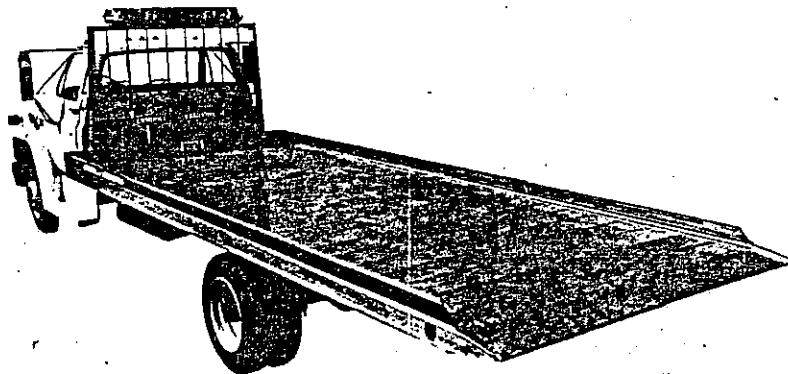




TWO TON CENTERFOLD OWNER'S MANUAL



LANDOLL CORPORATION

1700 MAY ST., MARYSVILLE, KAN. 66508

F-214

LANDOLL® CENTERFOLD



CONTENTS

	PAGE
Final Inspection	1
Safety Information	3
Certification.	6
Operation.	7
Maintenance.	9
Lubrication.	10
Parts Lists.	15
Index.	44
Warranty	46

Sold To _____
Address _____
City, State _____ Zip _____
Dealer _____

LANDOLL CORPORATION
1700 May Street
Marysville, Kansas
66508

FINAL INSPECTION SHEET
CENTERFOLD

S/N _____

Winch S/N _____
Tilt Cylinder S/N _____
Slide Cylinder S/N _____
Tow Bar Cylinder S/N _____
Pump S/N _____
PTO S/N _____

HYDRAULICS

INITIAL

Proper fluid and quantity in reservoir	
Set relief valve pressure 2,000 PSI	
Inspect for hydraulic leaks	
Secure all hoses	
Check P.T.O. warning light function	
Check routing of suction and pressure lines from exhaust system and sharp corners	
Operate all controls not binding and in correct direction as shown on instruction decal	

TRUCK

Throttle cable operates smoothly	
Driveline U-joints properly aligned	
Carrier bearing secured	
Carrier bearing aligned with driveline	
Brakes pressure bled	
Master cylinder filled and cap secured	
Park brake adjusted and operable	
Fuel tank fillers installed, functional with diesel labels when applicable	
Interior and exterior cab cleaned	
All windows clean of weld splatter	
P.T.O. operation decal affixed to driver's sun visor	

Original-Customer
Yellow-Factory

Inspection Complete By _____ Date _____

Customer Signature _____ Date _____

ELECTRICAL

INITIAL

Clearance lights operate	
Emergency lights operate	
Switch mounting plate installed	
Heavy duty flasher w/emergency light bar	
All lights functional	

GENERAL

Tow operable	
1. Rear tube level w/bed	
2. Rear latch straight	
3. Cylinder not rubbing tube	
Tool box latch adjusted and operable	
Decorative decals and stripe installed	
Trim-loc as required	
Bed level with cab	
Rear of cab to front of bed adjusted	
Bed cylinder nuts tight	
Proper rear bed to ground contact	
Bed hoses properly anchored and routed	
Final bed buff and polish as required	
All slides and required hinge points lubricated	
P.T.O. knob jam nut torqued	
Tires correctly inflated	
Completed Vehicle "Final Certification Label" in place	
Centerfold/Truck road test	

SAFETY SUGGESTIONS



This safety alert symbol indicates important safety messages in this manual when you see this symbol. Carefully read the message that follows and be alert to the possibility of personal injury or death.

For your safety, and those working with you, follow these safety rules:

WARNING: denotes a hazard to personal safety.

CAUTION: denotes a general reminder of good safety practices or directs attention to unsafe practice.

WARNING

The winch is not designed for use in the lifting or moving of persons! The winches described herein are neither designed nor intended for use or application to equipment used in the lifting of moving of persons.

WARNING

The cable clamp alone on winches is not designed to hold rated loads. Therefore, a minimum of 5 wraps of cable must be left on drum barrel to achieve rated load. Any damage resulting when less than 5 wraps are used will void the warranty.

WARNING

Rim and tire servicing can be dangerous. To protect life and limbs, be sure you understand and follow all mounting and demounting procedures and safety practices.

CAUTION

Do Not exceed the gross axle weight ratings for any axle on your vehicle.

CAUTION

All valve, pump, motor, and cylinder castings are not covered under warranty when using teflon tape sealant.

CENTER OF GRAVITY

A Landoll Centerfold, with a 14 foot aluminum bed on an axle chassis cab has a center of gravity of inches behind the front axles depending upon what options are on the truck.

If additional equipment or accessories are added to the Landoll Centerfold bed or chassis cab, the center of gravity will have to be recomputed.

MANUFACTURED BY: _____	
①	
DATE OF MANUFACTURE _____ ② mo ③ yr	
INCOMPLETE VEHICLE MANUFACTURED BY: _____	
④	
DATE INC. VEH. MFD. _____ ⑤ mo ⑥ yr	
GVWR _____ ⑦	
GAWR FRONT _____ ⑧ with	
_____ ⑨ tires,	
_____ ⑩ rims, @ _____ ⑪ psi cold _____ ⑫	
GAWR REAR _____ ⑬ with	
_____ ⑭ tires,	
_____ ⑮ rims, @ _____ ⑯ psi cold _____ ⑰	
THIS VEHICLE CONFORMS TO ALL	
APPLICABLE FEDERAL MOTOR VEHICLE	
SAFETY STANDARDS IN EFFECT IN: _____ ⑱ mo ⑲ yr	
VEHICLE IDENTIFICATION NUMBER: _____	
⑳	
VEHICLE TYPE: _____ ㉑	

- | | |
|---|---|
| 1. Customer/Company Name,
Address, City, State Zip | 12. Single |
| 2. Month Installation Completed. | 13. * |
| 3. Year Installation Completed. | 14. * |
| 4. Name of Truck Manufacturer. | 15. * |
| 5. Month Truck was Manufactured. | 16. * |
| 6. Year Truck was Manufactured. | 17. Dual (If Truck has Dual Tires) |
| 7. * | 18. Month of Installation |
| 8. * | 19. Year of Installation |
| 9. * | 20. * |
| 10. * | 21. Serial Number of Centerfold Bed
Stamped on Bed |
| 11. * | |

* Information is stated on new truck "Incomplete Vehicle Certification Label" supplied with each Chassis Cab.

OPERATION OF THE LANDOLL CENTERFOLD

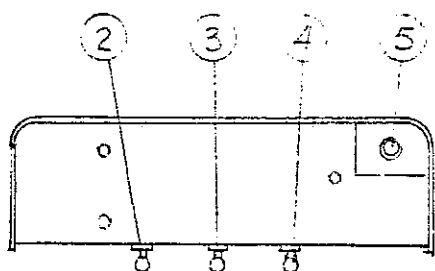
CONTROLS

The controls for the bed are located in the control box. The controls for the tow bar are on the rear bumper.

All operators should be trained and understand the entire Centerfold manual and controls before operating.

Assure adequate operating clearance and the safety of all personnel before operating the Centerfold.

Below listed are controls provided on the Centerfold.



1. Power Take Off (push-pull knob) located in cab of truck, with clutch depressed, pull up to engage P.T.O.
2. Tilt Control Handle--Pull up until maximum tilt is achieved. Push down to return to transport position.

CAUTION: Hold handle down until the hydraulic system by-passes fluid to assure proper engagement of the hydro-mechanical lock.



3. Winch Control--Push down on handle to reel in winch line, pull up on handle to reel out winch line.

NOTE: Located on the winch is a control knob to allow for free spooling as required.

4. Bed Slide Control--Pull up to extend bed to the ground. Push down to retract bed for transport position.

5. Auxiliary Engine Throttle Control--(Twist to set engine speed, push button in to return engine to idle).

LOADING

1. Position

Park the truck with the rear of the bed approximately 8 feet in front of the object to be loaded and in line with object to be loaded.

- a. Set the parking brake.
- b. With the Centerfold truck engine running, engage the P.T.O. per instructions on the Centerfold truck (Drivers Sun Visor).
- c. With the Centerfold truck engine running and the P.T.O. engaged, set the auxiliary throttle control to the desired engine speed (depending on the type of engine). **DO NOT OVERSPEED**
- d. Tilt Centerfold to maximum required for firm contact of rear bumper to ground.
- e. Slide bed to maximum required for firm contact of bed approach plate to ground.
- f. Centerfold winch line can be professionally attached to required load and, with caution, loaded.
- g. Care, good judgement, and professional knowledge should be exercised in securely tying down the load front and back or side ways. Use correct tie down restraints as required for securing the load to the bed. Set brakes, if a vehicle, and use wheel blocks as required for safe transport.

NOTE: The winch should not be used as a tie down restraint for transporting a load.

NOTE: When tilting bed, the Centerfold rear bumper should rest firmly on the ground. If the ground is unstable, adequate support should be used under the rear bumper. There should be an equal weight distribution between the Centerfold rear bumper and bed approach plate.

2. UNLOADING

Reverse the loading procedure.

3. OPERATING THE WINCH

- a. Pull up the winch control handle to power unreel the cable while a second person keeps the cable taut.

NOTE: If a one man operation exists, disengage the spool and unreel the cable while keeping it taut. Reengage the spool after unreeling and attaching the cable.

NOTE: The Warn winch free spool is accomplished by turning clutch control dial. Fully twist per winch decal to "engage".

- b. Push down on the winch control handle to wind the cable and pull the load onto the deck.

Always make sure the clutch dogs on the winch are fully engaged before using the winch.



Also remember that cables can break, winches fail and hooks become disengaged.
DO NOT WORK BELOW THE LOAD!

Replace cable when worn or damaged. Always wear gloves when handling cable.

Maintain a minimum of 5 turns of cable on the spool at all times. Also maintain a uniform wrap of the cable on the spool.

WARNING! Winches are not to be used to lift support or otherwise transport personnel.

4. OPERATION OF THE TOW BAR (OPTION)

The Landoll Centerfold may be equipped with a hydraulic tow bar.

NOTE: Observe all axle ratings. It would be professionally prudent to have the bed adequately loaded and secured for counter balance prior to loading and towing a vehicle on the tow bar.

WARNING! Do not extend the tow bar when the bed has been extended or is hooked up to a unit to be towed.



WARNING! Before each tow bar hook up, inspect tow bar, slings, hooks for any type damage or excessive wear.



- a. Position the Landoll Centerfold truck approximately 4 feet ahead of the vehicle to be towed.
- b. Set the Landoll Centerfold park brake.
- c. With P.T.O. engaged, tilt the Centerfold frame.
- d. Select the most appropriate of the two vertical positions of the tow bar. This height is set by repositioning the pins above and below the support tube.
- e. Extend the hydraulic tow bar to desired length of required hook up, by means of the two position hydraulic valve on the rear bumper of the Landoll Centerfold.
- f. Using professional tow bar attachment slings, chains, hooks, and safety equipment, hook up the towed vehicle to the tow bar. All safety chains must be installed as well as towed vehicle lights from the Centerfold to the towed vehicle.
- g. Return Centerfold to transport position, making sure the hydro-mechanical lock is secured.
- h. Check operation of lights on towed vehicle for safety purposes.

Always tow with the tow bar extended.

Properly secure the vehicle being towed.

- i. Disengage the P.T.O.

After unloading the vehicle being towed, retract the tow bar before sliding the Centerfold bed.

Landoll Centerfold truck decks are designed for years of service with little maintenance. This small amount of maintenance, however, is very important for durability and for safe operation of the deck.

Maintenance is an owner/user responsibility as neither the manufacturer nor the distributor can normally control this function.

Use only safe practices when maintaining this equipment. Never get under a tilted deck unless it is adequately supported (don't rely on the hydraulic system). Always shut off the engine before reaching into pinch areas as when checking the hydraulic oil level or greasing under the deck. Maintain a clean shop for safety. Clean up spilled oil immediately.

Inspect the vehicle and deck system periodically for damage or evidence of pending failure. Damaged or broken parts should be replaced immediately. Never operate a machine which is known to be defective or operating improperly. The cause of any binding or leakage should be determined immediately and the problem promptly fixed.

Sliding surfaces are to be cleaned and coated with a heavy grease periodically. Cleaning every 6 months is recommended for clean highway operations, but this frequency will vary appreciably with the type of service. Sliding on dirty wear surfaces will cause rapid wear. Fittings on linkage pivots should be greased every 2 months, again depending upon useage. See Lube Chart.

Check the hydraulic oil level monthly or after any leakage. Use hydraulic oil as recommended in lubricant chart.

The proper oil level is best checked by sliding the deck back enough to gain access to the fill plug. The oil tank should be about 2/3 full with the deck so positioned (shut off the engine after moving the deck). This will result in a 3/4 full tank with the cylinder fully retracted (deck fully forward).

If a cylinder seal leaks, disassemble the cylinder and ascertain the cause of the leak. Small scores caused by chips or contaminated fluid can usually be worked out with fine emory cloth to avoid repetition of the trouble. Whenever any seal replacement is necessary, it is always advisable to replace all seals in that component. These seals are available in kits. Also, thoroughly clean all components before reassembly.

NORMAL CARE AND CLEANING
OF YOUR ALUMINUM DECK

To retain the original appearance of all types of aluminum finishes, it is important to keep the finish clean and free of any dirt accumulation. For periodic routine cleaning, we recommend washing with water containing any mild, nonabrasive soap or detergent such as those found around the house or recommended for washing automotive finishes, or any of the numerous non-etching, non-abrasive aluminum cleaners which are available at grocery stores, department stores, hardware stores, and automotive stores. To apply these cleaners, use a soft cloth or sponge for smooth surfaces. Follow the cleaning with a thorough rinsing of the surface with clear water and drying with a chamois or cloth to prevent spotting or streaking. To help keep the surface clean, to protect the finish from minor scratches or abrasion, and to facilitate later cleaning, a coat of non-abrasive liquid or paste wax, such as those recommended for the care of automotive finishes, should be applied to the clean dry surface.

Wax coatings should normally be replenished every three to six months. The exact life of the wax coating is dependent on the degree and severity of exposure and maintenance between waxings. To get the longest life from wax coatings, excessive grime and soil should not be allowed to accumulate, and the waxed surface should be washed as often as needed with clear, cool water and dried with a damp chamois or cloth. A protective wax coating is particularly important for preservation of the finish in seaboard localities and in industrial areas where the finish is exposed to industrial fallout.

CENTERFOLD MAINTENANCE AND LUBRICATION SCHEDULE	FIRST 100 MILES	SERVICE INTERVALS								
		FIRST 1,000 MILES	DAILY	WEEKLY	30 DAYS	90 DAYS	180 DAYS	YEARLY	LOCATION	RECOM. LUB.
BED SLIDES	I					I			1	
TIRES	I		V	I					2	
LIGHTS	I		V						3	
HYDRAULIC OIL	I				I			R	4	1
HYDRAULIC OIL FILTER	I							R	5	
WINCH	I				I				6	
FASTENERS	I	T			V				7	
LATCH	I				L			A	8	2

A - Adjust.

