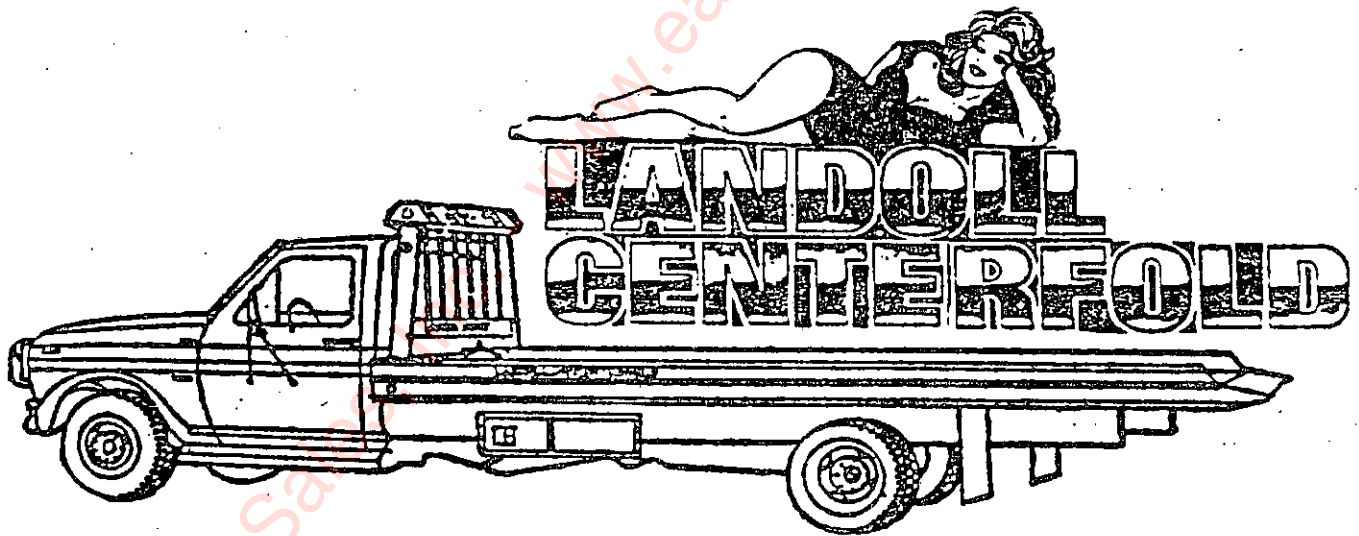




# OWNER'S MANUAL

## ONE TON CENTERFOLD



LANDOLL CORPORATION

1700 MAY STREET  
MARYSVILLE, KANSAS 66508

M.C.

F-222

# LANDOLL® CENTERFOLD



## CONTENTS

	Page
Final Inspection .....	
Safety Information.....	
Certification.....	
Operation.....	
Maintenance.....	
Lubrication.....	
Parts Lists.....	
Index.....	
Warranty.....	

Eastern Wrecker Sales, Inc. - www.easternwrecker.com - 919-553-4038

# FOREWORD

THIS MANUAL PROVIDES SUGGESTED OPERATING TECHNIQUES TO HELP YOU OBTAIN EFFICIENT AND DEPENDABLE USE FROM YOUR NEW EQUIPMENT. THIS MANUAL ALSO CONTAINS GENERAL INFORMATION, SPECIFICATIONS, SAFETY INFORMATION, MAINTENANCE, AND ASSEMBLY INFORMATION.

READ THIS MANUAL CAREFULLY BEFORE OPERATING THE EQUIPMENT, KEEP IT HANDY FOR FUTURE REFERENCE. IF, AT ANY TIME, YOU HAVE ANY QUESTIONS, REMEMBER YOUR EQUIPMENT DEALER IS BEST QUALIFIED TO HELP YOU. HE HAS TRAINED SERVICE TECHNICIANS AND REPLACEMENT PARTS TO KEEP YOUR EQUIPMENT IN TOP OPERATING CONDITION AT ALL TIMES.

