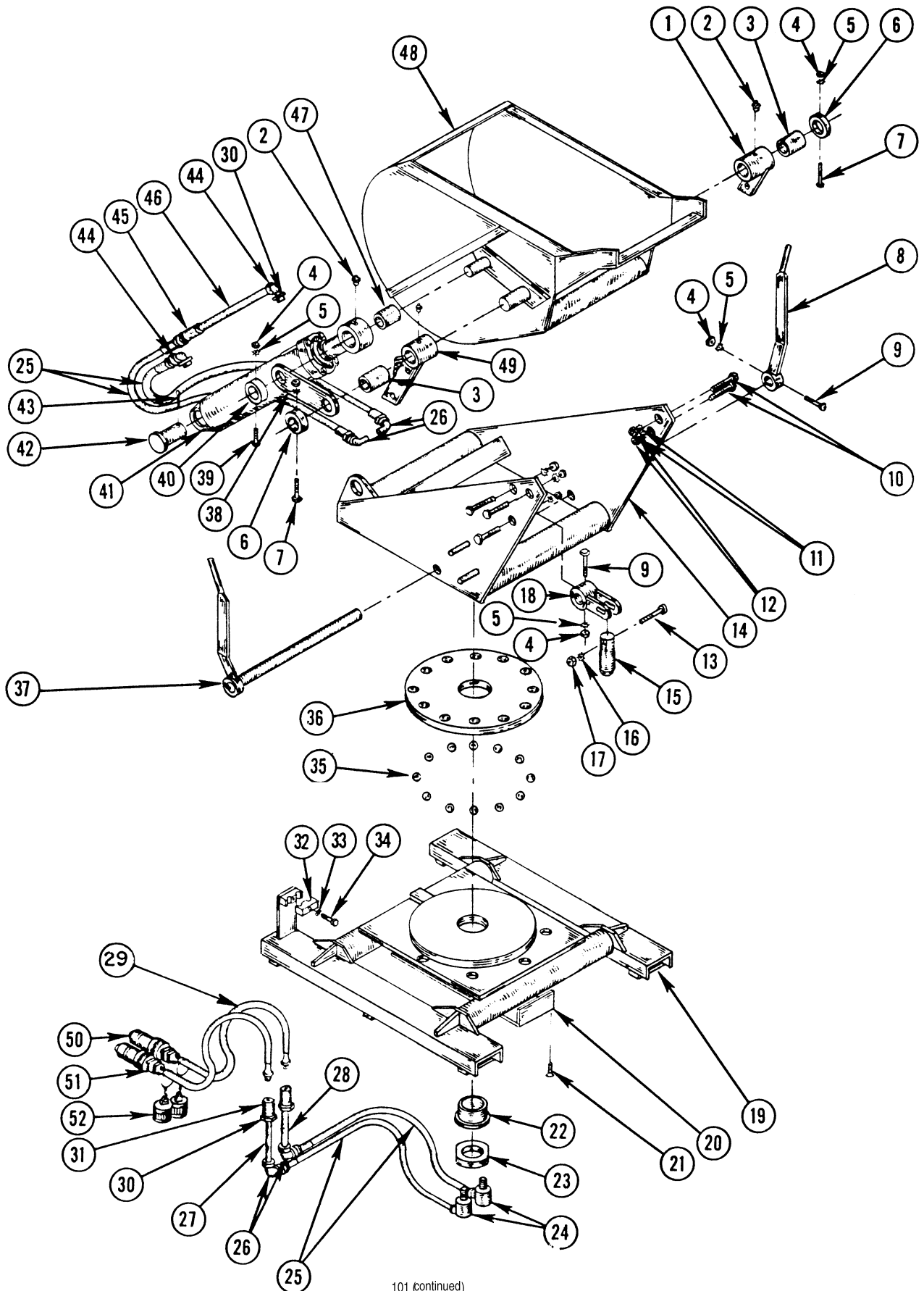
<u>ITEM NO.</u>	<u>PART NO.</u>	<u>ASSEMBLY NO.</u>	<u>DESCRIPTION</u>	<u>NO. REQ.</u>
1	4080		Concrete Bucket & Frame	1
2	Com1		Capscrew, 1/4-20 NC x 2 1/4 Hex	2
3	7451		Collar	2
4	Com1		Washer, 1/4 Shakeproof	3
5	Com1		Nut, 1/4-20 NC Hex	3
6	Com1		Zerk Fitting, 1/8 Straigh	3
7	7449		Link, Cylinder Pivot	1
8	7452		Pin, Lower Pivot	1
9	Com1		Cotterpin, 5/32 x 1 1/2	1
10	7450		Collar	1
11	Com1		Washer, 1 ID Flat	As Req'd
12		5980	Cylinder Assembly (Page 88)	1
13	P10117		Street Elbow	1
14	P10206		Elbow	1
15	N10321		Pipe	1
16	P10322		Hose	2
17	7473		Pulley	2
18	Com1		Cotterpin, 1/8 x 1 1/2	2
19	7377		Pin, Hose Pulley	1
20	P10325		Dust, Cap-Male Tip	2

CONCRETE BUCKET ASSEMBLY
 (TELESCOPIC TOWER) 7C2-31'
 NO. 4078

<u>ITEM NO.</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>	<u>NO. REQ.</u>
21	1130	Shield	1
22	COM'L	Nut, 5/16-18 NC Hex	4
23	COM'L	Lockwasher, 5/16	4
24	COM'L	Capscrew, 5/16-18 NC x 1 1/4 Hex	2
25	P-10120	Reducing Bushing	2
26	P-10119	Street Elbow	1
27	COM'L	Capscrew, 5/16 x 1 Hex Hd.	2
28	P-11353	Male Tip-Quick Coupler	2
29	COM'L	Capscrew, 1/4-20 NC x 2 Hex	1