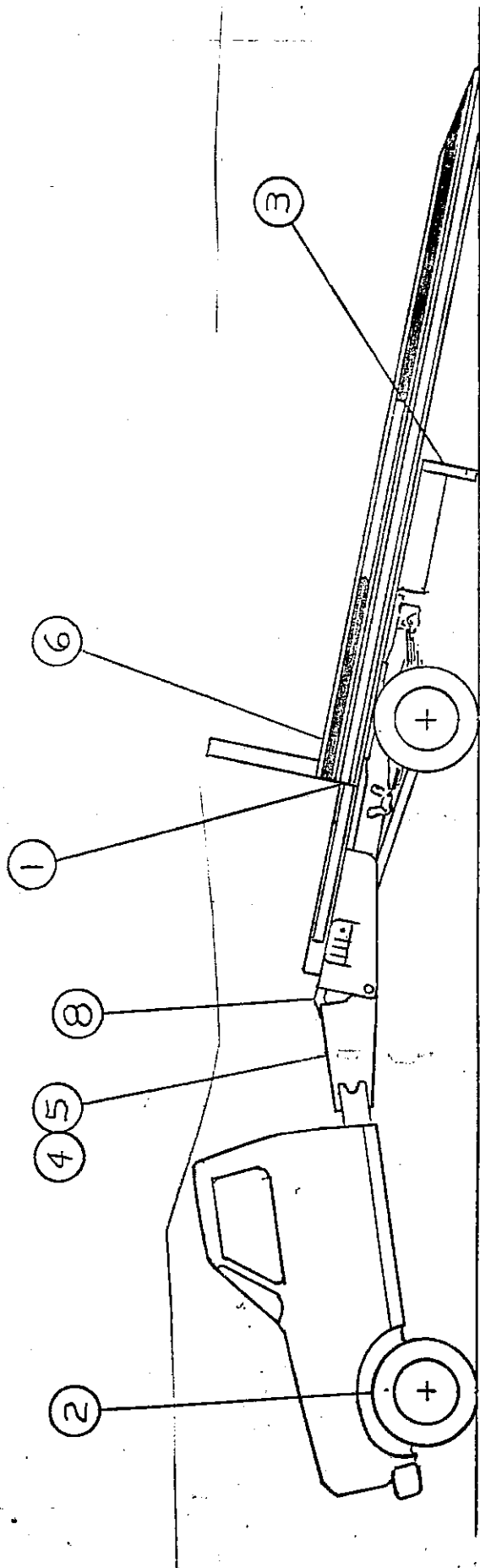
I - Inspect (correct, clean, or replace if necessary).

L - Lubricate.

R - Replace or change.

T - Tighten or Re-torque.

V - Visually inspect and if necessary, diagnose, correct, remove or replace.



RECOMMENDED LUBRICANTS

SYSTEM APPLICATION	AMOCO	EXXON	PHILLIPS	TEXACO	
1	Summer	Amoco-All-Weather #30277	Exxon HDX Plus 10W	Mangus Oil 315	Rando HD-AZ
	Winter	Amoco-All-Weather #30277	Exxon HDX Plus 10W	Mangus Oil 150	Rando HD-AZ
2	Summer	Amoco-Lit-Multi-Purpose Grease	Ronex Multi-Purpose	Phil Lub M.W. Grease	Marfax All Purpose
	Winter	Amoco-Lit-Multi-Purpose Grease	Ronex Multi-Purpose	Phil Lub M.W. Grease	Marfax All Purpose

DISASSEMBLY AND REASSEMBLY INSTRUCTIONS SPIN-IN RING RETAINER

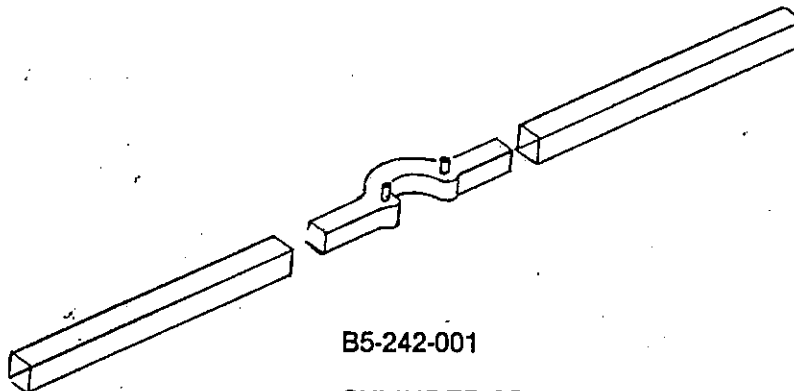
With the cylinder removed from the machine, retracted, and drained of oil, proceed as follows:

1. Secure the cylinder in a vise or other method to prevent rotation. Rotate cylinder so the slot in barrel is positioned for easy access.
2. With a 90° pin type spanner wrench rotate gland counter clockwise. The tail end of the wire will appear in slot of barrel. If tail of wire catches, it may be necessary to lift wire slightly with narrow screwdriver. Continue rotating gland to feed wire completely out.
3. Pull on piston rod to remove gland and piston from tube. Note: If seals catch in retaining ring groove, it may be necessary to cut seal through slot in tube and pull out with needle-nose pliers.

Before reassembly check that new seals have been installed and all internal parts are free of visible contamination. Smear a heavy grease on piston and gland O.D. seals for easier assembly.

1. Insert piston, gland and rod assembly into tube. Line up hole in gland retaining groove with slot in cylinder barrel.
2. Using new retaining wire rotate gland clockwise until wire is completely in tube.

The cylinder is now ready for reassembly in machine.



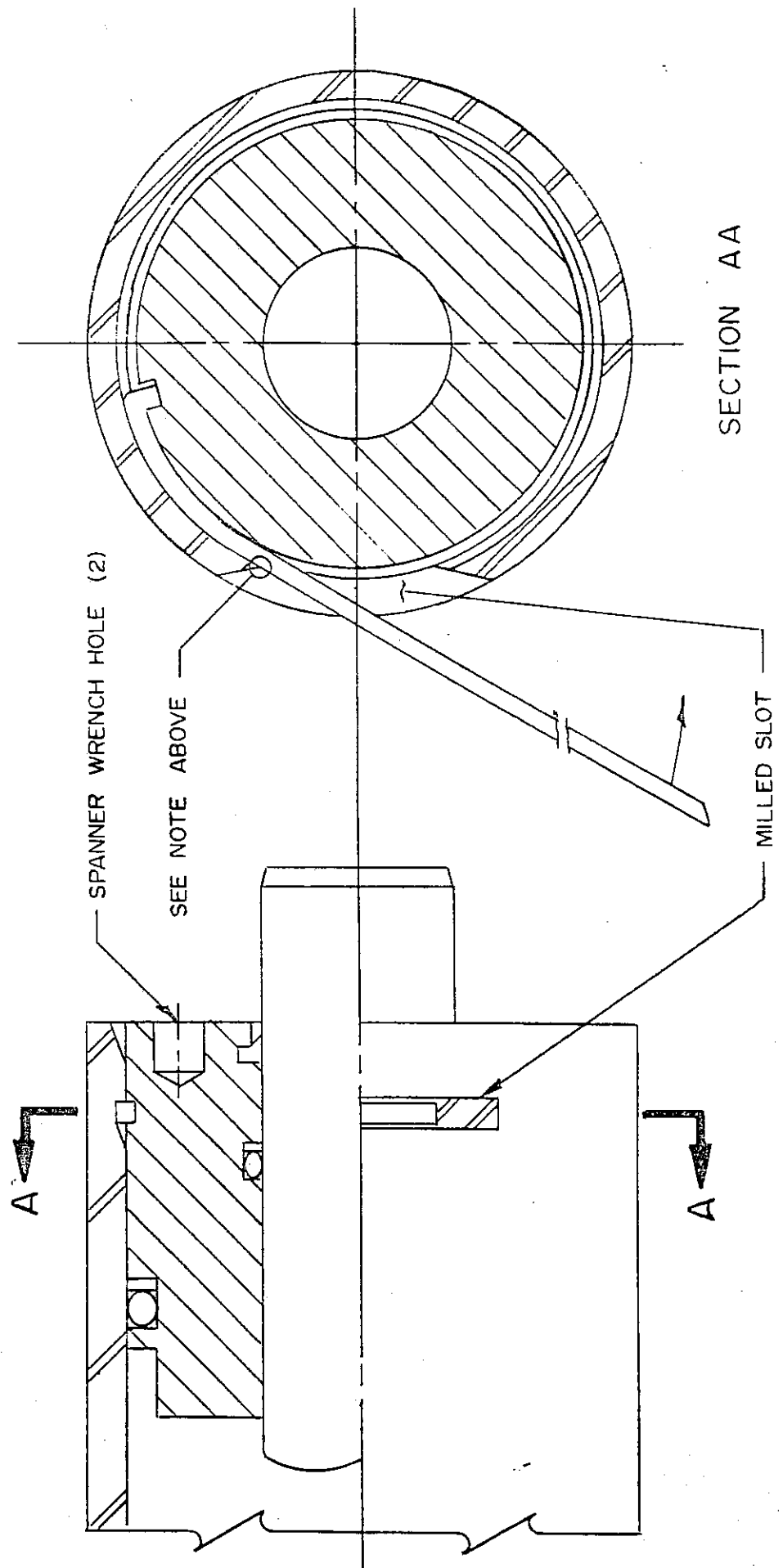
B5-242-001

CYLINDER SPANNER WRENCH

DISASSEMBLY 8 REASSEMBLY DIAGRAM

SPIN-IN RING RETAINER

NOTE PUSH TAIL OF RING TOWARD CYLINDER TO AVOID
SCRAPING OF RING ON MILLED SLOT.



TROUBLE SHOOTING GUIDE HYDRAULIC SYSTEMS

FINDING AND SOLVING PROBLEMS:

Most hydraulic system failures follow the same pattern, a gradual or sudden loss of pressure or flow with a resulting loss of cylinder or motor power. Any one of the system's components may be at fault. By following step-by-step procedures, the trouble can be located in a short time.

1. SYSTEM INOPERATIVE

- **No oil in system, insufficient oil in system.** Fill system. Check for leaks.
- **Wrong oil in system.** Refer to specifications. Change oil.
- **Filter dirty or clogged.** Drain oil and replace filter or filter element.
- **Oil line restriction.** Oil lines dirty or collapsed. Clean or replace.
- **Air leaks in pump suction line.** Repair or replace as necessary.
- **Worn or dirty pump.** Clean, repair or replace. Check alignment. Check for contaminated oil. Drain and flush system.
- **Badly worn components (valves, cylinders, etc.)** Examine and test for internal or external leakage. Replace faulty components. Check for cause of wear.
- **Leakage.** Check all components, particularly the relief valve for proper settings. Refer to technical manuals.
- **Excessive load.** Check unit specifications for load limits.
- **Slipping or broken pump drive.** Repair or replace belts, couplings, etc. Check for proper alignment or tension.

2. SYSTEM OPERATES ERRATICALLY

- **Air in system.** Check suction side of system for leaks. Repair.
- **Cold oil.** Allow ample warm-up period.
- **Dirty or damaged components.** Clean or repair as necessary.
- **Restriction in filters or lines.** Clean and/or replace elements or lines.

3. SYSTEM OPERATES SLOWLY

- **Oil viscosity too high, cold oil.** Allow oil to warm up before operating machine.
- **Low pump drive speed.** Increase engine speed (check manual for recommendations).
- **Low oil level.** Check reservoir and add oil as necessary.
- **Air in system.** Check suction side for leaks. Repair.
- **Badly worn pump, valves, cylinders, etc.** Repair or replace as needed.
- **Restriction in filters or lines.** Clean and/or replace elements or lines.
- **Improper adjustments.** Check orifices, relief valves, etc. Adjust per manual.
- **Oil leaks.** Tighten fittings. Replace seals or damaged lines.

4. SYSTEM OPERATES TOO FAST

- **Wrong size or incorrectly adjusted restrictor.** Replace or adjust as necessary.
- **Engine running too fast.** Reduce engine speed.

5. OVERHEATING OF OIL IN SYSTEM

- **Oil passing thru relief valve for excessive time.** Return control valve to neutral when not in use.
- **Incorrect oil, low oil, dirty oil.** Use recommended oil, fill reservoir, clean oil, replace filter element.
- **Engine running too fast.** Reduce engine speed.
- **Excessive component internal leakage.** Repair or replace component as necessary.
- **Restriction in filters or lines.** Clean and/or replace elements or lines.
- **Malfunctioning oil cooler.** Clean or repair.
- **Insufficient heat radiation.** Clean dirt and mud from reservoir and components.
- **Malfunctioning component.** Repair or replace.

6. FOAMING OF OIL

- **Incorrect, low or dirty oil.** Replace, clean or add oil as needed.
- **Air leaks.** Check suction line and component seals for suction leaks. Replace.

7. NOISY PUMP

- **Low oil level, incorrect oil, foamy oil.** Replace, clean or add oil as needed.
- **Suction line plugged, inlet screen plugged.** Clean or replace.
- **Worn or damaged pump.** Repair or replace.

8. LEAKY PUMP OR MOTOR

- **Damaged or worn shaft seal.** Replace. Check for misalignment.
- **Loose or broken parts.** Tighten or replace.

9. LOAD DROPS WITH CONTROL VALVE IN NEUTRAL

- **Leaking cylinder seals or fittings.** Replace worn parts.
- **Control valve centering when released.** Check linkage. Check for spool binding. Repair.

10. CONTROL VALVE STICKY (Binding).

- **Valve linkage misaligned.** Repair.
- **Tie-bolts too tight (stack valves).** Loosen as necessary.
- **Valve damaged.** Repair or replace.