GENERAL TORQUE SPECIFICATION TABLE (Revised 2-74)													
USE THE FOLLOWING TORQUES WHEN SPECIAL TORQUES ARE NOT GIVEN													
NOTE: These values apply to fasteners as received from supplier, dry, or when lubricated with normal engine oil. They do not apply if special greases or moly-disulfide greases or other extreme pressure lubricants are used. This applies to both LNF and LNC threads.													
SAE Grade Size	2				5				8				
Don't load combinations unless marked as per grade													
NOTE: Manufacturing tolerances may vary	Torque				Torque				Torque				
Size Size	Foot Pounds		Newton-Meters		Foot Pounds		Newton-Meters		Foot Pounds		Newton-Meters		
Inches	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	
1/4	8 25	8	8	8 13	9	11	12 2	14 9	12	18	16 3	20 3	
5/16	7 86	10	12	13 6	16 3	17	20 8	23 1	27 6	24	29	32 8	39 3
3/8	8 53	20	23	27 1	31 3	35	42	47 8	57 0	48	54	61 0	73 2
7/16	11 11	30	38	40 7	47 4	54	64	73 2	88 8	70	84	94 9	113 9
1/2	42 70	45	62	61 0	70 8	80	96	108 0	130 2	110	132	149 2	178 0
5/8	14 20	65	78	88 1	101 8	110	132	149 2	178 0	160	192	217 0	260 4
3/4	15 88	95	108	121 7	142 3	150	180	203 4	244 1	220	264	296 3	358 0
7/8	19 06	100	108	203 3	280 7	270	324	386 1	430 3	300	458	515 3	618 3
1	22 23	180	200	218 0	271 0	400	480	542 4	660 8	400	720	813 8	978 3
1 1/8	28 40	280	300	328 0	408 8	500	600	786 0	943 0	600	1080	1220 4	1484 8
1 1/4	31 78					800	880	1084 0	1193 2	1280	1440	1728 7	1962 0
1 3/8	34 93					1120	1240	1618 7	1881 4	1820	2000	2487 9	2712 0
1 1/2	38 10					1480	1680	1978 0	2278 1	2380	2720	3227 3	3680 3
1 3/4						1940	2100	2630 8	2982 2	3160	3560	4288 0	4827 4

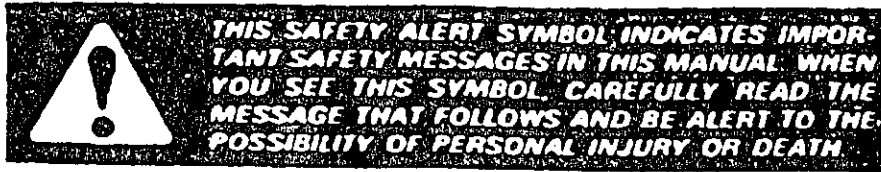
\* These nuts must be used with Grade 8 bolts


## CENTER OF GRAVITY


A Landoll Centerfold, with a 17 foot aluminum bed on an 84 cab to axle chassis cab stretched to 114 cab to axle, has a center of gravity of between 60 to 70 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.

# SAFETY INSTRUCTIONS




 **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 or 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.

# SAFETY INSTRUCTIONS

## CONTINUED



### WARNING

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



### CAUTION

Hold handle down until the hydraulic system by-passes fluid to assure proper engagement of the hydromechanical lock.



### 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.

### IMPORTANT

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

### NOTES

Empty box for notes.

www.easternwrecker.com - 919-553-4038

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,  
(13) \_\_\_\_\_ rims, @ (11) psi cold (12)

GAWR REAR (13) \_\_\_\_\_ with  
(14) \_\_\_\_\_ tires,  
(15) \_\_\_\_\_ rims, @ (16) psi cold (17)