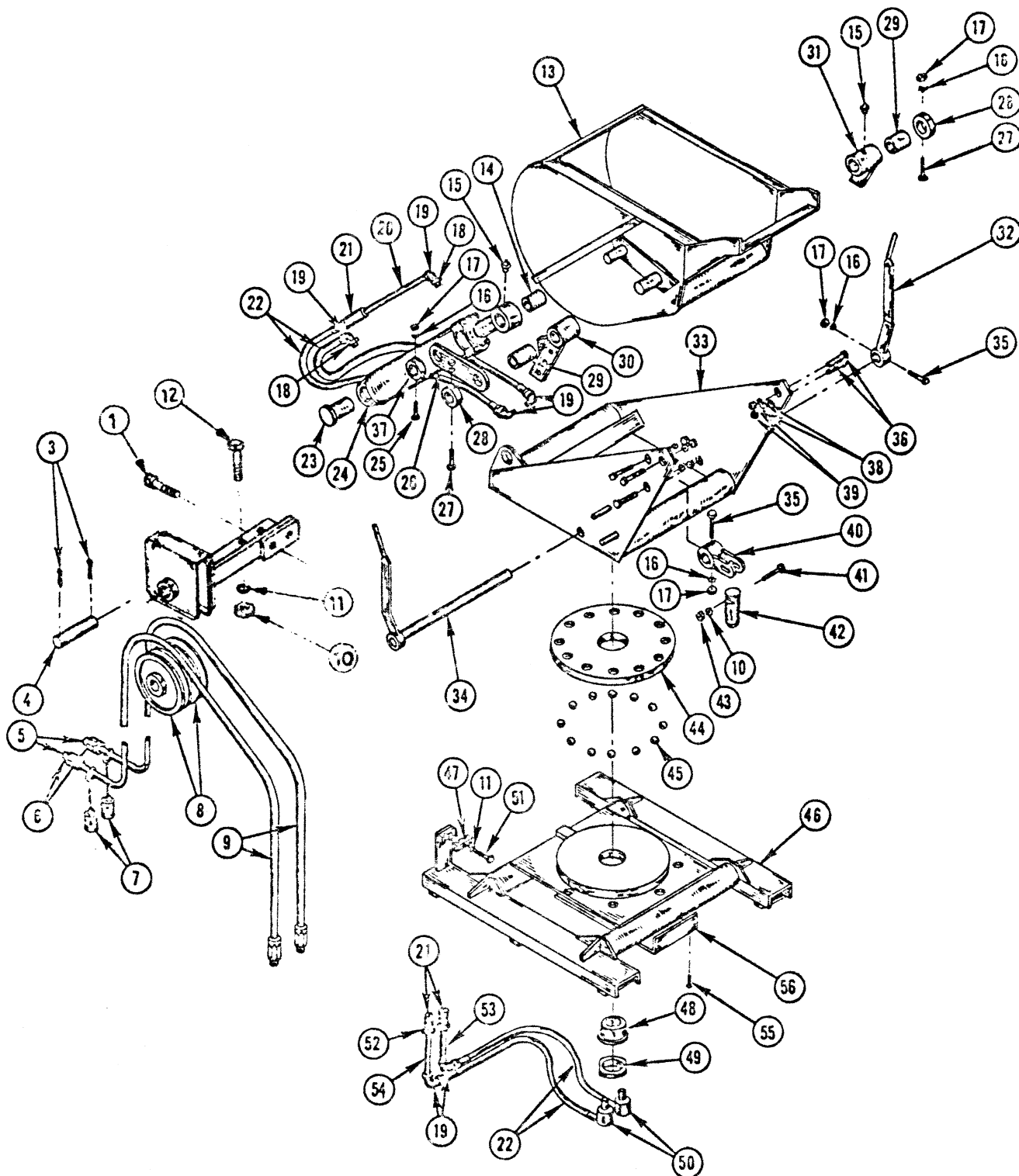
LULL ENGINEERING COMPANY, INC.
3045 Highway 13,
ST. PAUL 11, MINN.

SWIVEL CONCRETE BUCKET
(LIFT ARM CARRIAGE)
NO. 4071



SWIVEL CONCRETE BUCKET
(LIFT ARM CARRIAGE)
NO. 4071

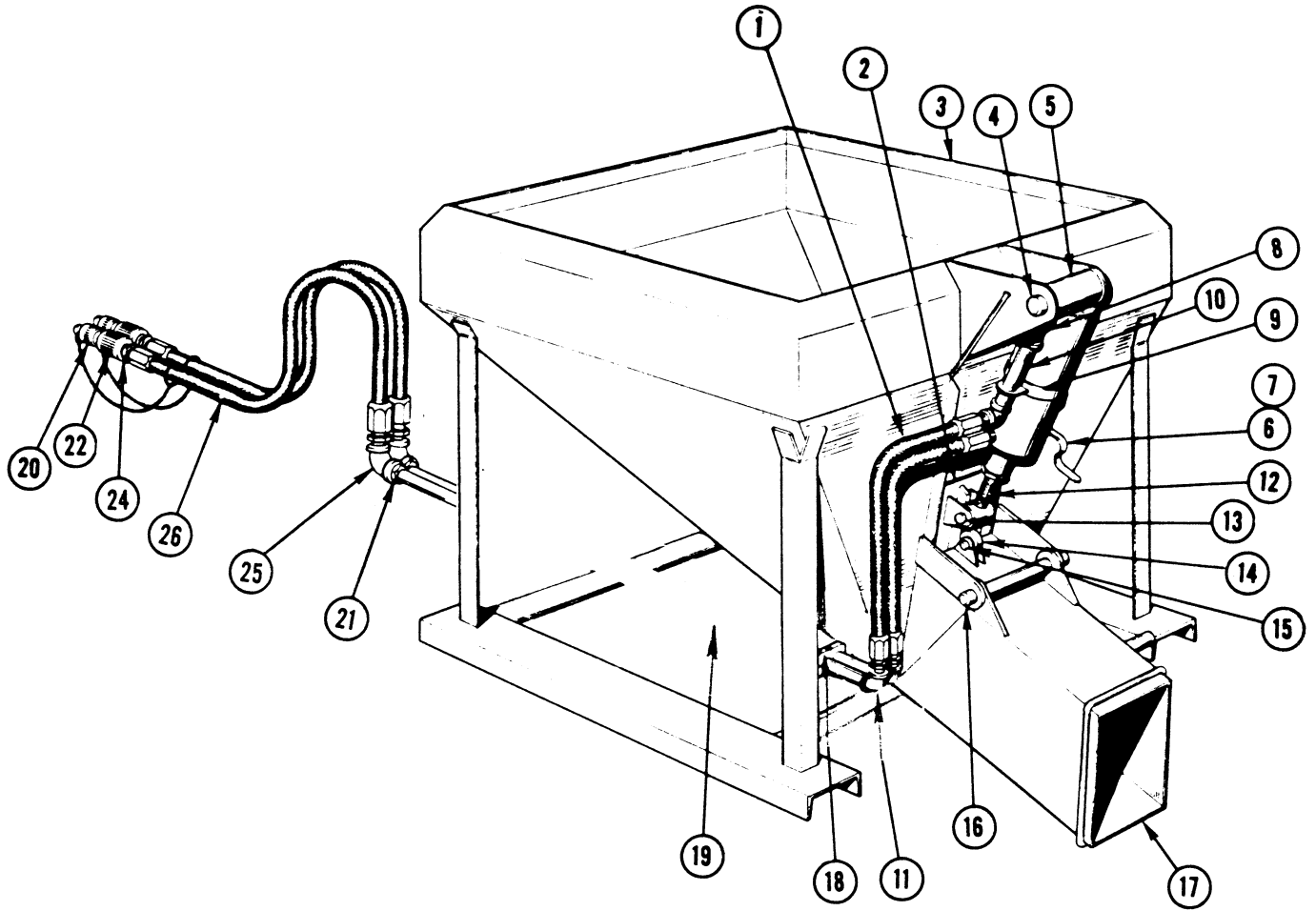
ITEM NO.	PART NO.	DESCRIPTION	NO. REQ.
1	7766	Pivot Bracket	1
2	COM'L	Zerk Fitting, 1/8 Straight	4
3	7774	Bushing	2
4	COM'L	Nut, 1/4-20 NC Hex	4
5	COM'L	Washer, Shakeproof 1/4	4
6	7451	Collar	2
7	COM'L	Capscrew, 1/4-20 NC x 2 1/4 Hex	2
8	7777	Lever	1
9	COM'L	Capscrew, 1/4-20 NC x 1 3/4 Hex	2
10	COM'L	Capscrew, 1/2-13 NC x 1 1/2 Hex	5
11	COM'L	Washer, Shakeproof 1/2	5
12	COM'L	Nut, 1/2-13 NC Hex Jam	5
13	COM'L	Capscrew, 5/16-18 x 2 Hex	1
14	7778	Upper Frame	1
15	7782	Lock Pin	1
16	COM'L	Nut, 5/16-18 NC Hex	1
17	COM'L	Nut, 5/16-18 Hex Jam	1
18	7781	Lock Pin Lever	1
19	4069	Base	1
20	7788	Hose Guard	1
21	COM'L	Capscrew, 3/8-16 NC x 3/4 Ft. Hd.	4
22	7784	Bushing	1
23	7785	Nut, Special	1
24	P-10150	Swivel	2
25	P-10155	Hose	4
26	P-10157	Elbow	4
27	P-10781	Nipple	1
28	P-10780	Nipple	1
29	P-10327	Hose	2
30	P-10691	Reducing Bushing	2
31	P-10328	Coupling	2
32	7773-2	Clamp	1
33	COM'L	Washer, Shakeproof 5/16	1
34	COM'L	Capscrew, 5/16-18 NC x 1 1/4 Hex	1
35	P-11044	Ball	12
36	7783	Ball Retainer	1
37	7779	Lever	1
38	7449	Link	1
39	COM'L	Capscrew, 1/4-20 NC x 2 Hex	1
40	7450	Collar	1
41	5980	Cylinder Assembly (Page 88)	1
42	7452	Pin	1
43	COM'L	Cotterpin, 5/32 x 2	1
44	P-10157	Street Elbow	2
45	P-10423	Coupling	1
46	N-10005	Pipe	1
47	7610	Bushing	1 (Ref)
48	7763	Bucket	1
49	7775	Pivot Bracket	1
50	P-11353	Male Tip-Quick Coupler	2
51	P-10120	Reducing Bushing	2
52	P-10325	Dust Cap (Male Tip)	2