11. CONTROL VALVE LEAKS

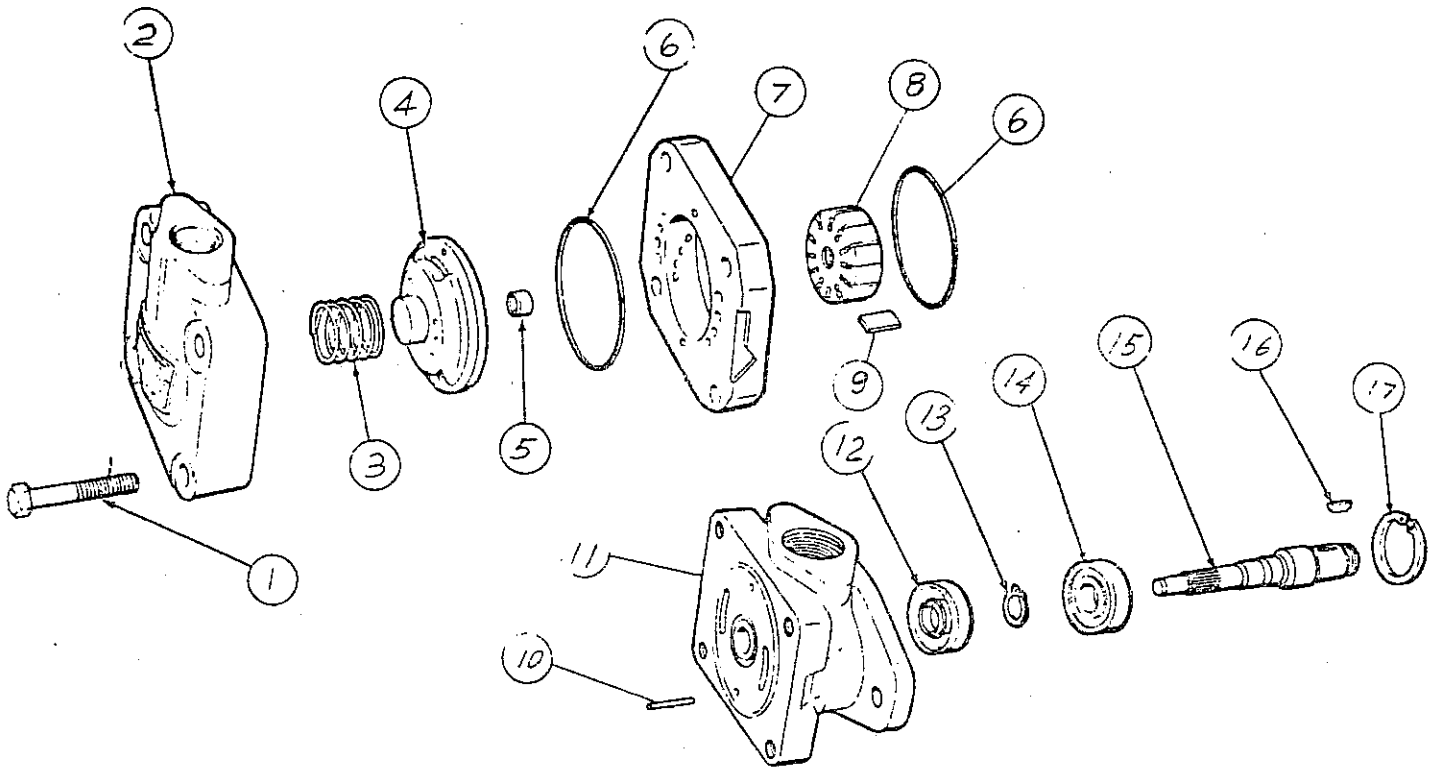
- **Tie-bolts too loose (stack valves).** Tighten as necessary.
- **Seals damaged or worn.** Replace.

12. CYLINDER LEAKS

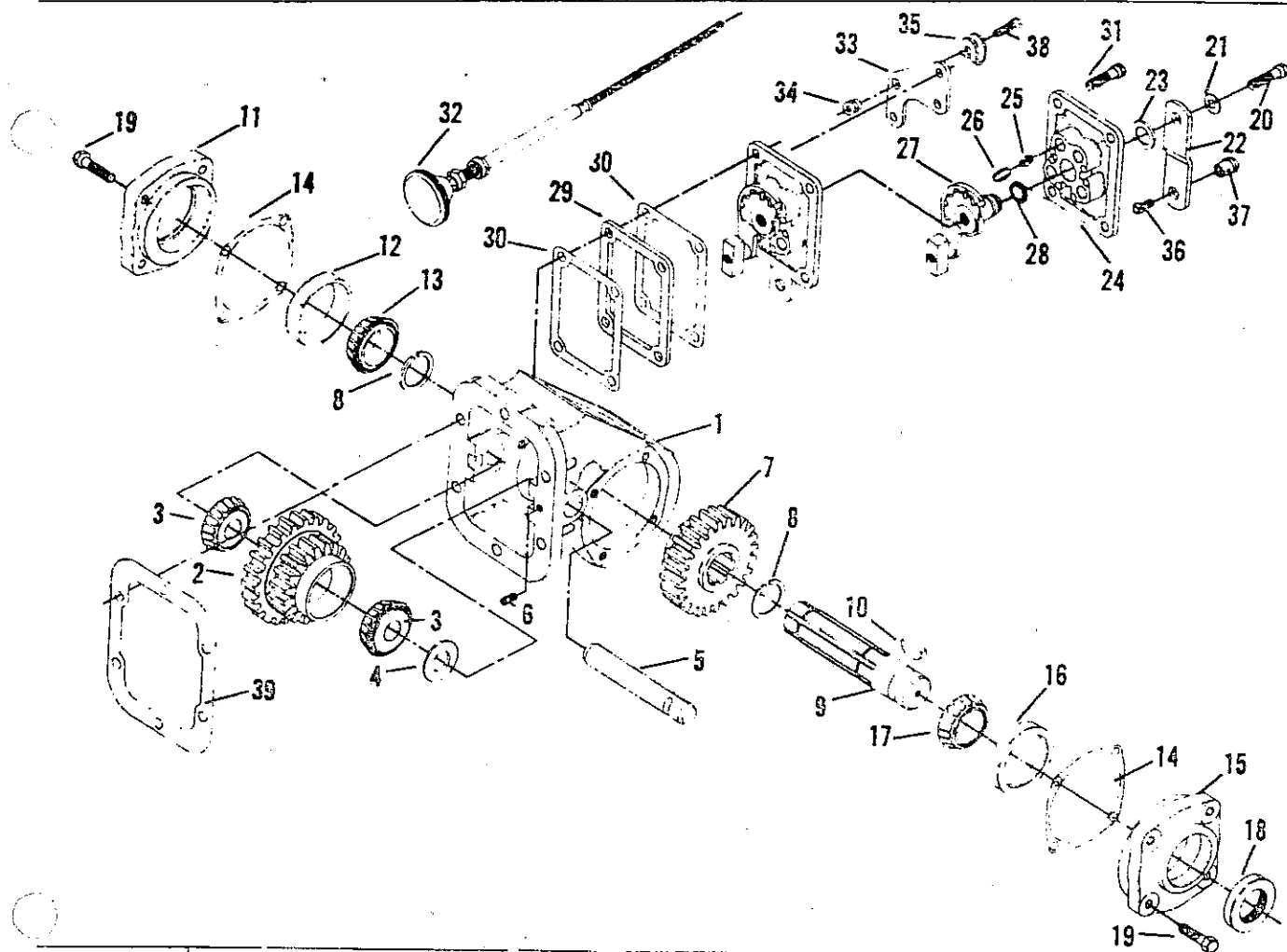
- **Seals worn or damaged.** Replace.
- **Rod damaged.** Replace.

13. CYLINDER LOWERS WITH VALVE IN "METER UP" POSITION

- **Damaged or leaky lift check.** Replace check.
- **Leaking cylinder seal.** Replace seal.



Item	Part No.	Description	Qty.
1	1319	Screw	4
2	313657	Cover	1
3	275672	Spring	1
4	359287	Pressure plate	1
5	280267	Bushing	1
6	154090	"O" ring	2
7	331807	Ring	1
8	358334	Rotor	1
9	923479	Vane kit (12 vanes)	1
10	9603	Pin	2
11	280689	Body	1
12	229235	Seal	1
13	98653	Snap ring	1
14	98574	Bearing	1
15	280372	Shaft	1
16	5881	Key	1
17	109975	Snap ring	1
	922733	Seal kit	
		includes items 6 and 12.	
	923487	Cartridge kit	
		includes items 6, 7, 8 and 9.	



Item	Part Number	Description	Quantity
1	1-P-195 1-P-196	CASE, p.t.o.—Standard Mount CASE, p.t.o.—Deep Mount	1 1
2	See Chart Pg. 4	GEAR, input cluster	1
3	550439	CONE, input gear bearing	2
4	328017X	KIT, input gear spacer—Consists of one 14— 1 thru 14-P-15-5	1
	14-P-15-1	SPACER, input gear—.055" Thick	1
	14-P-15-2	SPACER, input gear—.060" Thick	
	14-P-15-3	SPACER, input gear—.065" Thick	
	14-P-15-4	SPACER, input gear—.070" Thick	
	14-P-15-5	SPACER, input gear—.075" Thick	
5	9-P-60	SHAFT, idler	1
	3 7 8 4 5 2 - 7	SET SCREW—For Standard Mount— $\frac{1}{4}$ "-20x $\frac{1}{2}$ "	1
7	378452-3	SET SCREW—For Deep Mount— $\frac{1}{4}$ "-20x $\frac{1}{4}$ "	1
8	2-P-291	GEAR, output sliding—24 Teeth	1
9	378391	RING, output shaft snap	2
	3-P-352	SHAFT, std. p.t.o. output 1- $\frac{1}{4}$ " Round— $\frac{5}{16}$ " Keyway	1
10	500007-29	KEY, woodruff—Shipped Loose— $\frac{5}{16}$ "	1
11	328278X	BEARING CUP ASSEMBLY—Closed End— (Includes Cup 550221)	1
12	550221	CUP, bearing—For Closed End	1
13	550532	CONE, bearing—For Closed End	1

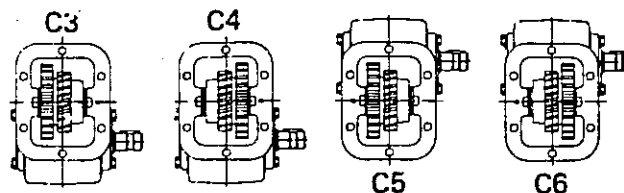
(148) - From SPACER KIT, select SPACER of proper thickness to provide end play of gear.

42 SERIES **PARTS LIST & SPECIFICATIONS**

Chelsea®

Item	Part Number	Description	Quantity
14	22-P-24-1	GASKET, bearing cup—.014" ThickAR	
	22-P-24-2	GASKET, bearing cap—.020" ThickAR	
15	328277X	BEARING CAP ASSEMBLY—Output End— (Includes Cup 550221)1	
16	550221	CUP, bearing—For Output End1	
17	550397	CONE, bearing—For Output End1	
18	28-P-2	SEAL, output shaft oil1	
19	378430	CAPSCREW, hex. head eslock—5/16"-18x1" ...8	
	328290-1X	SHIFTER ASSEMBLY—For Wire Control1	
		(Use with Assemblies C3 & C6)	
	328290-2X	SHIFTER ASSEMBLY—For Wire Control1	
		(Use with Assemblies C4 & C5)	
20	500409-6	CAPSCREW, hex. head—5/16"-24x5/8"1	
21	378003	LOCKWASHER, eslock capscrow—5/16"1	
22	51-P-22	LEVER, shifter1	
23	378004	WASHER, shifter lever—1" O.D.1	
24	34-P-17	COVER, shifter1	
25	37-P-20	SPRING, shifter ball1	
26	63-P-6	PIN, poppet1	
27	328289-1X	PLATE SUB-ASSEMBLY—For C3 & C61	
	328289-2X	PLATE SUB-ASSEMBLY—For C4 & C51	
28	28-P-49	"O" RING, shifter post—3/4" O.D.1	
29	5A-062	SPACER, shifter cover fiber1	
30	35-P-8	GASKET, shifter coverAR	
31	378430-9	CAPSCREW, hex. head eslock—5/16"-18 x 1" ..4	
PARTS SHIPPED LOOSE			
32	328346-10X	WIRE CONTROL ASSEMBLY—Wire & Knob ...1	
	328380X	WIRE CONTROL MOUNTING PARTS KIT1	
33	50-P-17	WIRE CONTROL MOUNTING PARTS KIT BRACKET, wire control1	
34	378326	NUT, hex1	
35	50-P-19	BRACKET, swivel1	
36	500568-4	SETSCREW—1/4"-10x1/2"1	
37	378019	PIN, pivot1	
38	500396-8	CAPSCREW, hex. head—1/4"-20 x 3/4"1	
39	35-P-9-1	GASKET, p.t.o. mounting—.010" ThickAR	
	35-P-9-2	GASKET, p.t.o. mounting—.020" ThickAR	
P.T.O. MOUNTING STUD KIT			
	328170-76X	STUD KIT—For Standard Mount1	
	328170-77X	STUD KIT—For Deep Mount1	
GASKET & SEAL KIT			
	328356-13X	GASKET & SEAL KIT—Must Be Ordered (Contains 4 each of Item 14, 18, & 28; 2 pieces Item 30; 1 piece each Item 8 & 39)1	