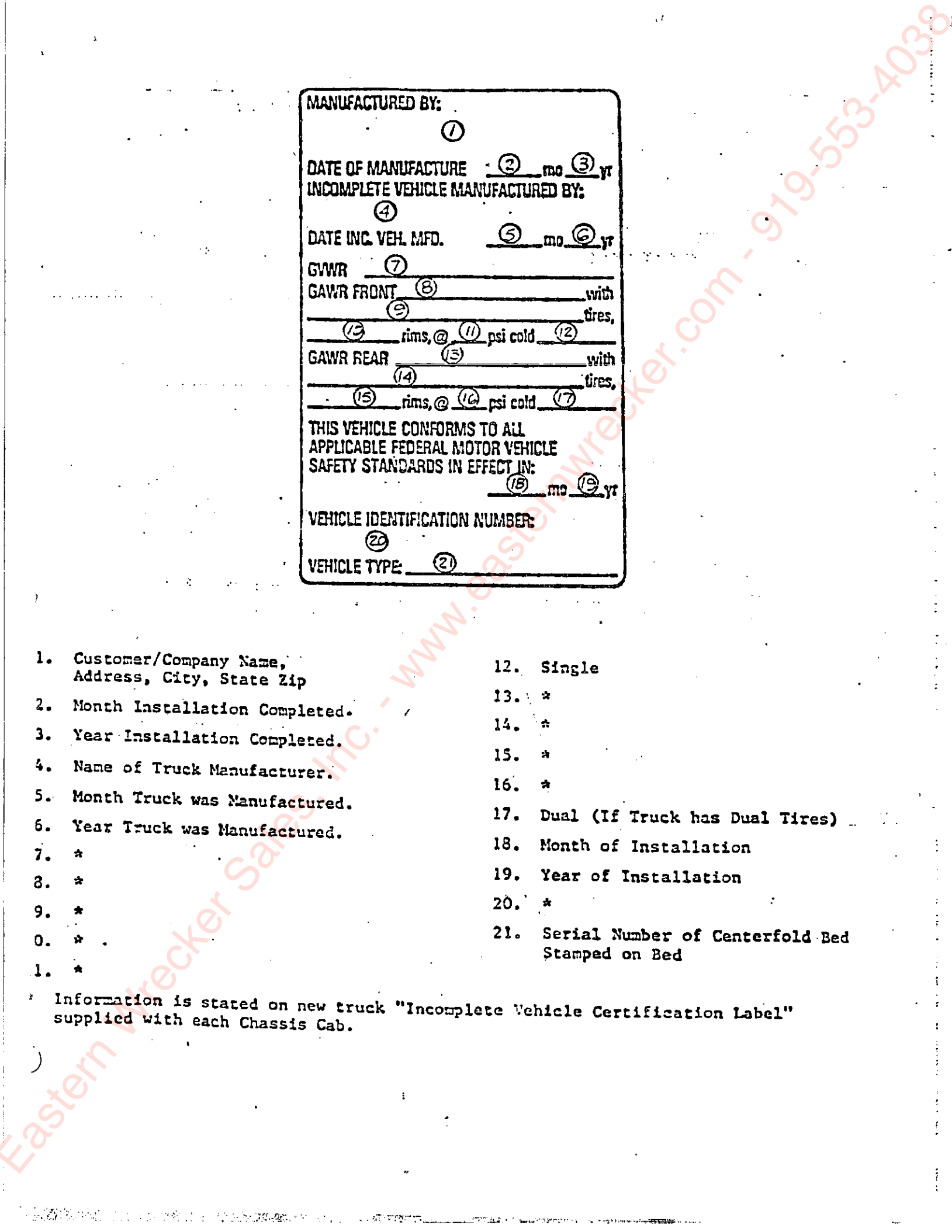
THIS VEHICLE CONFORMS TO ALL  
APPLICABLE FEDERAL MOTOR VEHICLE  
SAFETY STANDARDS IN EFFECT IN:  
(18) mo (19) yr

VEHICLE IDENTIFICATION NUMBER:  
(20)

VEHICLE TYPE (21)

- |   |   |
|---|---|
| 1. Customer/Company Name,<br>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<br>Stamped on Bed |
| 11. *   |   |

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



# OPERATION OF THE LANDOLL CENTERFOLD

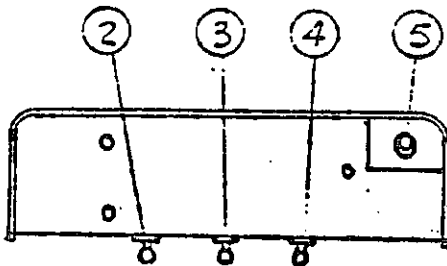
## CONTROLS

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.

## 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. **DO NOT** exceed the load limit of 1500 pounds on the one ton centerfold tow bar.

- 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							REC. LUB.	
		FIRST 1,000 MILES	DAILY	WEEKLY	30 DAYS	90 DAYS	180 DAYS	YEARLY		LOCATION
BED SLIDES	I					I			1	
TIRES	I		V	I					2	
LIGHTS	I		V						3	
HYDRAULIC OIL	I				I				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

**DISASSEMBLY AND REASSEMBLY INSTRUCTIONS  
SPIN-IN RING RETAINER**

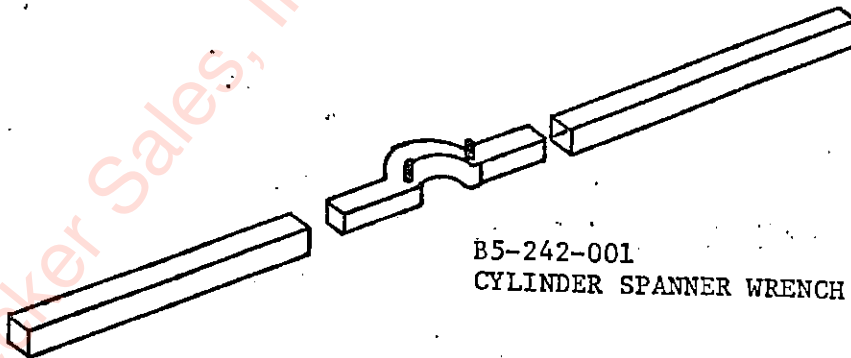
With the cylinder removed from the machine, retracted, and drained of oil, proceed as follows:

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.