<u>ITEM NO.</u>	<u>PART NO.</u>	<u>ASSEMBLY NO.</u>	<u>DESCRIPTION</u>	<u>NO. REQ.</u>
1	COM'L		Capscrew 5/16 NC x 1 1/4	2
2	1130		Shield Assembly	1

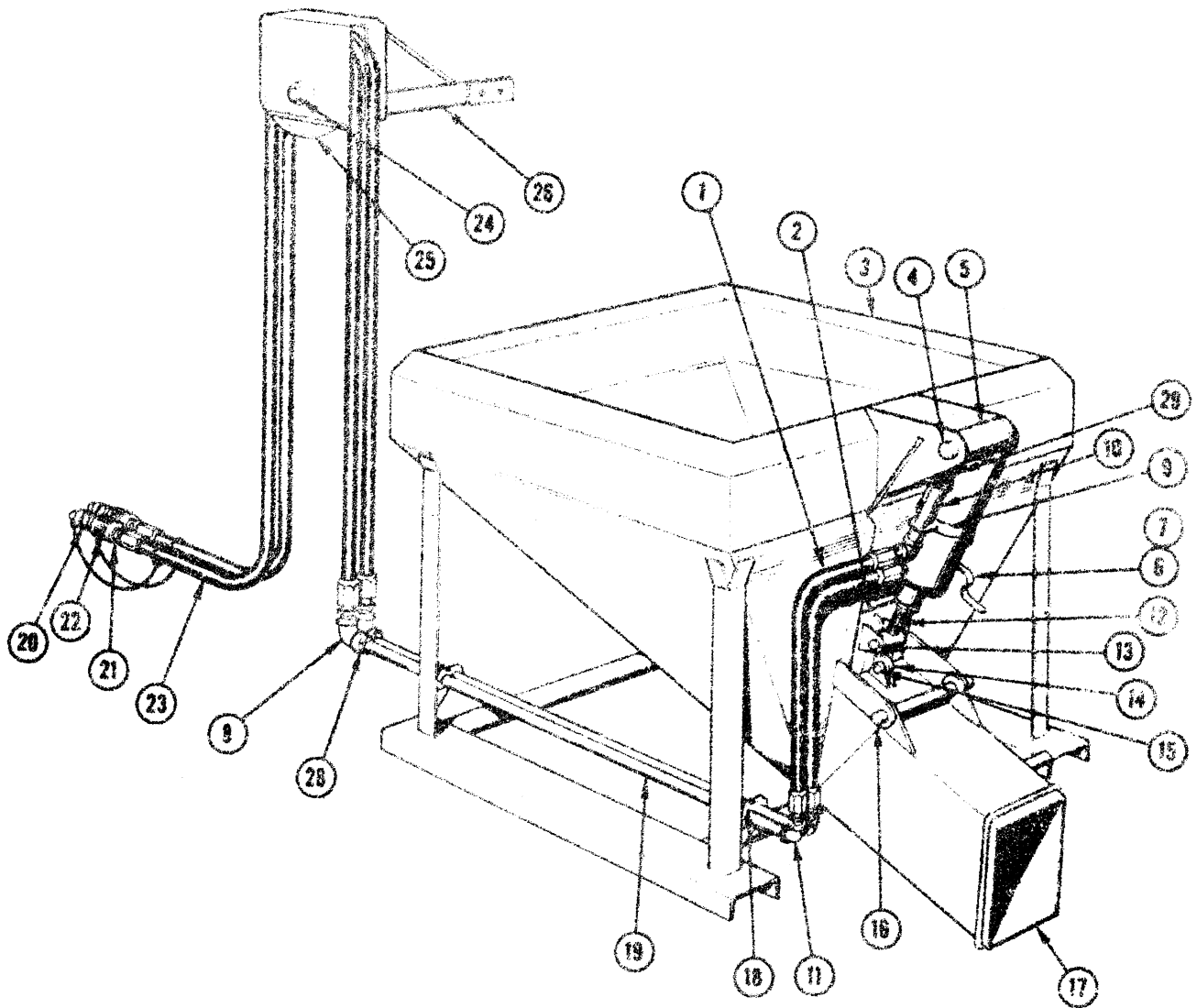
SWIVEL CONCRETE BUCKET
(TELESCOPIC TOWER)
NO. 4070