ASSEMBLY ARRANGEMENT

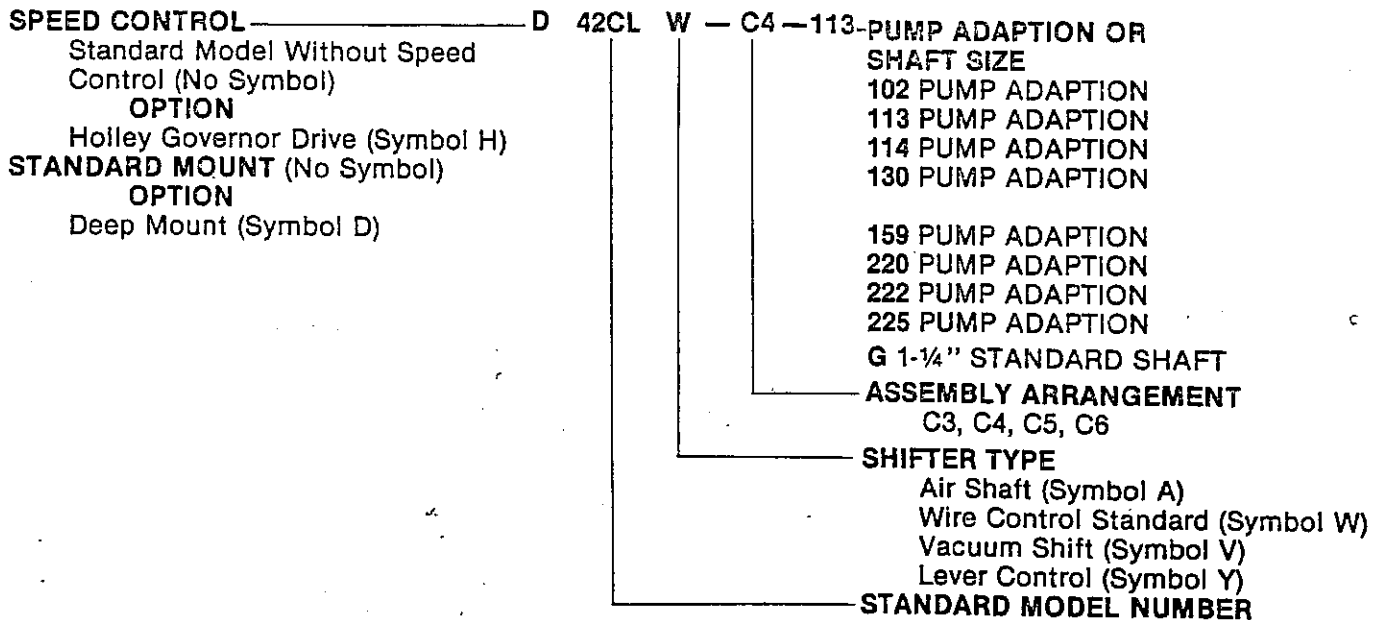


42 SERIES PITCH MODELS & GEAR DATA

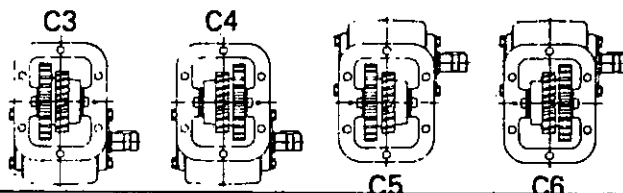
P.T.O. Model	Input Gear Item No. 2	Teeth	Transmission Application	Pitch & Pressure Angle
42ARL	5-P-432	25-19	New Process 4 Speed 435L Series & Others....	8.1160NP-20° L.H.
42CFL	5-P-426	26-19	Warner T98-A (Left Hand Helix)	8.0829NP-20° L.H.
42CL	5-P-428	19-19	General—All 5 or 5/7	5 or 5/7-20°
42D17L	5-P-427	22-19	Spicer 5650, 5750 & 5850 Series	6/7-17 1/2°
42F6	5-P-535	22-19	Fuller T-1056-A	6.2418-19° 17'
42F8	5-P-537	33-19	Fuller TS1312A & TS1308-A	8.35-20°
42GDL	5-P-466	25-19	New Process 4 Speed 435-D Series	8-2559NP-20° L.H.
42HCL	5-P-348	25-19	Chevrolet 4 Speed & Spicer 3150, 3550 & 3850 Series.....	7NP-20° L.H.
42HEL	5-P-425	21-19	Spicer 5831 Auxiliary & Watson Auxiliary	6 or 6/8NP-17 1/2° L.H.
42L	5-P-326	22-19	General—All 6 or 6/8	6 or 6/8-20°
42LDH	5-P-411	26-19	Clark 5 Speed	7.6168NP-18° 29'22" L.H.
42LKH	5-P-466	22-19	New Process NP-205 T.C. (Left Side).....	7NP-20° R.H.
42LMH	5-P-358	25-19	Chevrolet CH-465 4 Speed & GMC	7.3449NP-20° L.H.
42LNB6	5-P-526	18-19	Clark 397V	6.100-25° L.H.
42LNE7	5-P-495	23-29	New Process Model 203 Transfer Case	7-20° L.H.
42LNO5	5-P-499	17-19	Spicer R-8031 & R-8341	5-17 1/2° L.H.
42LRH	5-P-386	26-19	New Process 4 Speed Synchro-Shift (420)	7.6168NP-18° 29'22" R.H.
42LUH	5-P-420	23-19	Spicer 5000 Series (Right Side 8 Hole)	7NP-17 1/2° L.H.
42L7R	5-P-433	27-19	Spicer 1350 Series (Right Side 8 Hole)	8.0829NP-20° L.H.
42N10	5-P-542	33-19	Spicer 480010-20° R.H.	
D42HPL	5-P-434	21-19	Spicer 6350, 6450 & 6850 Series	6NP-17 1/2° L.H.

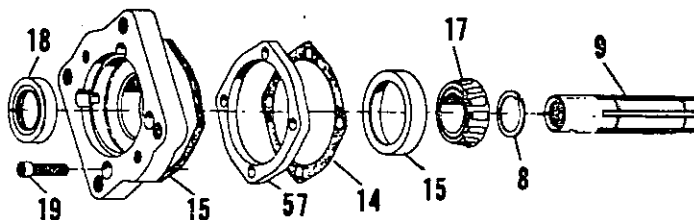
CHELSEA MODEL NUMBER CONSTRUCTION

42 SERIES EXTRA HEAVY DUTY LOW SPEED P.T.O.



ASSEMBLY ARRANGEMENT





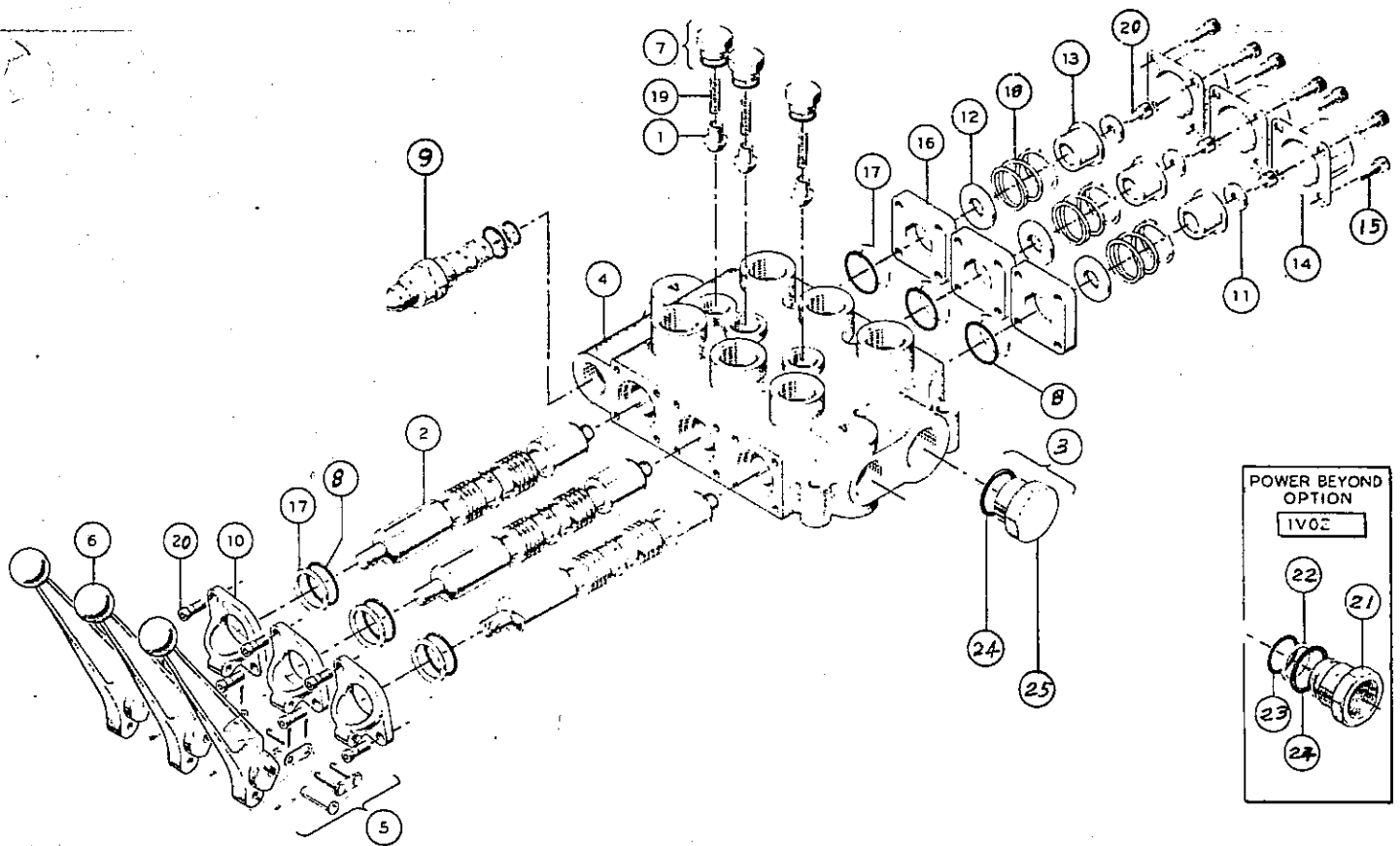
Pump Mounting Suffix	NEW Flange Item No. 15	Output Shaft Item No.	Capscrew & Dimensions Quantity Required—Four Item No. 19	Conversion Kit▶
102	328580X	3-P-385	378447-9 (5/16"-18x1.750")	328593-5X
113	328333X	3-P-351	378447-9 (5/16"-18x1.750")	328593-9X
114	328580X	3-P-452	378447-9 (5/16"-18x1.750")	328593-11X
130	328583X	3-P-385	378447-8 (5/16"-18x1.500")	328593-13X
159	328584X	3-P-351	378447-9 (5/16"-18x1.750")	328593-14X
220	328328X	3-P-351	378447-8 (5/16"-18x1.500")	328593-15X
222†	328589X	3-P-351	378447-9 (5/16"-18x1.750")	328593-10X
225	328710X	3-P-452	378922 Studs, 378919 Washer and 500963-1 Hex (Locknut (4 each)	328593-16X

▶ Conversion Kits consist of all Items listed plus Oil Seal 28-P-52 Item 18, Lockring 378391 (Qt. 2) Item 8, Gaskets 22-P-24-1 and 22-P-24-2 Item 14, and Spacer 378336 Item 57.

† Flange Assembly 328589X interferes with Base on Deep Mount Housing Assembly C-3 only.

All Flange Assemblies consist of Pump Flange and Bearing Cup 550221.

MODEL BA—three spool

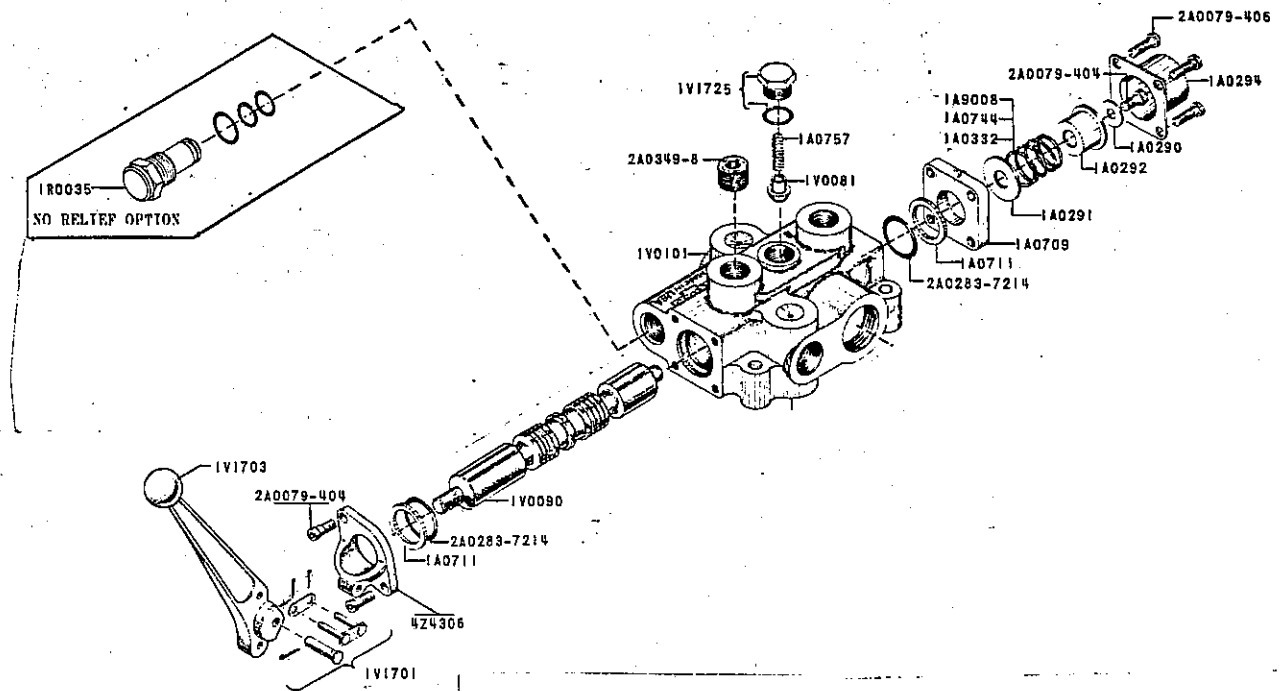


THREE SPOOL VALVE

Item	Part No.	Des.	Qty.
1	1V0081	Load Check Poppet	3
2*	1V0090	4-Way Spool	3
3	2A0354-121	Conversion Plug Assembly	1
4*	1V0351	Valve Housing	1
5	1V1701	Pin Kit	3
6	1V1703	Handle	3
7	1V1725	Load Check Plug	3
8	2A0283-7214	Spool Seal	6
9	1R0017	Relief Assy. (1500-3000)	1
10	4Z4306	Handle Bracket	3
11	1A0290	Centering Spring Washer	3
12	1A0291	Stop Washer	3
13	1A0292	Stop Collar	3
14	1A0294	End Cap	3
15	2A0079-406	Cap Screw	12
16	1A0709	End Spacer	3
17	1A0711	O-Ring Spool Washer	6
18	1A0744	Centering Spring (std.)	3
19	1A0757	Load Check Spring	3
20	2A0079	Cap Screw	9
21	1V0075	Power Beyond Sleeve	1
22	2A0007-022	O-Ring Back Up	1
23	2A0283-9022	O-Ring	1
24	2A0283-9916	Plug O-Ring	1
25	2A0354-21	Conversion Plug	1
	2V0010	Seal Kit	1

*Spools and valve body are matched at factory and may not be ordered as separate items.

MODEL (BA) DIRECTIONAL CONTROL VALVE



PARTS LIST

Cross Manufacturing Company reserves the right to discontinue products and/or to change design, specifications or prices at any time without incurring any obligations.

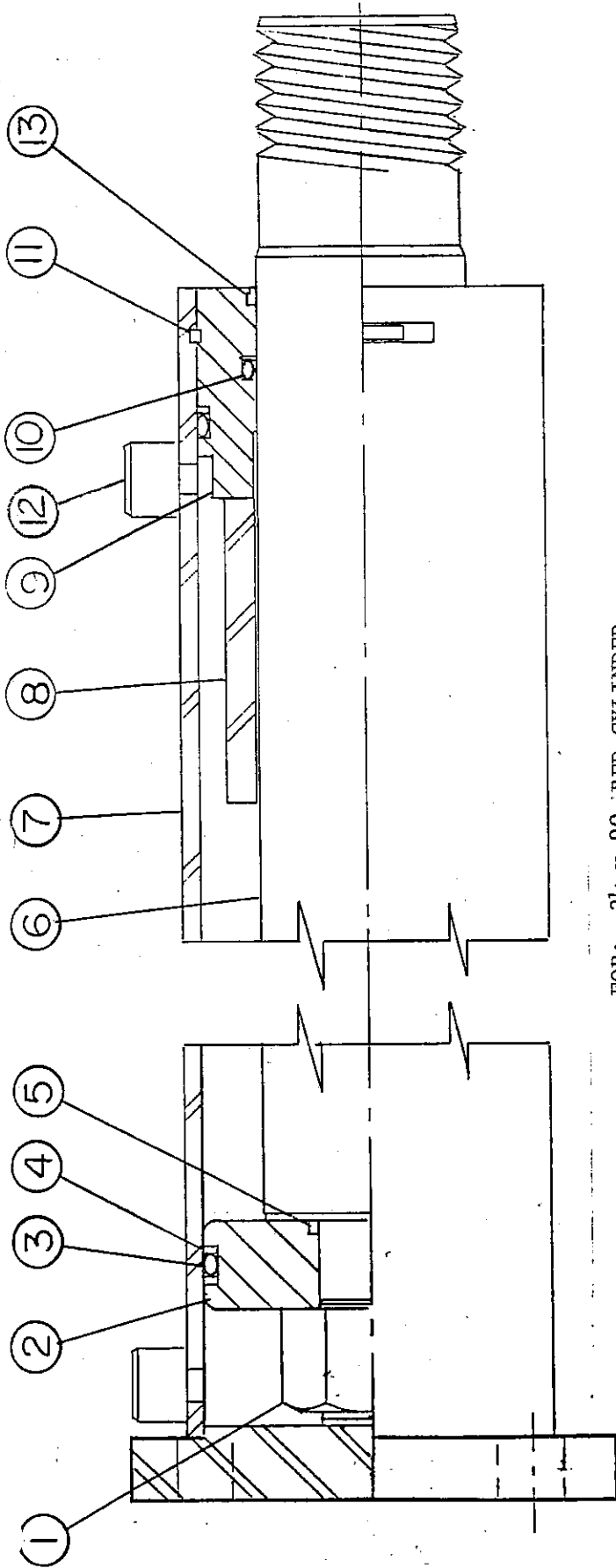
PART NO.	DESCRIPTION	NO. REQ'D. (1-Spool)
1V0081	Load Check Poppet	
* 1V0090	4-Way Spool	
* 1V0096	3-Way Spool	
* 1V0101	Valve Housing (1 Spool)	
* 1V0126	Valve Housing (2 Spool)	
* 1V0351	Valve Housing (3 Spool)	
1V1701	Pin Kit	
1V1703	Handle	
1V1725	Load Check Plug Ass'y.	
1R0016	Relief Ass'y., Adj. (500-1500) Std.	
4Z4306	Handle Bracket	
1A0290	Centering Spring Washer	
1A0291	Stop Washer	
1A0292	Stop Collar	
1A0294	End Cap	
1A0332	Light Centering Spring	
1A0709	End Spacer	
1A0711	O-Ring Spool Washer	
1A0744	Centering Spring (Std.)	
1A0757	Load Check Spring	
1A9008	Heavy Centering Spring	
2A0079-404	Machine Screw	
2A0079-406	Machine Screw	
2A0283-7214	Spool Seal	
SPECIAL PARTS FOR NO RELIEF		
1R0035	Relief Plug Ass'y.	