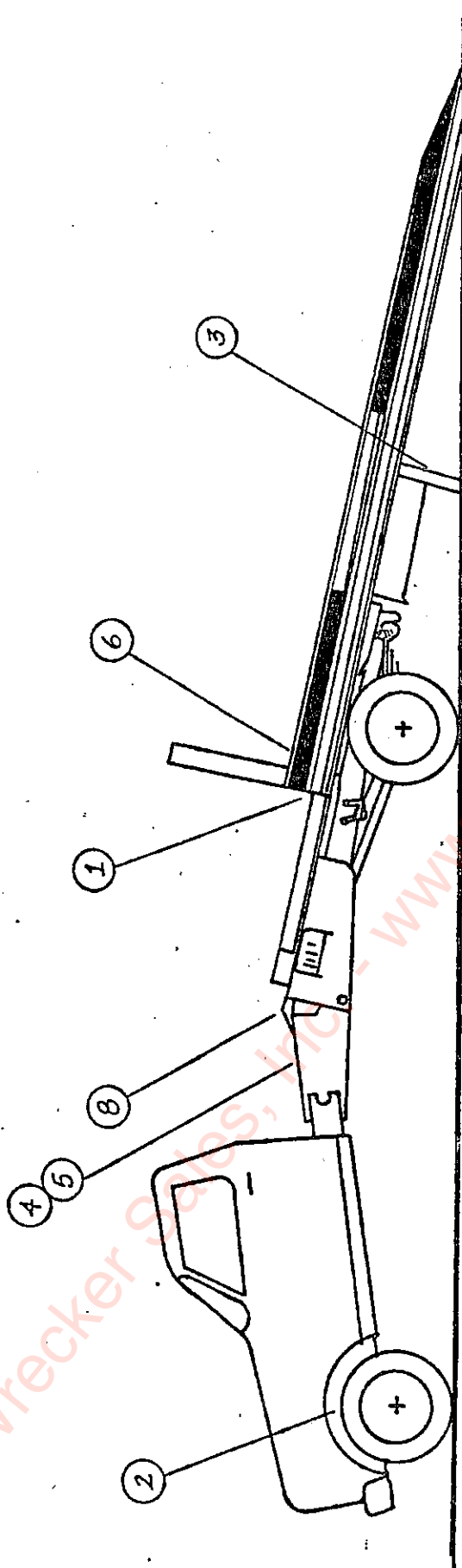
Before reassembly check that new seals have been installed and all internal parts are free of visible contamination. Smear a heavy grease on piston and gland O.D. seals for easier assembly.