ITEM NO.	PART NO.	DESCRIPTION	NO. REQ.
3	COM'L	Cotterpin, 1/8 x 1 1/2	2
4	7377	Pin	1
5	P-11353	Male Tip Quick Coupler	2
6	P-10120	Reducing Bushing	2
7	P-10325	Dust Cap Male Tip	2
8	7473	Pulley	2
9	P-10322	Hose	2
10	COM'L	Nut, 5/16-18 N.C. Hex	2
11	COM'L	Lockwasher, 5/16	2
12	COM'L	Capscrew, 5/16-18 NC x 1" Long	2
13	7763	Bucket	1
14	7610	Bushing	Ref.
15	COM'L	Zerk Fitting	3
16	COM'L	Washer, Shakeproof 1/4	3
17	COM'L	Nut, Hex 1/4-20 NC	3
18	P-10691	Reducing Bushing	2
19	P-10157	Street Elbow	4
20	N-10005	Pipe	1
21	P-10328	Coupling	3
22	P-10155	Hose	4
23	7452	Pin	1
24	5980	Cylinder Assembly (Page 98)	1
25	COM'L	Capscrew, 1/4-20 NC x 2 Hex	1
26	7449	Link	1
27	COM'L	Capscrew, 1/4-20 NC x 2 1/4 Hex	2
28	7451	Collar	2
29	7774	Bushing	2
30	7775	Pivot Bracket	1
31	7776	Pivot Bracket	1
32	7777	Hand Lever	1
33	7778	Upper Frame	1
34	7779	Hand Lever	1
35	COM'L	Capscrew, 1/4-20 NC x 1 3/4 Hex	2
36	COM'L	Capscrew, 1/2-13 NC x 1 1/2 Hex	5
37	7450	Collar	1
38	COM'L	Washer, 1/2 Shakeproof	5
39	COM'L	Nut, 1/2-13 NC Hex Jam	5
40	7781	Lock Pin Lever	1
41	COM'L	Capscrew, 5/16-18 NC x 2 Hex	1
42	7782	Lock Pin	1
43	COM'L	Nut, 5/16-18 NC Hex Jam	1
44	7783	Ball Retainer	1
45	P-11044	Ball, Steel	12
46	4069	Base	1
47	7773-2	Clamp	1
48	7784	Bushing	1
49	7785	Nut, Special	1
50	P-10150	Swivel Fitting	2
51	COM'L	Capscrew, 5/16-18 NC x 1 1/4 Hex	1
52	P-10691	Reducing Bushing	2
53	P-10780	Nipple	1
54	P-10781	Nipple	1
55	COM'L	Capscrew, 3/8-16 NC x 3/4 Ft. Hd.	4
56	7788	Hose Guard	1



<u>ITEM NO.</u>	<u>PART NO.</u>	<u>ASSEMBLY NO.</u>	<u>DESCRIPTION</u>	<u>NO. REQ.</u>
1	P-11045		Hose	2
2	7801		Door	1
3	4084		Hopper	1
4	7738		Shaft	1
5		5978	Cylinder Ass'y (Page 108)	1
6	7354		Spring Catch	1
7	7510		Stiffener	1
8	P-10157		Street Elbow	1
9	7803		Pipe Clamp	1
10	N-10006		Pipe	1
11	P-10152		Elbow	3
12	7761		Adjustable Boss	Ref.
13	7746		Shaft	1
14	7634		Roller	1
15	7651		Shaft	1
16	7639		Shaft	1
17	7662		Chute	1
18	7773-2		Clamp	2
19	N-10007		Pipe 1/4" x 38"	2
20	P-10325		Dust Cap	2

CONCRETE HOPPER ASS'Y
 702-31' Ft. High Lift
 No. 4086



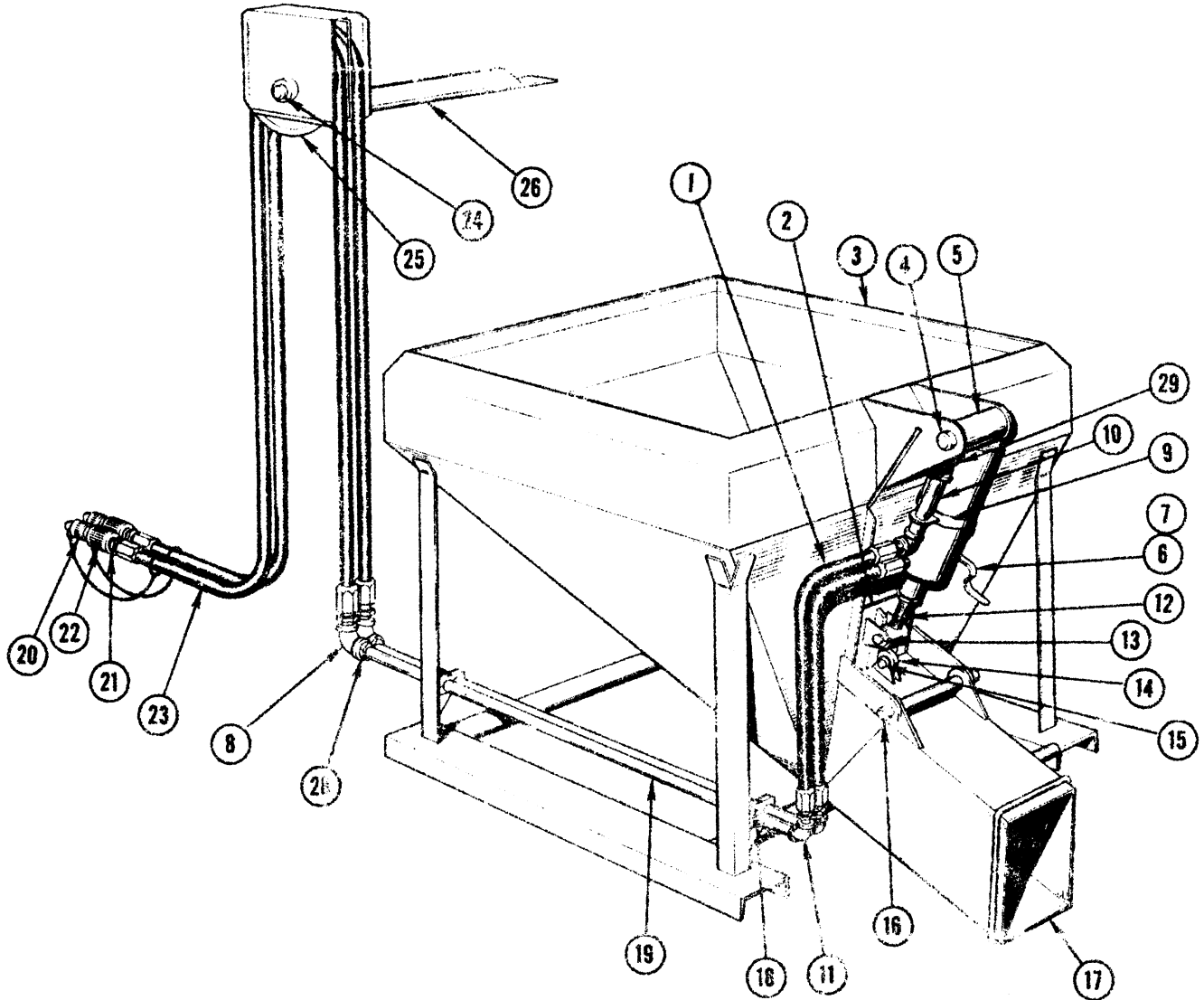
<u>ITEM NO.</u>	<u>PART NO.</u>	<u>ASSEMBLY NO.</u>	<u>DESCRIPTION</u>	<u>NO. REQ.</u>
1	P11045		Hose	2
2	7801		Door	1
3	4084		Hopper	1
4	7738		Shaft	1
5		5978	Cylinder Assembly (Page 108)	1
6	7354		Spring Catch	1
7	7510		Stiffener	1
8	P10225		Elbow	2
9	7803		Pipe Clamp	1
10	N10006		Pipe	1
11	P10152		Elbow	3
12	7761		Adjustable Boss	Ref.