* The select-fit honing process at factory, which fits a spool to an individual valve body, eliminates the possibility of ordering the valve body or spool as separate items.



MANUFACTURING, INC.

LEWIS, KANSAS 67552 / 316 324-5525

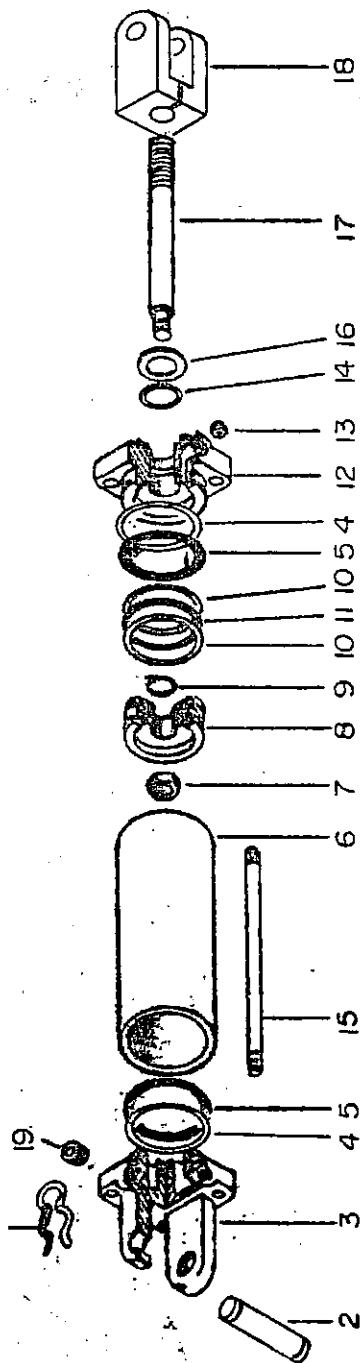


FOR: 3 1/2 x 90 BED CYLINDER
LANDOLL PART NUMBER 3-242-010044

Item	Qty.	Part Number	Description
1	1	220000213	Lock Nut
2	1	071700130	Piston
3	2	240000338	O-Ring*
4	3	240005338	Back-up Washer*
5	1	240000028	O-Ring*
6	1	011000256	Piston Rod
7	1	061700305	Butt & Tube Assembly
8	1	211100200	Spacer
9	1	081700035	Gland
10	1	240020007	U-Cup*
11	1	230007350	Sq. Ret. Ring*
12	2	200018002	Pipe Plug
13	1	250001327	Wiper*
14	1	3-242-010046	Packing Kit (Includes * Items)

TILT CYLINDER

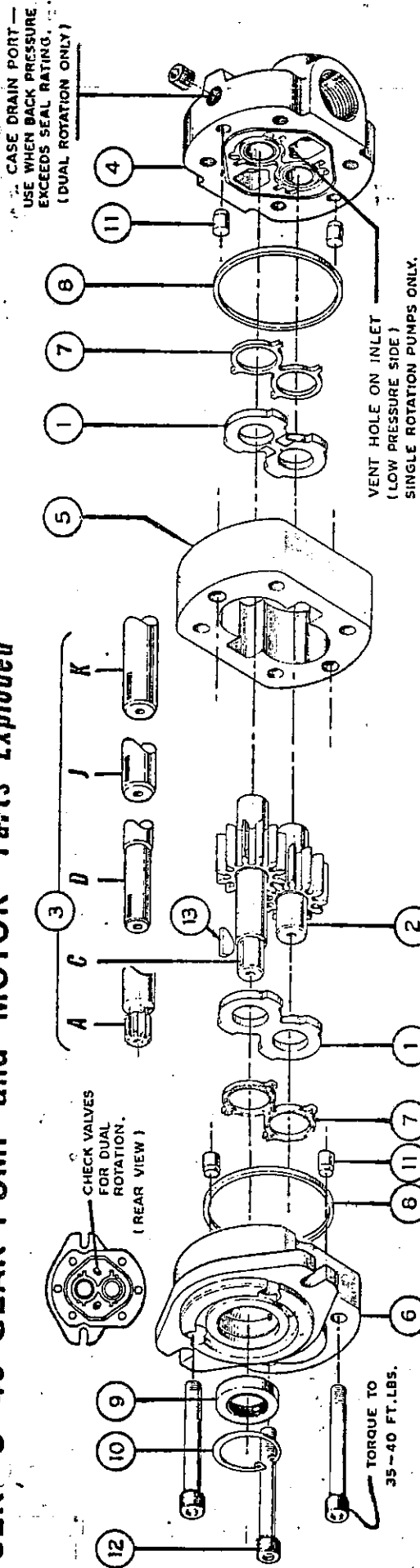
LANDOLL PART NO. 1-242-0100



4 x 10 Cylinder 1-1/2 Rod

Item	Description	Qty	Part Number
1	Full Hair Pin Clip	2	190400002
2	Clevis Pin	1	190400004
3	Anchor Gland	1	141900037
4	Back-up Washer	2	240005240
5	O-Ring	2	240000329
6	Tube	1	051900009
7	Piston Rod Lock Nut	1	220000210
8	Piston	1	071900006
9	O-Ring	1	240000022
10	Back-up Washer	2	240005342
11	O-Ring	1	240000342
12	Rod Gland	1	081900231
13	Tie Rod Nut	8	9/16 UNC
14	U-Cup Seal	1	240020059
15	Tie Rod	4	170301153
16	Wiper Seal	1	250001222
17	Piston Rod	1	010800006
18	Clevis Assembly	1	100000043
19	3/4 - 16 Steel Plug w/ O-Ring	1	200300040
20	Packing Kit (Consist of items 4,5,9,10,11,14,16)	1	1-242-010C04

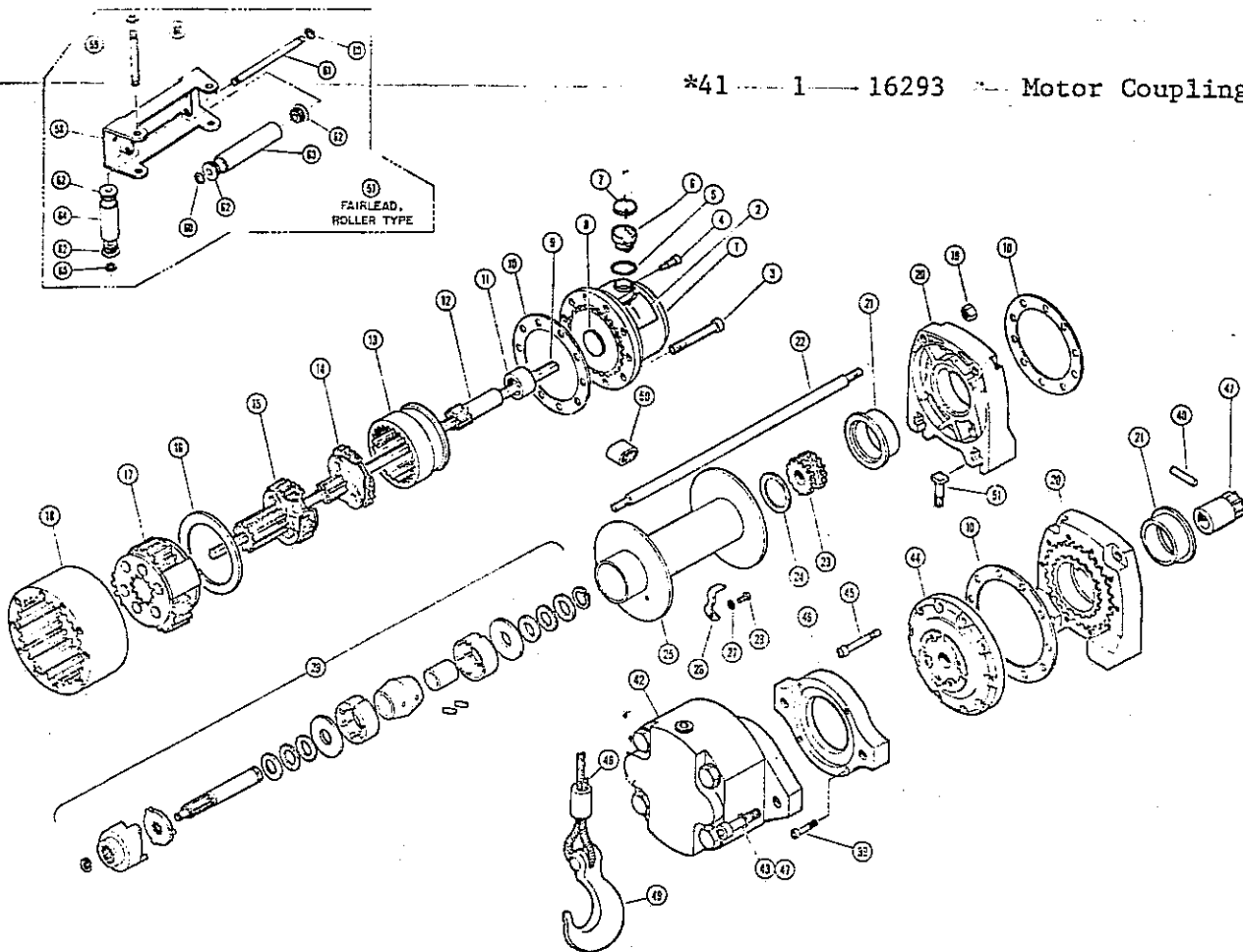
SER. S 40 GEAR PUMP and MOTOR Parts Exploded



ITEM	QTY.	PART NUMBER	DESCRIPTION.
------	------	-------------	--------------

PART NO. 14462 WINCH MOTOR

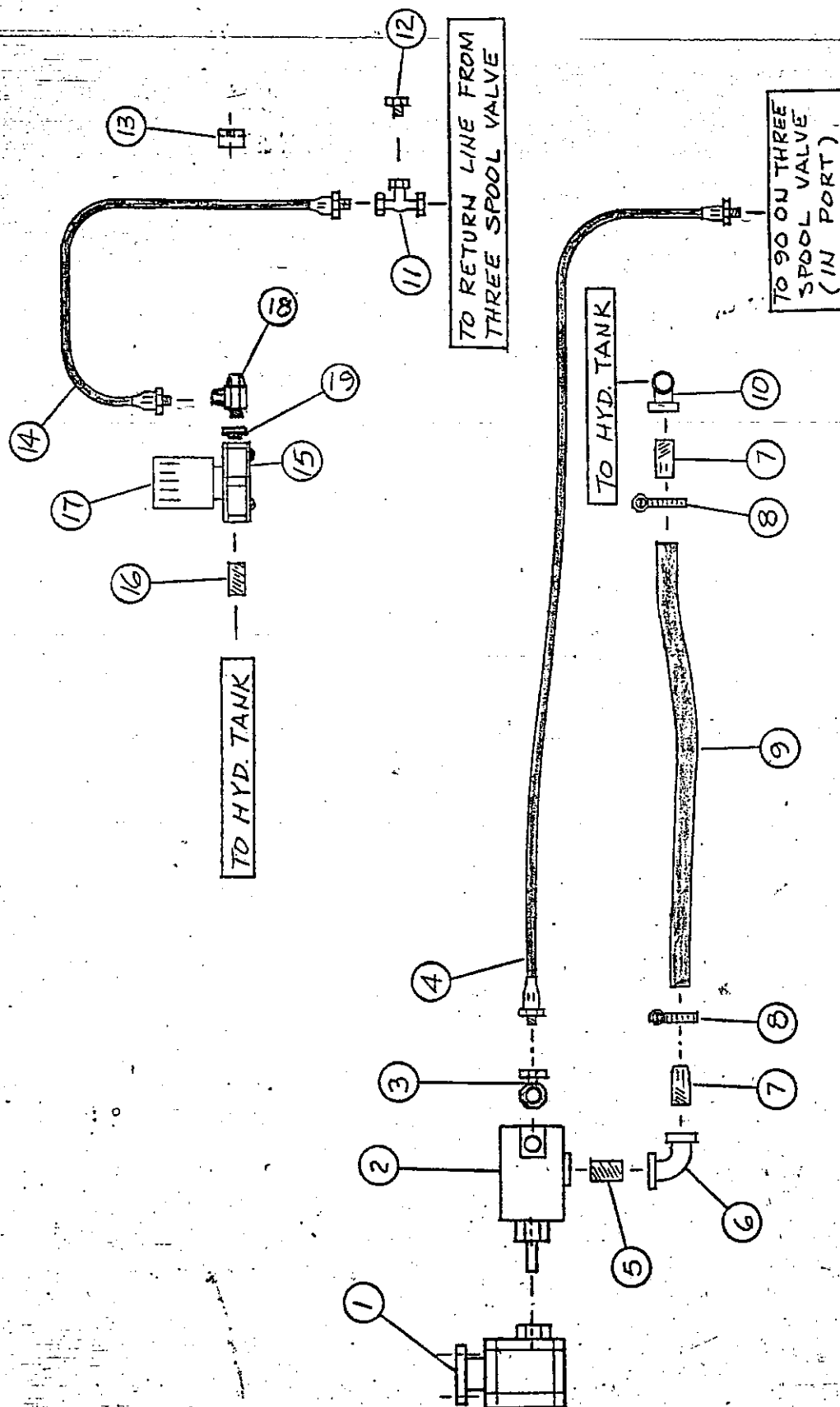
1	2	4P0013-001	Thrust Plate
2	1	4P0012-008	Driven Gear
3	1	4P0011-014	Drive Gear Assy. Shaft "D"
4	1	4P0007-002	Rear Cover Assy. Rear Ports
5	1	4P0004-002	Body
6	1	4P0003-001	Front Cover Assy. Dual Rotation
7	2	5A0078	Loading Seal
8	2	5A0048	Static Seal
9	1	5P0015-014	High Pressure (250 PSI) Shaft Seal
10	1	2A0466-150	Retaining Ring
11	4	2A0310-604	Dowel Pin
12	4	2A0079-624	Cap Screw 2 1/2 Long
13	1	5A0067	Woodruff Key
14	1	4P0017-003	Seal Kit
15	2	2A0353-17	Shipping Plug