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



RECOMMENDED LUBRICANTS

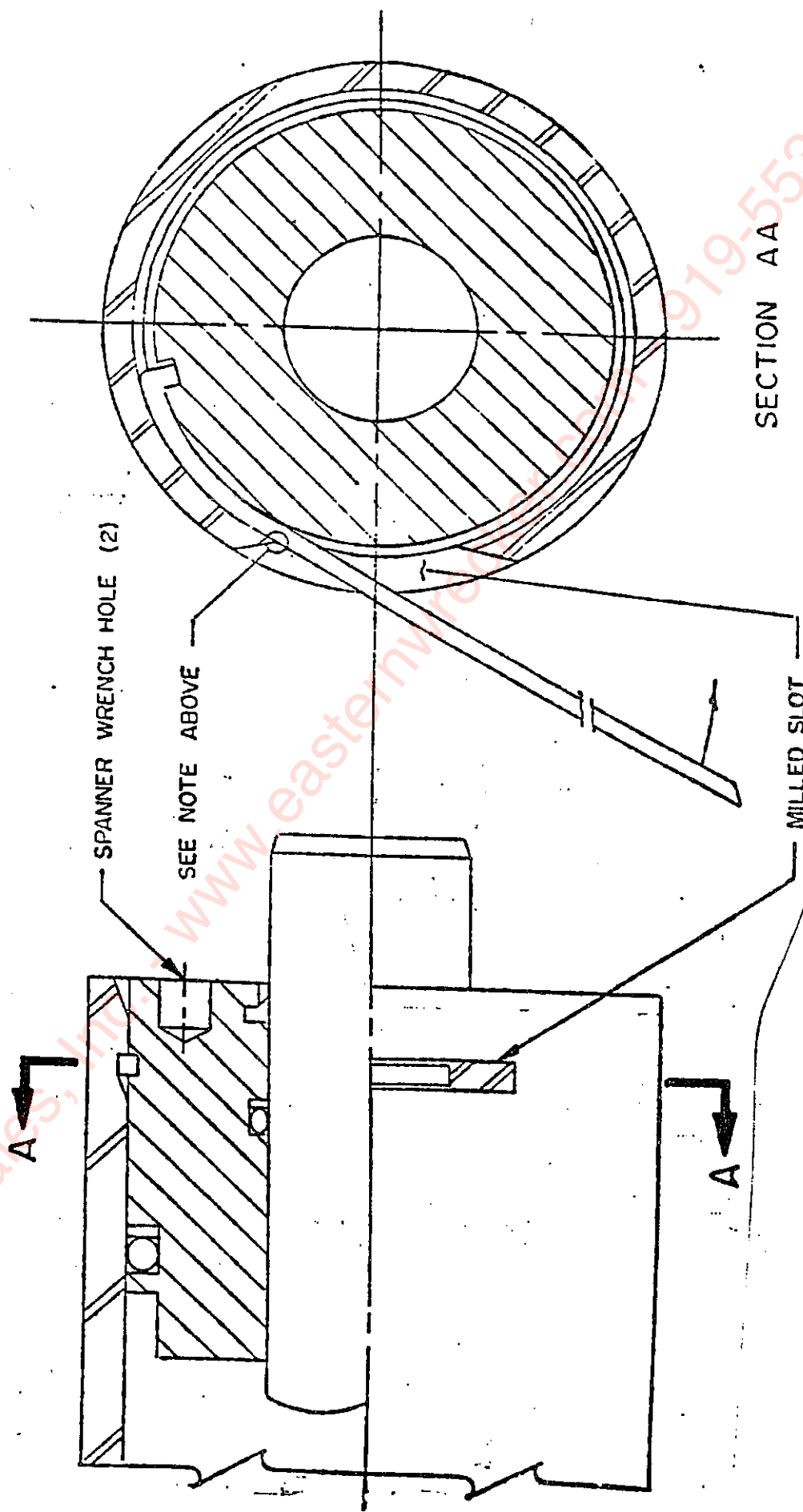
SYSTEM APPLICATION	SEASON	AMOCO	EXXON	PHILLIPS	TEXACO
1	Summer	Amoco-All-Weather #03277	Exxon HDX Plus 10W	Mangus Oil 315	Rando HD-AZ
	Winter	Amoco-All-Weather #03277	Exxon HDX Plus 10W	Mangus Oil 315	Rando HD-AZ
2	Summer	Amoco-Lit-Multi-Purpose Grease	Ronex Multi-Purpose	Phil Lub M.W. Grease	Marfax All Purpose
	Winter	Amoco-Lit-Multi-Purpose Grease	Ronex Multi-Purpose	Phil Lub M.W. Grease	Marfax All Purpose