CONCRETE HOPPER ASSEMBLY
 7C2-31' HIGH-LIFT LOADER
 NO. 4086

<u>ITEM NO.</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>	<u>QTY.</u>
13	7746	Shaft	1
14	7634	Roller	1
15	7651	Shaft	1
16	7639	Shaft	1
17	7662	Chute	1
18	7773-2	Clamp	2
19	N-10007	Pipe	2
20	P-10325	Dust Cap	2
21	P-10120	Reducer	2
22	P-11353	Male Tip	2
23	P-10322	Hose	2
24	7377	Shaft	1
25	7473	Pulley	2
26	1130	Shield	1
27			
28	P-10691	Reducer	2
29	P-10157	Street Ell	1

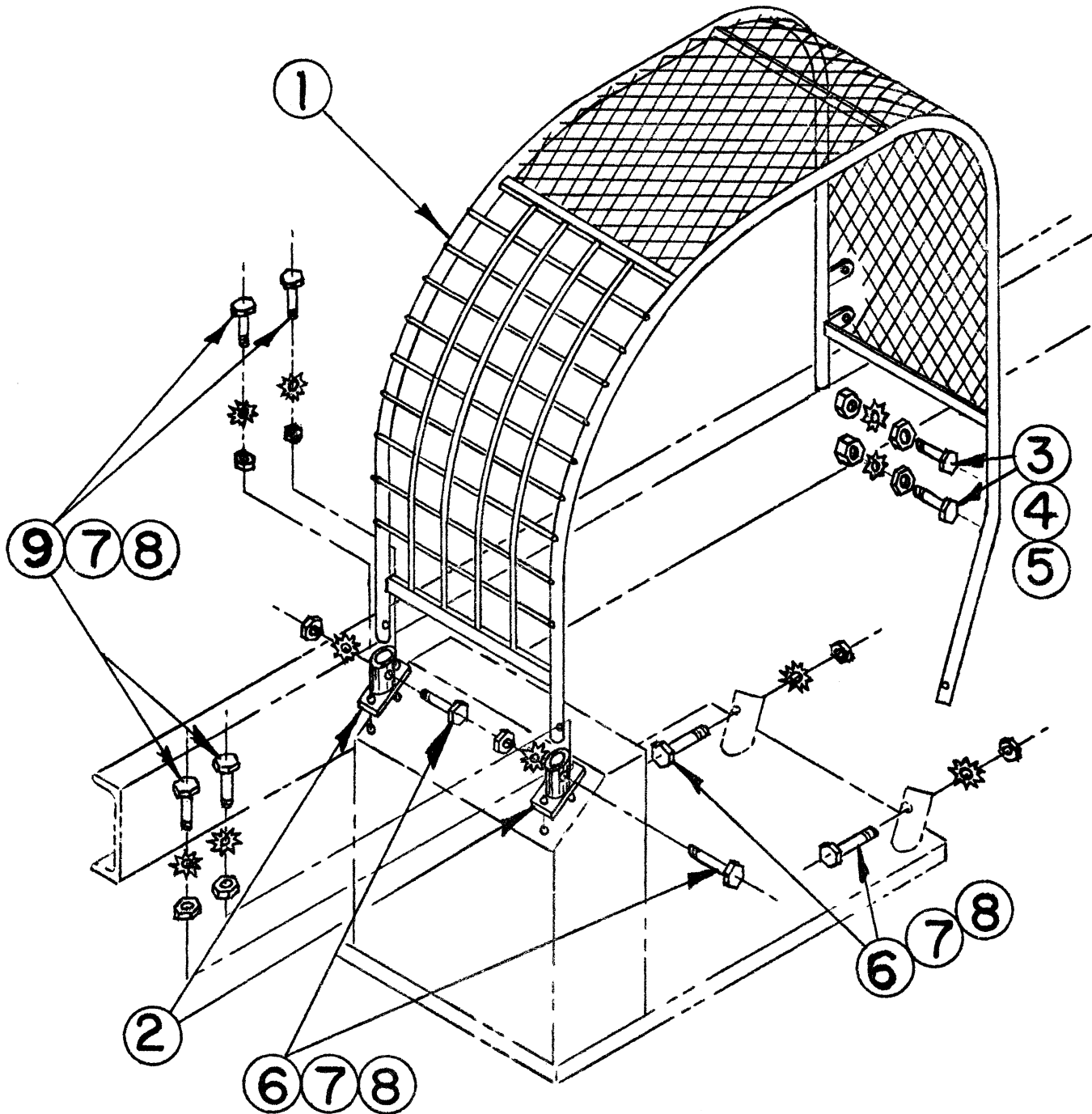
LULL ENGINEERING COMPANY, INC
 3045 HIGHWAY 13,
 ST. PAUL 11, MINNESOTA