ITEM	QTY.	PART NO.	DESCRIPTION	ITEM	QTY.	PART NO.	DESCRIPTION
1	1	14547	End Housing Assy. Incl. Items 2,8,&11	25	1	13876	Drum Assy.
2	1	14124	Decal, End Housing	26	1	13887	Clamp, Wire Rope
3	10	13850	10-24x2 1/2 Socket HD CS	27	1	1129	1/4 Lock Washer
4	1	13872	Screw, Clutch Knob	28	1	13699	1/4-20 Oval Hd. CS
5	1	14211	Seal, O-Ring	29	1	14812	Brake Assembly
6	1	14585	Knob, Clutch Incl. Item 7	39	4	13340	1/4-20x3/4 Socket Hd. CS
7	1	13854	Decal, Clutch	40	1	3504	1/8 Diam.x3/8 Roll Pin
8	1	13868	Plate, Thrust	41*	1	14410	Motor Coupling
9	1	14518	Drive Shaft	42	1	14462	Motor, Hyd., .75cu.in./Rev.
10	3	13848	Gasket	43	2	14157	7/16-14x1 Socket Hd. CS
11	1	13829	Bushing	44	1	14468	Adapter, Motor
12	1	14227	Gear, Sun, No. 1	45	10	5553	10-24x3/4 Socket Hd. CS
13	1	13839	Gear, Ring, No. 1 & 2	46	1	14467	Adapter, Hyd. Motor
14	1	14610	Carrier Assy., No.1	47	2	2146	7/16 Lockwasher
15	1	14611	Carrier Assy., No.2	48	1	14540	Wire Rope, 5/16x80 Ft. Incl. Item 49
16	1	13826	Bushing, Carrier	49	1	5320	Hook, 3/8
17	1	14612	Carrier Assy., No.3	50	1	14631	Sleeve, Wire Rope
18	1	14471	Gear, Ring	51	4	14939	Sq Hd 3/8-16x2, GR5 CS
19	4	6725	1/4-20HN, Self Locking	57	1	5742	Fairlead, Roller Type Incl. Items 58 - 64
20	2	15184	Support, Drum Incl. Item 21	58	1	5741	Bracket, Fairlead
21	2	13831	Bushing, Drum	59	2	5744	Shaft, Vertical
22	2	13875	Tie Rod	60	8	6126	Ring, Retaining
23	1	15185	Drive, Splined Incl. Item 24	61	2	5745	Shaft, Horizontal
24	1	13827	Retaining Ring	62	8	2050	Bushing
				63	2	2049	Roller, Horizontal
				64	2	2051	Roller, Vertical

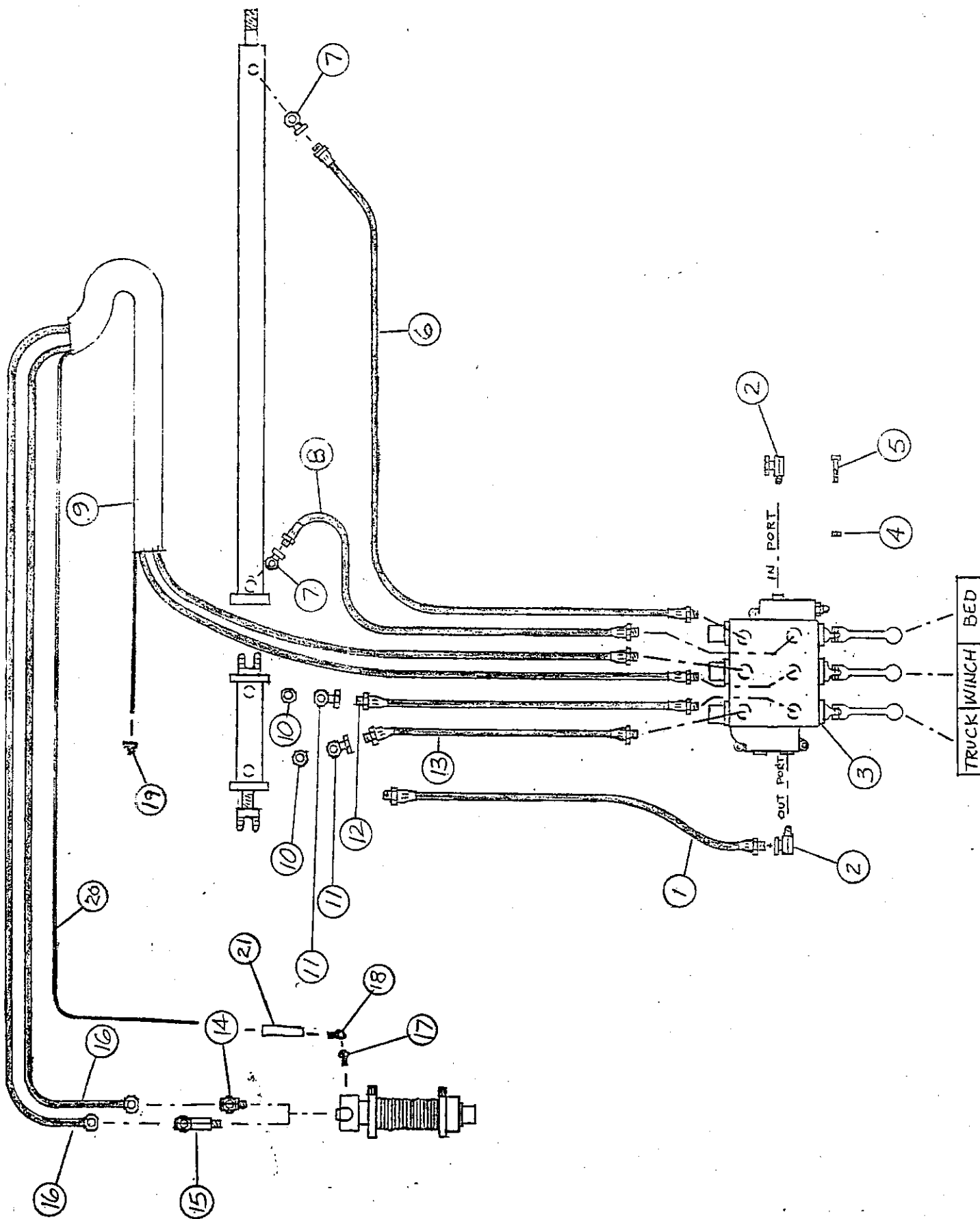
HYDRAULIC WET KIT, TWO TON CENTERFOLD

<u>Item</u>	<u>Part Number</u>	<u>Description</u>	<u>Qty.</u>
1	P.T.O.	Power Take Off	1
2	V-201P13P1C11	Pump Vickers	1
3	1-007-010013	1/2FPT 3/4MPG 90 Swivel	1
4	1-397-010056	1/2 Hose Assembly 154IN	1
5	1-1/4 x 2PN	1-1/4 x 2 Pipe Nipple	1
6	1 1/4 x 1 1/4 90 ELL	1-1/4 x 1-1/4 90 Blk. ELL	1
7	3-561-010001	Hose Barb 1-1/4 NPT	1
8	6828	Ideal Hose Clamp	2
9	19B	Hose 1-1/4	7.5FT
10	1-1/4 ST ELL	BLK Pipe Elbow 90 ST	1
11	2255-8-8S	Tee Internal Pipe Swivel	1
12	1/2 Pipe Plug	Black	1
13	2-181-010001	Hose Clamp	1
14	2-397-010002	1/2 Hose Assembly 36IN	1
15	1-295-010001	Return Line Filter	1
16	3/4 Nipple	All Thread Nipple	1
17	1-295-010002	Replacement Filter Element	1
18	2-92-8-8S	Tee 1/2 External/Internal Pipe	1
19	C3109 x 12 x 8	Steel Bush 3/4 MPT x 1/2 FPT	1



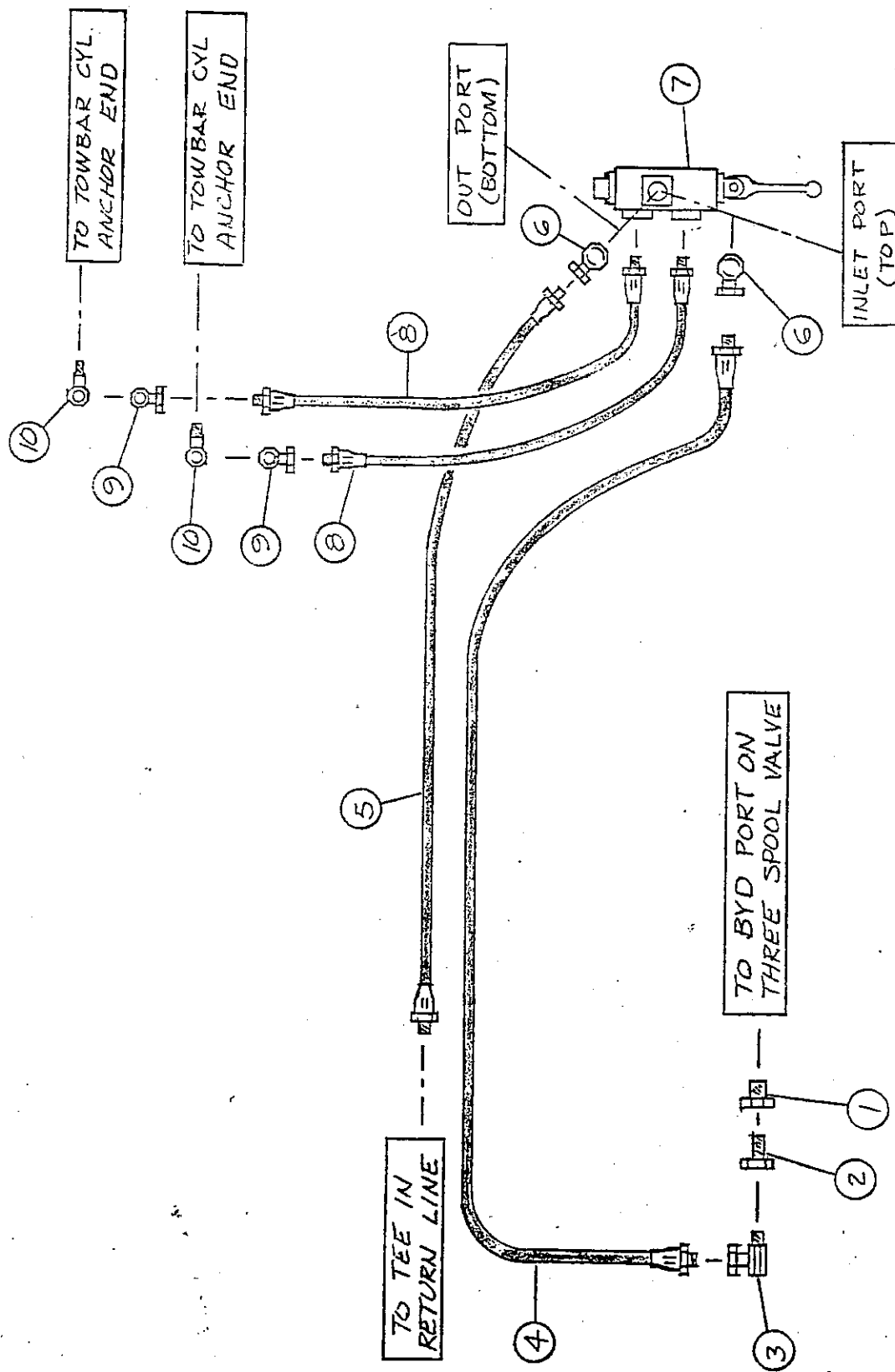
MAIN FRAME HYDRAULICS, TWO TON CENTERFOLD

<u>Item</u>	<u>Part Number</u>	<u>Description</u>	<u>Qty.</u>
1	2-397-010002	1/2 Hose Assembly 36IN	1
2	1-007-010013	1/2FPT 3/4 MPT 90 Swivel	2
3	BA3111AAAG3EAO	Valve 3 Spool w/Power Beyond	1
4	3/8-16HFLN	Lock Nut	3
5	3/8-16 x 1-3/4CS	Hex Cap Screw GR5	7
6	1-397-010060	3/8 Hose Assembly 152IN	1
7	2047-6-6S	INT P Swiv. 3/8NPT	2
8	1-397-010064	3/8 Hose Assembly 58IN	1
9	3-395-010001	CF Fire Hose	7.5FT
10	2216-6-8S	3/8FPT 3/4MPT O-Ring Adapter	2
11	1-007-010005	3/8 90 Swivel w/3/32 Restrictor	2
12	1-397-010061	3/8 Hose Assembly 46IN	1
13	1-397-010063	3/8 Hose Assembly 37IN	1
14	1-007-010011	90 Union O-Ring Adapter STD.	1
15	1-007-010012	90 Union O-Ring Adapter XL	1
16	1-397-010065	3/8 Hose Assembly 277IN	2
17	C3409 x 4	90° ST EL 1/4 MPT x 1/4 FPT	1
18	1480 x 6	45° EL 3/8 O.D. Tube x 1/4 MPT	1
19	1468 x 6 x 8	Connector 3/8 O.D. Tube x 1/4 MPT	1
20	62P6	Tubing 3/8 O.D.	26 FT
21	1-397-010010	1/2 Hydraulic Hose	8.0