Eastern Wrecker Sales, Inc. www.easternwrecker.com 919-553-4038

DISASSEMBLY 8 REASSEMBLY DIAGRAM

SPIN-IN RING RETAINER

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



Eastern Wrecher Sales, Inc. 919-553-4038

# 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 not 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.

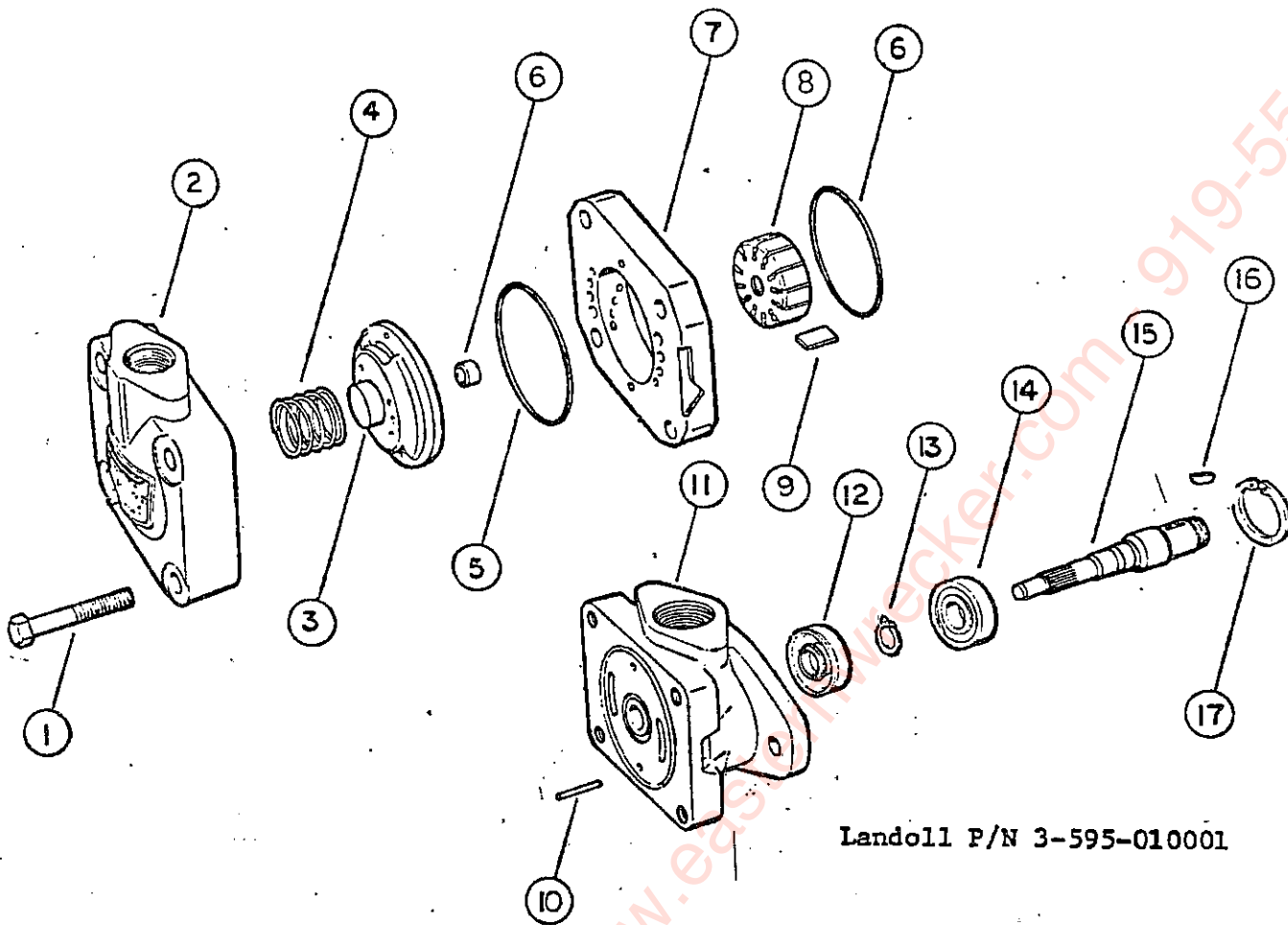
#### 12. CYLINDER LEAKS

- 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.