CONCRETE HOPPER ASS'Y
 TELESCOPIC TOWER 702-40'
 NO. 4087

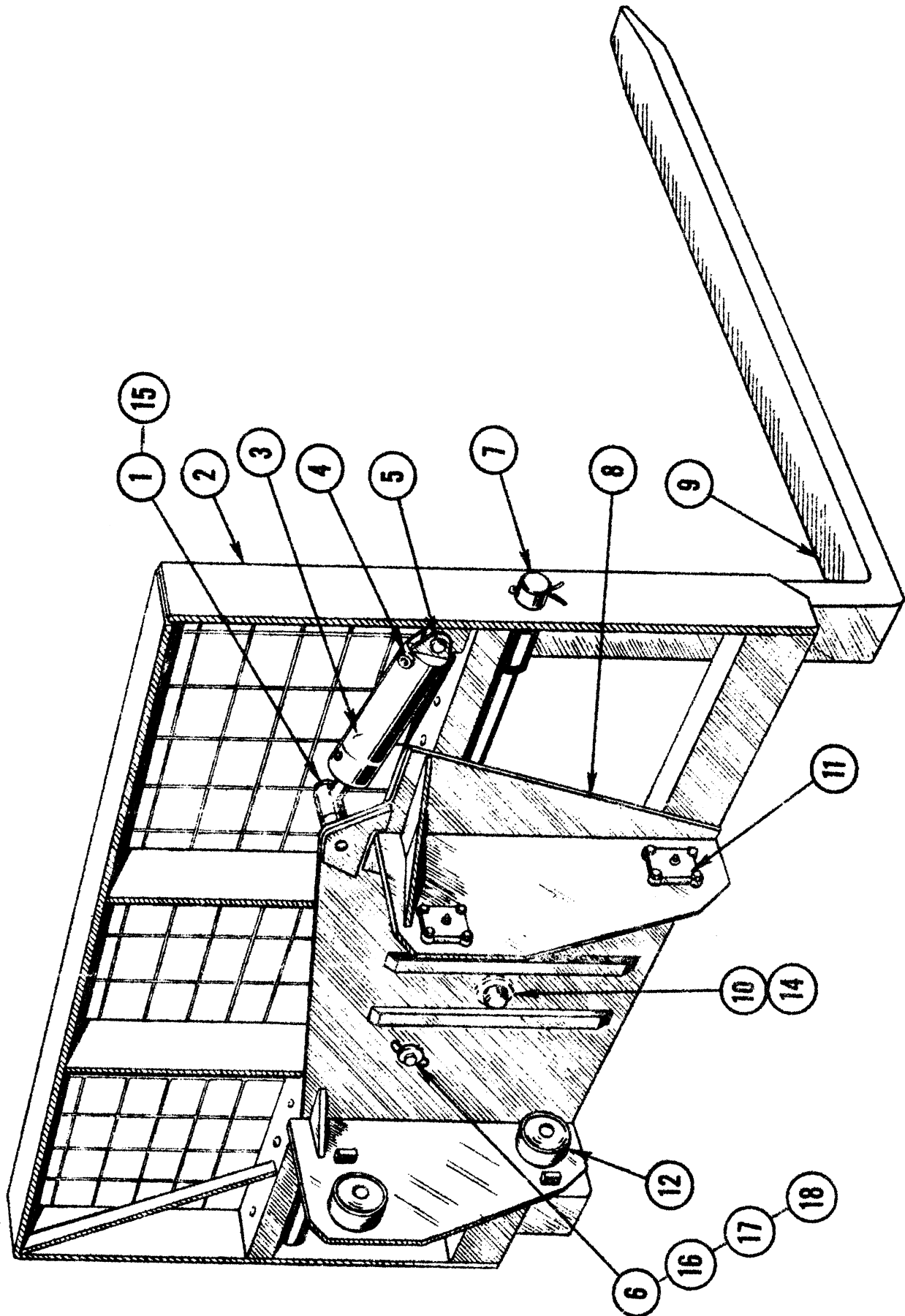


ITEM NO.	PART NO.	ASSEMBLY NO.	DESCRIPTION	NO. REQ.
1	P-11045		Hose	2
2	7801		Door	1
3	4084		Hopper Weldment	1
4	7738		Shaft	1
5		5978	Cylinder Ass'y (Page 108)	1
6	7354		Spring Catch	1
7	7510		Stiffener	1
8	P-10225		Elbow	2
9	7803		Pipe Clamp	1

ITEM	PART	DESCRIPTION	REQ.
10	N-10006	Pipe	1
11	P-10152	Elbow	1
12	7761	Adjusting Boss	1
13	7746	Shaft	1
14	7634	Roller	1
15	7651	Shaft	1
16	7639	Shaft	1
17	7662	Chute	1
18	7773-2	Clamp	2
19	N-10007	Pipe	2
20	P-10325	Dust Cap	2
21	P-10120	Reducer	2
22	P-10324	Male Tip	2
23	P-11667	Hose	2
24	7377	Shaft	1
25	7473	Pulley	2
26	8055	Shield Ass'y	1
27	7581	Spacer	3
28	P-10691	Reducer	2
29	P-10157	Elbow	1



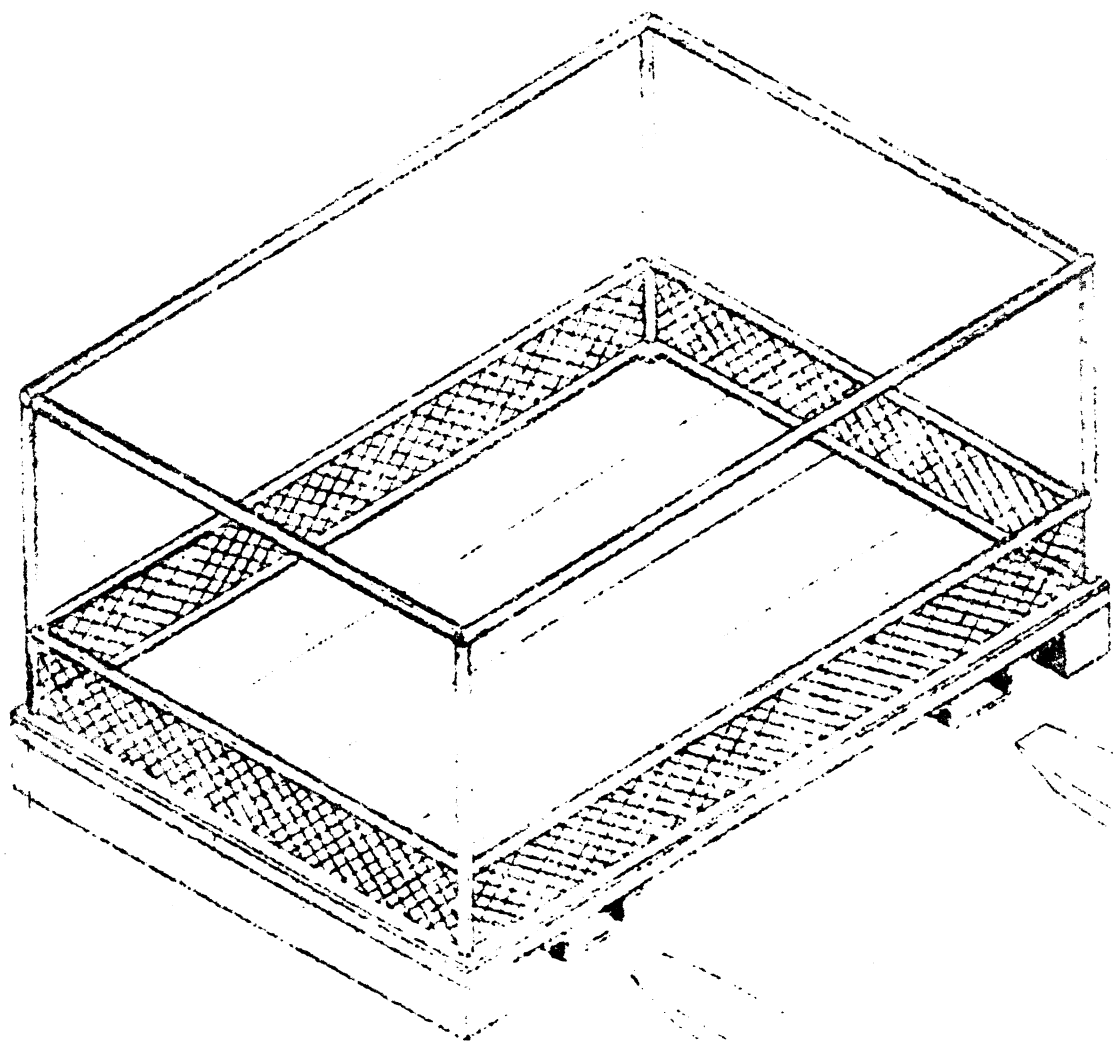
ITEM NO.	PART NO.	ASSEMBLY NO.	DESCRIPTION	NO. REQ.
1	11,235		Guard	1
2	3601		Bracket, Mtg.	2
3	COM'L		Capscrew, Hex Hd. 1/2 x 1 3/4-13 NC	2
4	COM'L		Nut, Jam 1/2-13 NC Hex	2
5	COM'L		Washer, Shakeproof 1/2"	2
6	COM'L		Capscrew, Hex Hd. 1/4 x 1 3/4-20 NC	4
7	COM'L		Washer, Shakeproof 1/4"	8
8	COM'L		Nut, Hex 1/4-20 NC	8
9	COM'L		Capscrew, Hex Hd. 1/4 x 1/2-20 NC	4