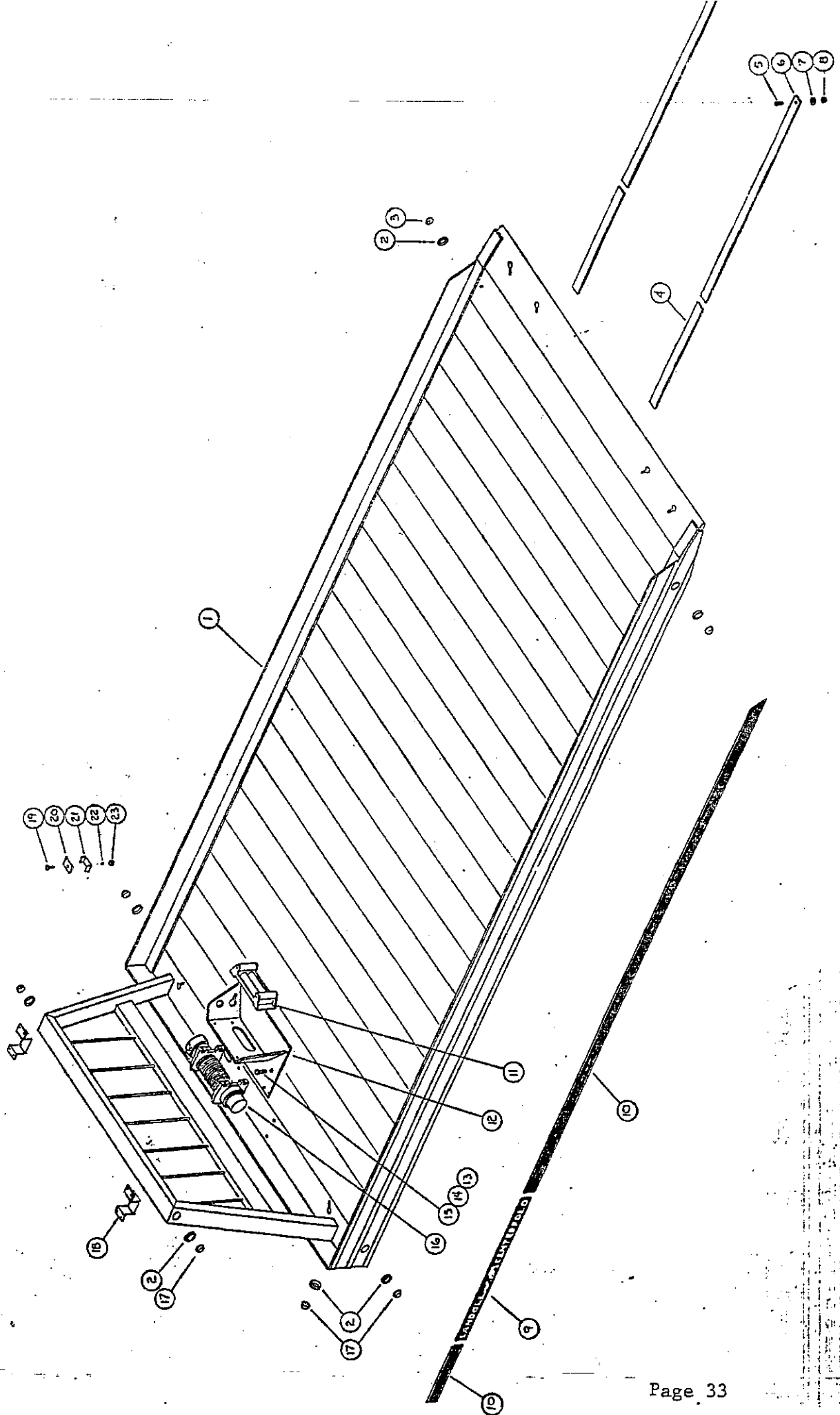
TOW BAR, TWO TON CENTERFOLD

<u>Item</u>	<u>Part Number</u>	<u>Description</u>	<u>Qty.</u>
1	1V0208	Power Beyond Remote	1
2	3/4 x 1/2 BUSH	BLK Pipe Bushing	1
3	2047-8-8S	Adapter	1
4	3-397-010023	1/2 Hose Assembly 172IN	1
5	3-397-010021	1/2 Hose Assembly 148IN	1
6	1-007-010013	1/2 FPT 3/4 MPT 90 Swivel	2
7	BA11AD00A0	Single Spool Valve	1
8	1-397-010061	3/8 Hose Assembly 46IN	2
9	2047-6-6S	INT P Swiv. 3/8 NPT	2
10	1-007-010014	3/8FPT 3/4ST 37 Flare EL	2



ALUMINUM BED STANDARD SIDE RAILS

<u>Item</u>	<u>Part Number</u>	<u>Description</u>	<u>Qty.</u>
1	3-080-010053	19FT Alum. Bed w/Side Rails	1
2	30401	2IN Grommet Mount Kit	8
3	30200R	2IN Sealed Clearance Red	2
4	RPRB3999x96	1/4x2 1/2x96 UHMW Polyethylene	2
5	3/8-16x1HHCS	Hex Cap Screw GR5	2
6	3-080-010033	Alum. Channel Bed Slide	2
7	3/8FW	Flat Washer ZP	2
8	3/8-16HFLN	Lock Nut	2
9	3-573-010063	Centerfold Decal	3
10	3-573-010066	Black Yellow Stripe 3IN	52 ft.
11	3-873-010057	Cable Guide Rollers	1
12	3-311-011913	Winch Mount Assy. Flat	1
13	5/8-11HFN	Nut ZP GR2 (Not Shown)	4
14	5/8SLW	Split Lock Washer ZP (Not Shown)	4
15	5/8-11x1-3/4CS	HHCS ZP GR5	4
16	3-873-010056	8000 LB Hydraulic Winch	1
17	30200Y	2IN Sealed Clearance Yellow	6
18	3-141-010023	Mtg. Plate Emergency Lights CF	2
19	3/8-16x1-3/4CS	Hex Cap Screw GR5	4
20	3-181-010007	Hose Clamp Top Plate	4
21	3-181-010008	Bottom Hose Clamp	4
22	3/8SLW	Split Lock Washer	4
23	3/8-16HFN	Hex Nut ZP GR2	4

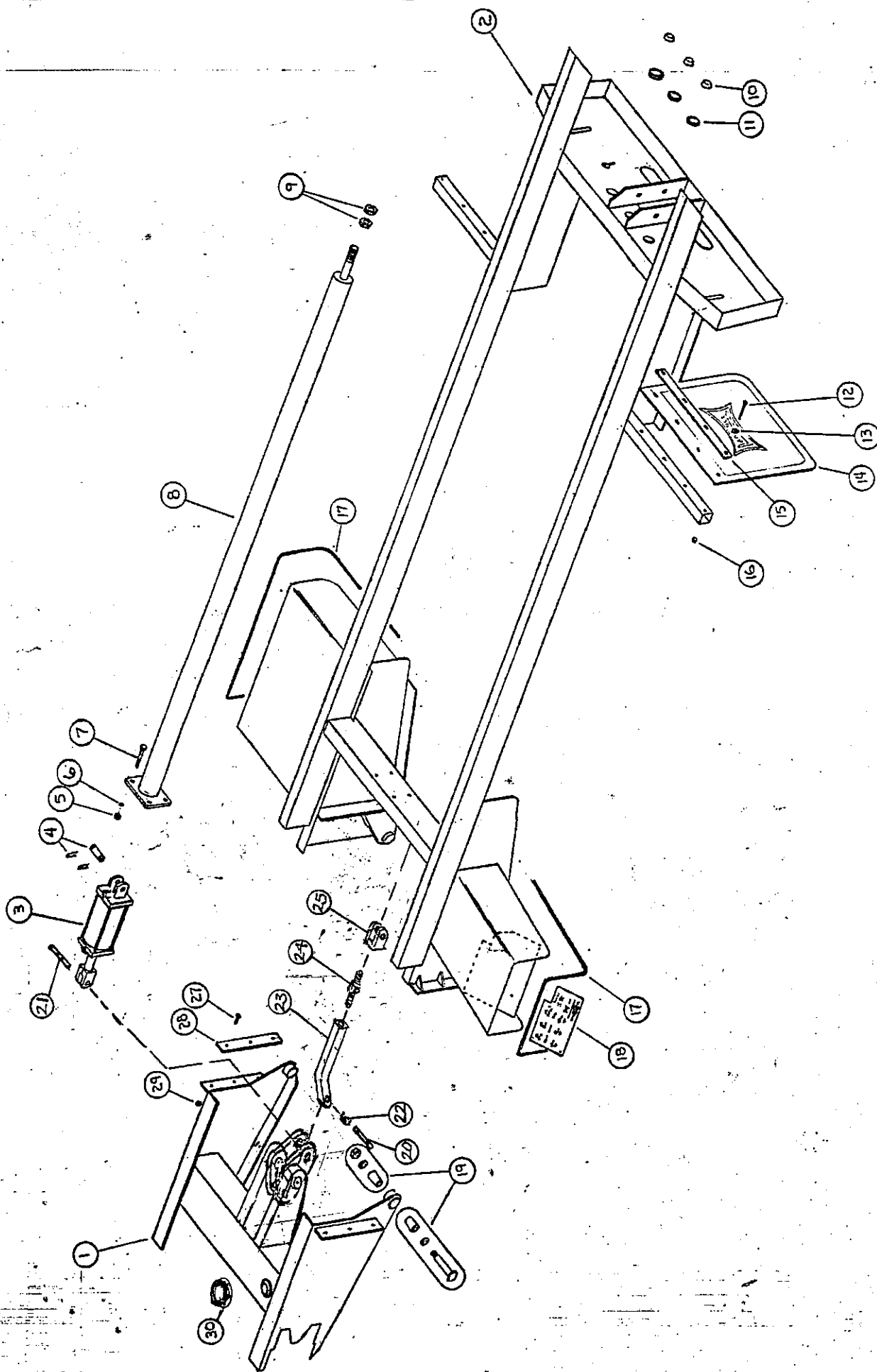


PARTS LIST FOR STEEL BED NOT COMPLETE AS OF 6/27/84.

STEEL BED DRAWING NOT COMPLETE AS OF 6/27/84.

FRAME KIT FOR TWO TON CENTERFOLD

<u>Item</u>	<u>Part Number</u>	<u>Description</u>	<u>Qty.</u>
1	3-311-012473	Two Ton Front Hinge Assy.	1
	3-311-012474	Two Ton Centerfold Assy.	1
3			
4	1-242-010048	4 x 10 Tie Rod Cylinder	1
5	5/8-11HFN	Cyl. Pins (See Cyl. Break Down)	
6	5/8SLW	Hex Nut ZP GR2	4
7	5/8-11x5-1/2	Split Lock Washer	4
8	3-242-010044	Hex Cap Screw GR2	4
9	1 1/2-12 JN	3 1/2 x 90 Hyd. Cyl.	1
10	30200R	Jam Nut ZP	3
11	30401	2IN Sealed Clearance Red	3
12	3/8-16x3HHCS	2IN Grommet Mount Kit	3
13	3/8FW	Hex Cap Screw GR5	8
14	3-485-010001	Flat Washer ZP	8
15	3-762-010017	Mud Flap 21IN	2
16	3/8-16HFLN	Clamp Mud Flap	2
17	1-822-010002	Lock Nut	8
18	3-573-010061	3/16 Trim	As Req.
19	3-762-010267	Operator Instruction Decal	1
20	3-311-012448	Pivot Bushing Assembly (1 Pair)	1
21	3-311-012449	Over - Center Lock Pin	1
22	3-150-010005	Cyl. Pivot Pin	1
23	3-311-012442	1 1/2 I.D. Bronze Sleeve Bearing	1
24	3-311-011791	Over-Center Lock Assembly	1
25	3-242-010051	Adjustment Rod	1
26	1-557-010014	1" Rod Cast Clevis	1
27	5/16-18x1 1/4	Hair Pin 1/4 Dia. (Not Shown)	4
28	3-146-010003	Hex Soc Flat Head Cap Screw	3
29	5/16-18HFN	Armorite Cushion Hinge	2
30	3-162-010001	Hex Nut ZP GR2	6
31	1-DSL LATCH	Filler-Breather-Strainer Assy.	1
32	BSL-6-4	Zinc Finish Paddle (Not Shown)	1
33	5010	Rivet (Not Shown)	4
		Zerk Fitting 1/4 SAE (Not Shown)	5

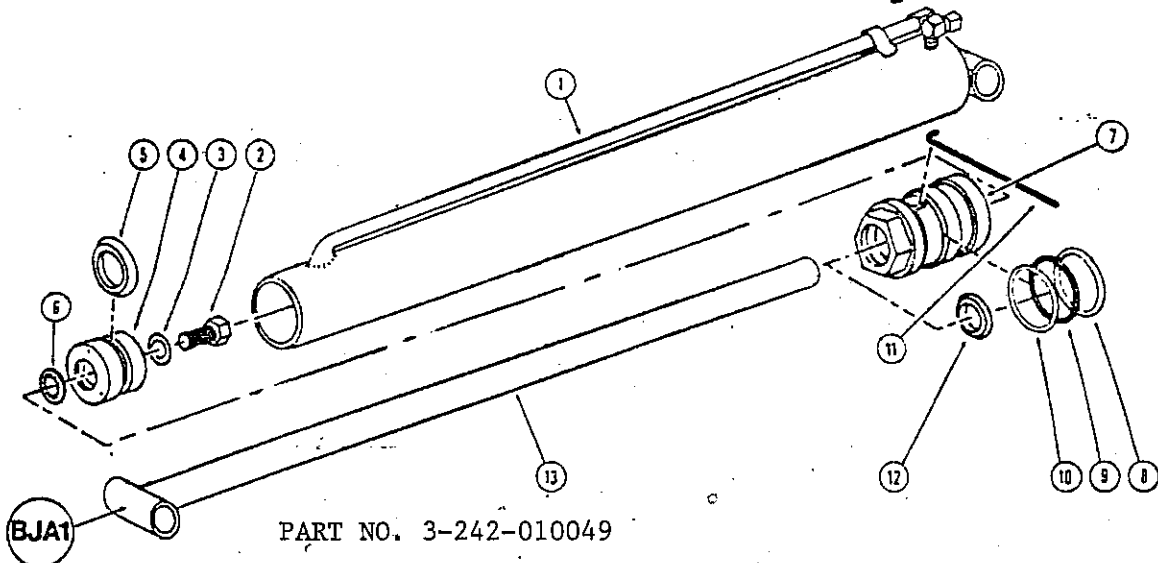


STANDARD TOWBAR W/ RUBBER RING

<u>Item</u>	<u>Part Number</u>	<u>Description</u>	<u>Qty.</u>
1	3-311-012475	Tow Bar Anchor Assembly 2 Ton	1
2	3-311-012450	Tow Bar Pin	3
3	1/4 x 2	Cotter Pin ZP	4
4	1/4-20HFLN	Hex Lock Nut GRB Cad w/Wax	2
5	3-272-010003	4 Pole Elect. FM Connector	1
6	1/4-20x1HHCS	Cap Screw ZP	2
7	1-557-010014	Hair Pin 1/4 Dia.	2
8	1-8x C 5	Hex Cap Screw GR5 ZP	1
9	1-8HFLN	Lock Nut Ding Type ZP	1
10	3-311-012464	Rubber Ring Tow Bar Weldment	1
11	3-573-010067	Tow Bar Operation Decal	1
12	3-311-012447	Outer Tube Tow Bar Weldment	1
13	BCY 225	2 1/2 x 32 Tow Bar Cylinder (See Below)	1
14	3-311-012446	Inner Tube Tow Bar Weldment HD	1

BCY225 2-1/2" x 32"