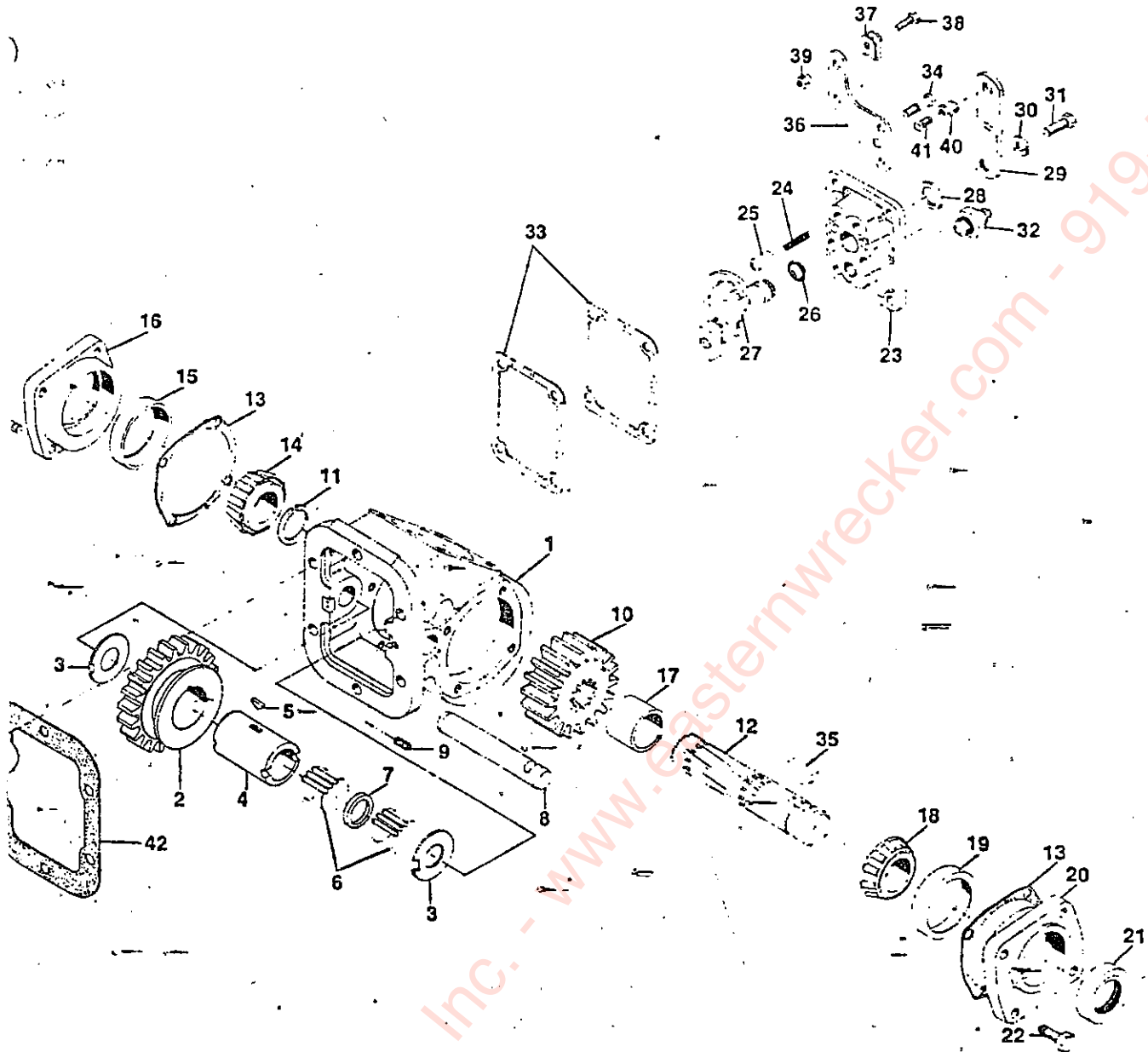
VICKER'S VANE PUMP



Landoll P/N 3-595-010001

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	1
7	331807	Ring	2
8	358334	Rotor	1
9	923479	Vane kit (12 vanes)	1
10	9603	Pin	1
11	280689	Body	2
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	1
	923487	includes Items 6 and 12.	
		Cartridge kit	
		Includes Items 6, 7, 8 and 9.	

Eastern Wrecker, Inc. - www.easternwrecker.com 919-553-4038



Item	Part Number	Description	Quantity
1	{ 1-P-195 1-P-196	HOUSING—Standard Mount .....	1
		HOUSING—Deep Mount .....	1
2	See Chart Pg. 10 328889X	SLIDING GEAR, Input .....	1
		NEEDLE BEARING & IDLER SHAFT SERVICE KIT (contains Items 3-9) .....	1
3	31-P-78	THRUST WASHER (1 3/4" Outside Diameter) .....	1
4	6-P-14	BEARING SLEEVE .....	2
5	378210	HI-PRO KEY .....	1
	328297-10X	NEEDLE BEARING REPLACEMENT KIT (contains Item 6) .....	1
6	379114	NEEDLE BEARING (two sets, 15 per set) .....	30
7	14-P-63	NEEDLE BEARING SPACER (.225" wide) .....	1
8	9-P-60	IDLER SHAFT .....	1
9	{ 378452-7 378452-4	SET SCREW—For Standard Mount (1/4" - 20 x 1/2") .....	1
		SET SCREW—For Deep Mount (1/4" - 20 x 5/16") .....	1
10	See Chart Pg. 10	GEAR, Output .....	1
11	378391	LOCK RING .....	1
12	3-P-202	DRIVE SHAFT, Output (1 1/4" Round) .....	1
13	{ 22-P-24-1 22-P-24-2	BEARING CAP GASKET (.010") .....	1
		BEARING CAP GASKET (.020") .....	A.R.