LULL ENGINEERING COMPANY, INC.
 3045 HIGHWAY 13,
 ST. PAUL 11, MINNESOTA 55111

SIDE TILT CARRIAGE
 702-31' HIGH-LIFT LOADER
 NO. 11,301

<u>ITEM NO.</u>	<u>PART NO.</u>	<u>ASSEMBLY NO.</u>	<u>DESCRIPTION</u>	<u>NO. REQ.</u>
1	1170		Collar	1
2	11,286		Carriage, (Outer)	1
3		6320	Cylinder Assembly (Page 124)	1
4	1179		Hydraulic System	1
5	6459		Pin	1
6	10,180		Washer	2
7	11,331		Shaft	1
8	11,279		Carriage, (Inner)	1
9	11,290		Fork Tine 4"	2
10	6326		Washer	1
11	11,272		Spindle	4
12	6860		Roller	4
13				
14	11,276		Pin	1
15	4273		Pin	1
16	COM'L		Nut, 7/8-9 NC	2
17	COM'L		Bolt, 7/8-9 NC x 2 1/4 long	2
18	COM'L		Washer, Shakeproof 7/8	2



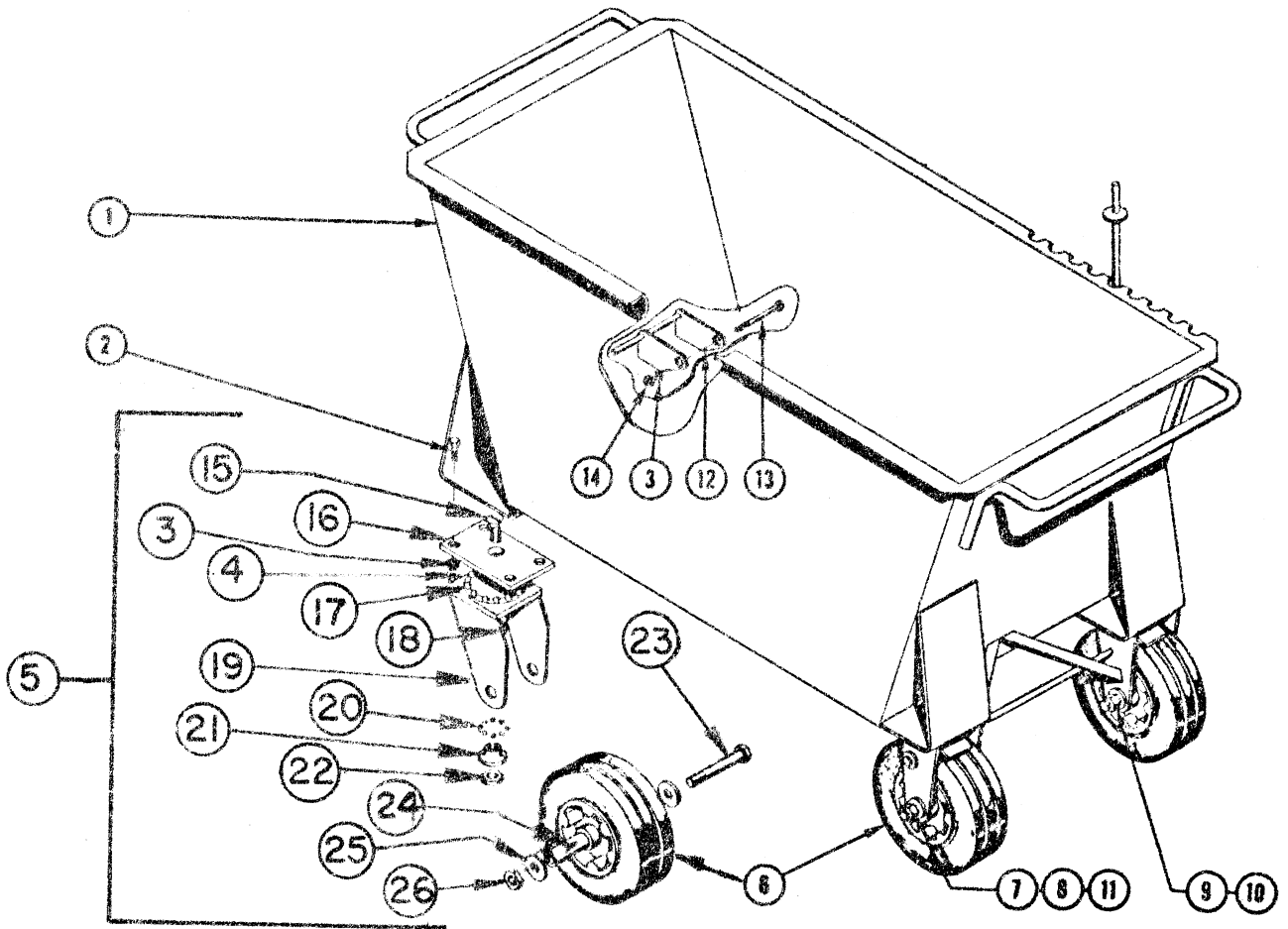
WORKMANS PLATFORM

NO 7813 -- TO FIT 4 INCH FORK TINE

NO. 4206 -- TO FIT 5 INCH FORK TINE

LULL ENGINEERING COMPANY, INC.
 3045 Highway 13,
 ST. PAUL, Minnesota 55121

GENERAL ASSEMBLY
 7 1/2 CU. FT. HOD BUGGY
 NO. 578 (20" WIDE)