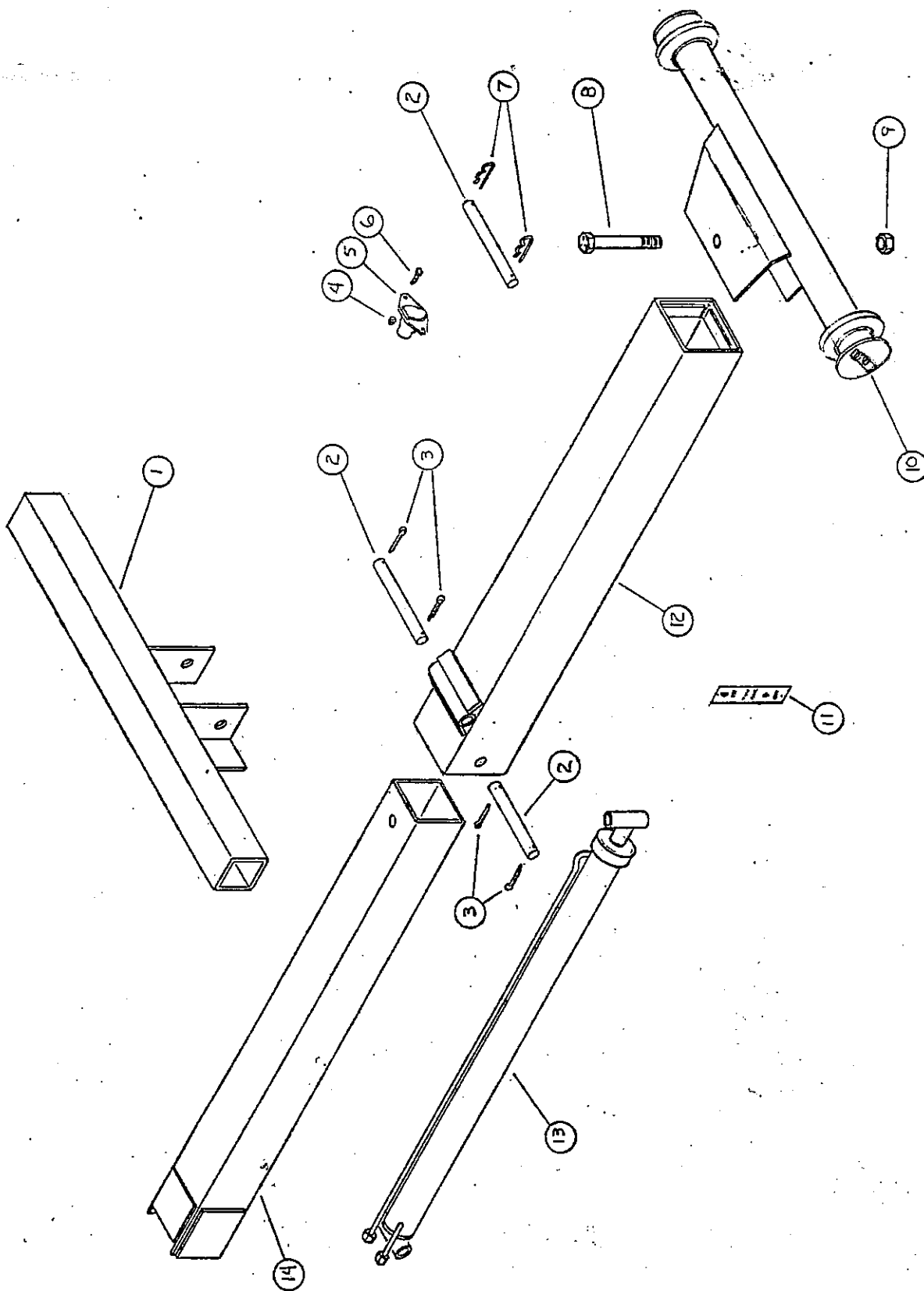
Cylinder



PART NO. 3-242-010049

<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>
1	BCY1076	Barrel Assembly	8 & 10	SCY1070	Back-up Ring
2	SCY1017	7/8" Capscrew	9	SCY1024	O'Ring
3	SCY1018	7/8" Dyna Seal	11	SCY1026	Lockwire
4	BCY224	Piston	12	SCY1006	Rod Seal
5	SCY1019	Piston Seal	13	BCY	Rod Assembly
6	SWS245	Internal Lockwasher	*	SCY222	Seal Kit
7	BCY223	Ram Head			

*NOTE: Seal kit part number LCY 10498 will work on new style cylinders having a split piston.



BRAKE LINE COMPONENTS

<u>Item</u>	<u>Part Number</u>	<u>Description</u>	<u>Qty.</u>
1	3-158-010009	1/4 Standard Nut	2
2	3-158-010006	Brake Hose 1/4 Tube	1



BRAKE LINE COMPONENTS

ADDITIONAL PARTS ADDED TO FRAME KIT FOR STEEL BED INSTALLATION NOT
COMPLETE AS OF 6/27/84.

ELECTRICAL FRAME

<u>Item</u>	<u>Part Number</u>	<u>Description</u>	<u>Qty.</u>
11	1-879-010005	14AWG Brown Wire	4.0 FT
12	1-879-010007	14AWG Yellow Wire	1.5 FT
13	1-879-010011	14AWG Black Wire	4.5 FT
14	1-879-010006	14AWG Green Wire	2.5 FT
15	30200R	2IN Sealed Clearance Red	3 EA

WIRING 4 POLE CONNECTOR FOR UNITS WITH TOWBAR

<u>Item</u>	<u>Part Number</u>	<u>Description</u>	<u>Qty.</u>
16	1-879-010005	14AWG Brown Wire	1.50 FT
17	1-879-010006	14AWG Green Wire	1.50 FT
18	1-879-010007	14AWG Yellow Wire	1.50 FT
19	1-879-010010	14AWG White Wire	1.50 FT
20	3-272-010003	4 Pole Elect. FM Connector	1 EA

BED CLEARANCE LIGHT WIRING
WITH BULKHEAD

<u>Item</u>	<u>Part Number</u>	<u>Description</u>	<u>Qty.</u>
21	1-879-010005	14AWG Brown Wire	4.5 FT
22	1-879-010010	14AWG White Wire	1.2 FT
23	30200R	2IN Sealed Clearance Red	2 EA
24	30200Y	2IN Sealed Clearance Yellow	6 EA

WITHOUT BULKHEAD

21	1-879-010005	14AWG Brown Wire	4.5 FT
23	30200R	2IN Sealed Clearance Red	2 EA
24	30200Y	2IN Sealed Clearance Yellow	4 EA

REAR WORK LIGHT WIRING

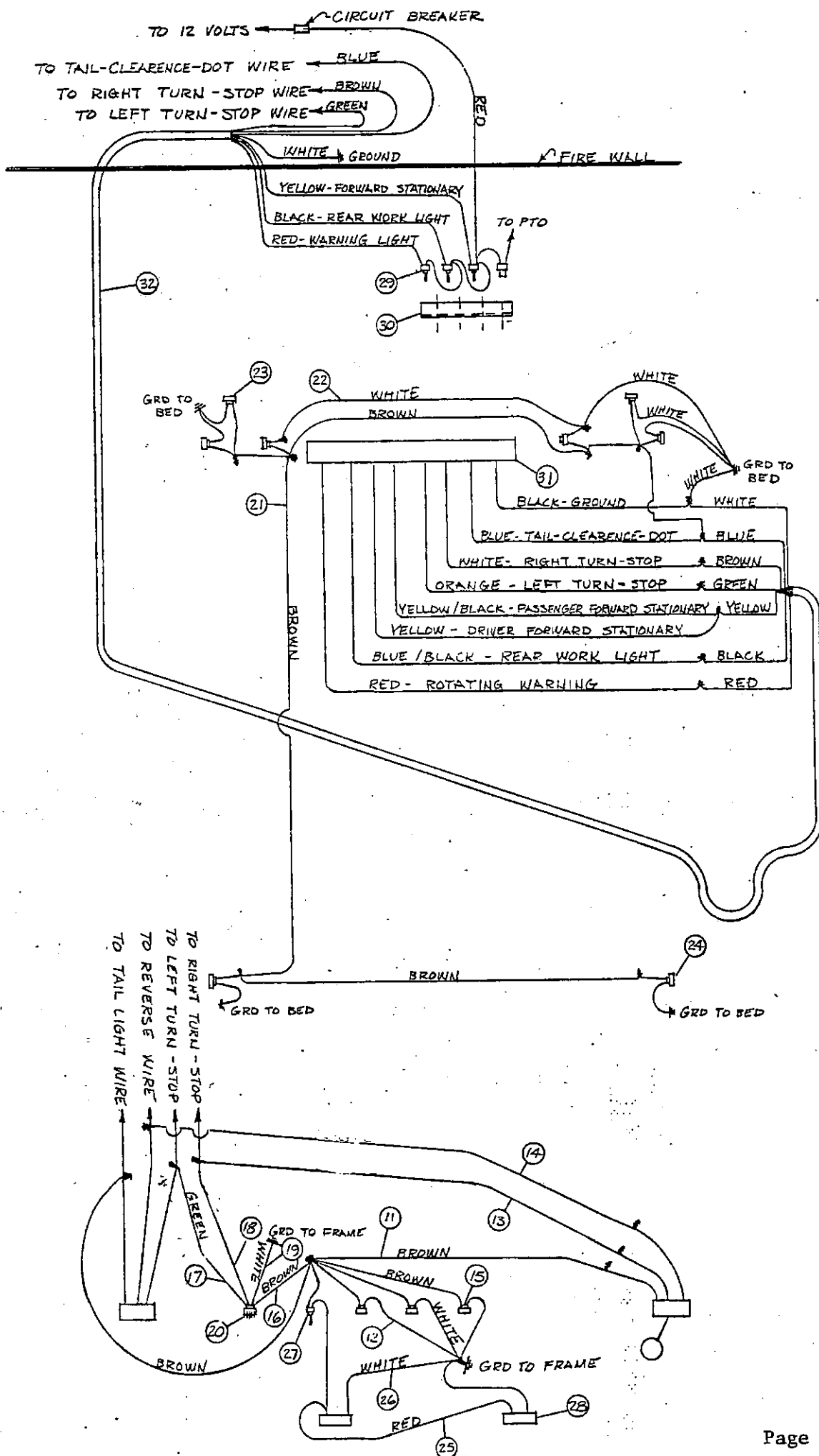
<u>Item</u>	<u>Part Number</u>	<u>Description</u>	<u>Qty.</u>
25	1-879-010004	14AWG Red Wire	2.50 FT
26	1-879-010010	14AWG White Wire	2.50 FT
27	3-272-010004	SPST Toggle Switch	1 EA
28	60004	3 x 7 Back-up Lamp w/Grommet	2 EA

WIRING BED WITH EMERGENCY LIGHT

<u>Item</u>	<u>Part Number</u>	<u>Description</u>	<u>Qty.</u>
29	3-272-010004	SPST Toggle Switch	3 EA
30	3-272-010005	Switch Plate Cab	1 EA
31	3-446-010001	CF Light Bar w/Hook-up Kit	1 EA
32	59A-7	Multi-Conductor Cable	40 FT

WIRING BED WITHOUT EMERGENCY LIGHT

30	3-272-010007	PTO Plate Cab	1 EA
32	14-3 S0	Three Conductor Wire	32 FT



INDEX

	PAGE
Bed Care and Maintenance	9
Bed Operation.	7
Center of Gravity.	5
Certification Label.	6
Cylinder (Hydraulic)	12
Inspection Sheet Final	1&2
Safety Suggestions	3
Service and Lubrication.	9
Tow Bar Operation.	8
Trouble Shooting Guide Hydraulic System.	14
Warranty	
Winch Operation.	8

SERVICE PARTS

Steel Bed.	34
Aluminum Bed Standard.	32
Brakes	40
Cylinders.	22
Frame Parts.	36
Hydraulic Frame.	28
Hydraulic Tow Bar.	30
Hydraulic Wet Kit.	26
Power Take Off	16
Pump	15
Single Spool Valve	21
Three Spool Valve.	20
Throttle Cable	40
Tow Bar.	38
Winch.	25
Winch Motor.	24
Wiring	40



**Our company
proudly displays the
FEMA Seal of Quality
on this equipment.**

**We were awarded this
registered trademark because:**

- **We provide complete operating instructions.**
- **We provide complete repair parts lists.**
- **We provide written warranty protection.**
- **We agree to provide ten year
parts availability.**

**Look for the Seal of Quality
when purchasing your next shortline equipment.**

**Landoll Corporation, whose policy is one of
continuous improvement, reserves the right to
make changes without obligation to modify
previously produced equipment.**

LANDOLL CORPORATION WARRANTY

THERE ARE NO WARRANTIES, EXPRESS OR IMPLIED, MADE BY EITHER THE DEALER OR THE MANUFACTURER ON NEW LANDOLL EQUIPMENT, EXCEPT THE MANUFACTURER'S WARRANTY AGAINST DEFECTS, MATERIAL AND WORKMANSHIP SET OUT BELOW:

NEW EQUIPMENT WARRANTY

LANDOLL CORPORATION WARRANTS EACH NEW PRODUCT MADE BY IT TO BE FREE FROM DEFECTS IN MATERIAL AND WORKMANSHIP FOR A PERIOD OF SIX (6) MONTHS, DATING FROM DELIVERY OF SAID PRODUCT TO THE INITIAL USER. ITS OBLIGATION AND LIABILITY UNDER THIS WARRANTY BEING LIMITED TO REPLACING FREE OF CHARGE AT ITS FACTORY AT MARYSVILLE, KANSAS, OR ANY SUCH OTHER POINT NEARER THE INITIAL USER AS MAY BE DESIGNATED BY IT, OF ALL PARTS PROVING DEFECTIVE UNDER NORMAL USE AND SERVICE. IF ANY MATERIAL IS FOUND TO BE DEFECTIVE WITHIN THE WARRANTY PERIOD SPECIFIED ABOVE, IMMEDIATE WRITTEN NOTIFICATION OF SAID DEFECTS MUST BE MADE TO THE DEALER FROM WHOM THE EQUIPMENT WAS PURCHASED OR TO THE COMPANY. THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, AND THE OBLIGATION AND LIABILITY OF LANDOLL CORPORATION UNDER THIS WARRANTY SHALL NOT INCLUDE ANY TRANSPORTATION, INSTALLATION, LABOR EXPENSES, DOWN TIME OR DIRECT OR INDIRECT OR CONSEQUENT DAMAGE OR DELAY RESULTING FROM SAID DEFECT. ANY IMPROPER USE OR APPLICATION OF THE PRODUCT OR SUBSTITUTION UPON IT OF PARTS NOT APPROVED BY IT SHALL VOID THIS WARRANTY. THIS WARRANTY COVERS ONLY THE MANUFACTURE BY LANDOLL CORPORATION. THE PRODUCTS OF ANY OTHER MANUFACTURERS ARE COVERED ONLY BY SUCH WARRANTY AS IS MADE BY THEIR MANUFACTURERS.

THIS WARRANTY IS EXPRESSLY IN LIEU OF ANY OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING ANY IMPLIED WARRANTY OR MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, AND OF ANY OTHER OBLIGATIONS OR LIABILITY ON THE PART OF THE MANUFACTURER AND LANDOLL CORPORATION. NEITHER ASSUMES NOR AUTHORIZES ANY OTHER PERSON TO ASSUME FOR IT ANY OTHER LIABILITY IN CONNECTION WITH SUCH EQUIPMENT.