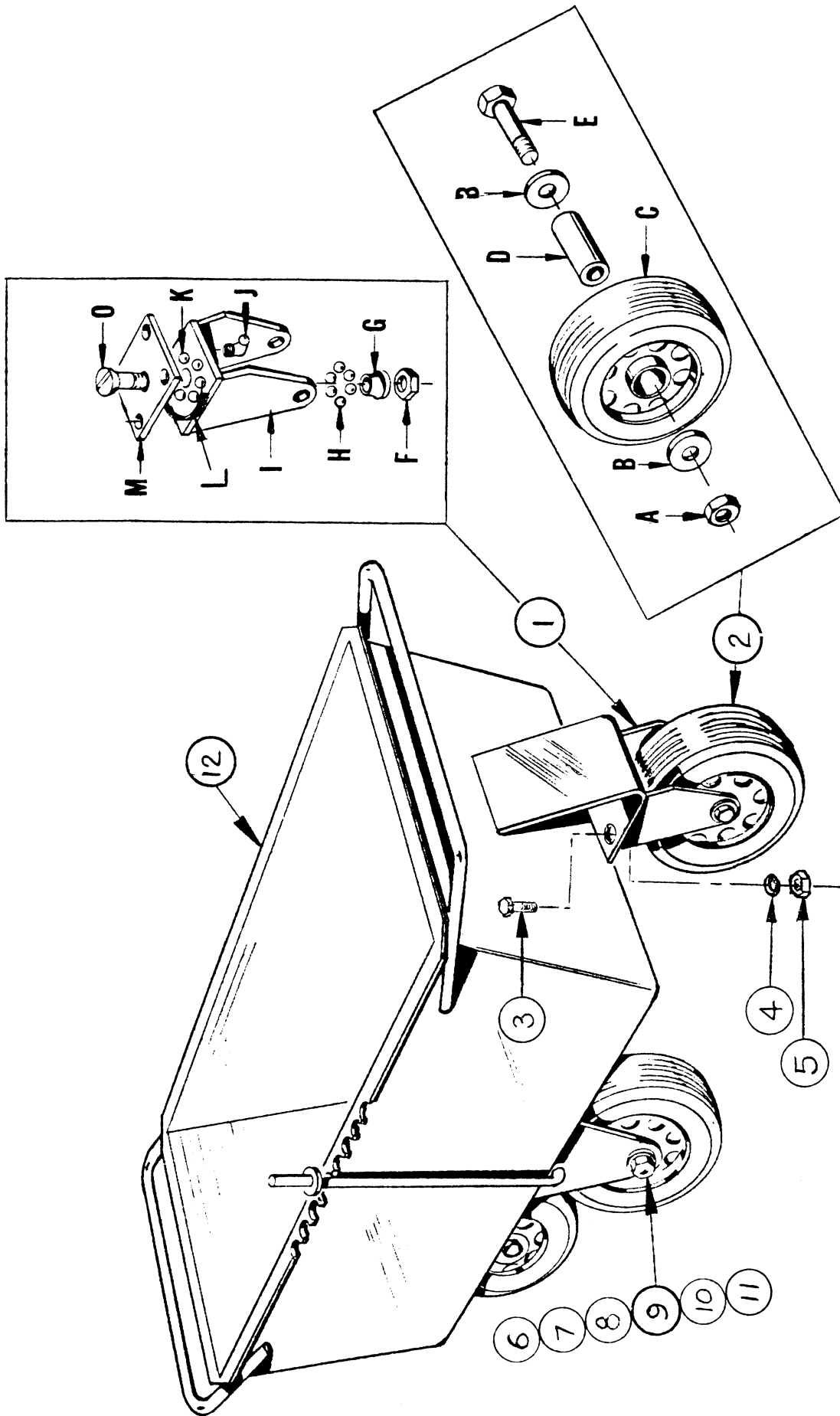


<u>ITEM NO.</u>	<u>PART NO.</u>	<u>ASSEMBLY NO.</u>	<u>DESCRIPTION</u>	<u>NO. REQ.</u>
1	573		Hod Buggy	1
2	COM'L		Capscrew, 3/8-16 NC x 1 Hex Hd.	8
3	COM'L		Washer, 3/8 Shakeproof	9
4	COM'L		Nut, 3/8-16 NC Hex	8
5	P-12980		Caster Assembly (Less Wheel)	2
6	P-12337		Wheel	24
7	N-10051		Spacer	2
8	P-11412		Washer	4
9	COM'L		Washer, 5/16 Shakeproof	2
10	COM'L		Nut, 5/16-18 NC Hex	2
11	COM'L		Capscrew, 5/16-18 NC x 4 1/4	2
12	577		Wheel Lock	1
13	COM'L		Capscrew, 3/8-16 NC x 5	1
14	COM'L		Jam Nut, 3/8-16 NC	1

LULL ENGINEERING COMPANY, INC.
3045 HIGHWAY 13
ST. PAUL, MINNESOTA 55121

GENERAL ASSEMBLY
NO. 578

<u>ITEM NO.</u>	<u>PART NO.</u>	<u>ASSEMBLY NO.</u>	<u>DESCRIPTION</u>
15	P-12332		Capscrew
16	P-12333		Top Plate
17	P-12334		Ball Bearing, 19 Required
18	P-12339		Drive Zerk
19	P-12340		Fork
20	P-12341		Ball Bearing, 13 Required
21	P-12342		Cone
22	P-12343		Nut, Slotted
23	P-12335		Capscrew
24	P-12336		Spacer
25	P-12329		Washer, 2 Required
26	P-12338		Nut, Slotted



HOD BUGGY 10A TWISTER

LULL ENGINEERING COMPANY, INC.
 3045 Highway 13
 St. Paul, Minnesota 55121

HOD BUGGY ASSEMBLY
 10-A Twister
 NO. 623

<u>ITEM NO.</u>	<u>PART NO.</u>	<u>ASSEMBLY NO.</u>	<u>DESCRIPTION</u>	<u>NO. REQ.</u>
1	P-12980		Caster Assembly	2
(F)	P-12343		Nut	1
(G)	P-12342		Cone	1
(H)	P-12341		Ball Bearing	13
(I)	P-12340		Fork	1
(J)	P-12339		Drive Zerk	1
(K)	P-12334		Ball	19
(L)	P-16449		Grease Retainer	1
(M)	P-12333		Top Plate	1
(O)	P-12332		Capscrew	1
2	P-12981		Wheel Assembly	2
(A)	P-12338		Nut	1
(B)	P-12349		Washer	4
(C)	P-12337		Wheel	1
(D)	P-12336		Spacer	1
(E)	P-12335		Capscrew	1
3	COM'L		Capscrew, Hex Head 3/8-16 NC x 1" 1g.	8
4	COM'L		Washer, Shakeproof 3/8"	8
5	COM'L		Nut, Hex 3/8-16 NC	8
6	P-12337		Wheel	2
7	N-10051		Spacer	2
8	P-11412		Washer	4
9	COM'L		Washer, Shakeproof 5/16"	2
10	COM'L		Nut, Hex 5/16-18 NC	2
11	COM'L		Capscrew, Hex Head 5/16-18 NC x 4 1/4	2
12	1590		Body	1

The parts information in this publication is based on data available at the time it was printed. Because of continual improvement and advancing product design, your vehicle may not be identical to the parts information shown. Whenever there is a question, obtain the latest parts information available from your local dealer. JLG Industries, Inc. continually updates these publications electronically within our *OnLine Services*.



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- Reduces processing time for warranty claims.

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- Review order status.
- Review invoices and credits.
- Review shipping information.
- Submit warranty claims

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