R.-As Required



410 SERIES  
WIRE CONTROL



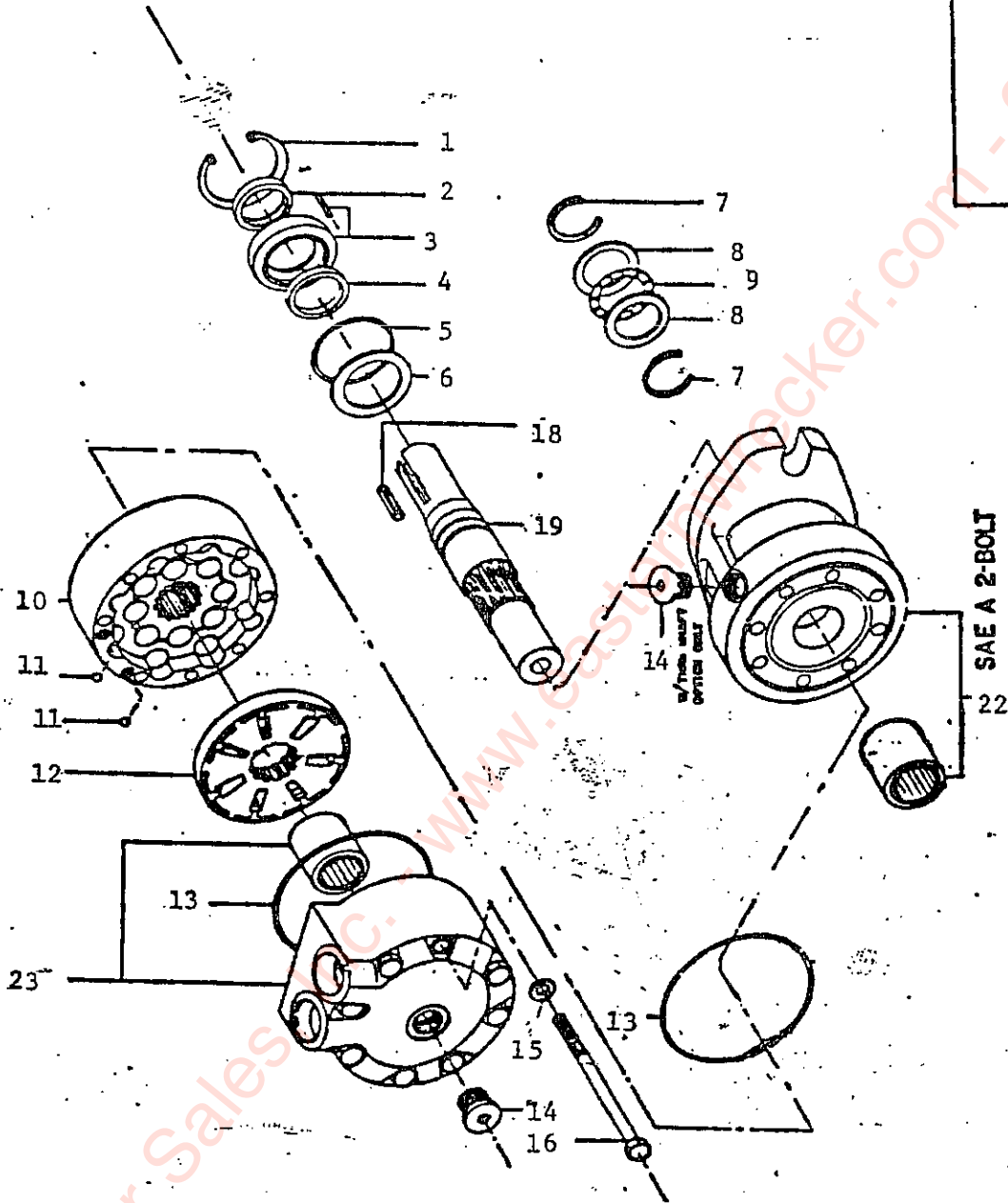
Item	Part Number	Description	Quantity
14	550532	BEARING CONE, Closed End .....	1
	328274X	BEARING CAP ASSEMBLY, Closed End (contains Items 15-16).....	1
15	550221	BEARING CUP, Closed End.....	1
16	21-P-131	BEARING CAP, Closed End.....	N.S.S.
17	4-P-63	DRIVE SHAFT SPACER.....	1
18	550397	BEARING CONE, Output .....	1
	328273X	BEARING CAP ASSEMBLY, Output (contains Items 19-20) .....	1
19	550221	BEARING CUP, Output .....	1
20	21-P-130	BEARING CAP, Output .....	N.S.S.
21	28-P-52	OIL SEAL, Output .....	1
22	378430-10	SCREW, hex head (Eslock 5/16" - 18 x 1") .....	8
	328818-1X	WIRE SHIFT COVER ASSEMBLY, Assembly 3 & 6 (contains Items 23-32).....	1
	328818-2X	WIRE SHIFT COVER ASSEMBLY, Assembly 4 & 5 (contains Items 23-32).....	1
23	34-P-74	SHIFTER COVER.....	1
24	37-P-19	SHIFTER SPRING .....	1
25	63-P-16	POPPET .....	1
26	28-P-49	O-RING (3/4" Outside Diameter).....	1
27	{ 328817-1X	POST & PLATE ASSEMBLY (Assembly 3 & 6) .....	1
	{ 328817-2X	POST & PLATE ASSEMBLY (Assembly 4 & 5) .....	1
28	378004	FLAT WASHER (1" Outside Diameter) .....	1
29	51-P-22	SHIFTER LEVER .....	1
30	378003	LOCK WASHER (5/16") .....	1
31	500409-6	SCREW, hex head (5/16" - 24 x 5/8").....	1
32	378969	INDICATOR SWITCH.....	1
33	35-P-8	SHIFTER COVER GASKET (.020") .....	2
34	378430-10	SCREW, hex head (Eslock 5/16" - 18 x 1") .....	4
		<b>LOOSE PARTS</b>	
35	500007-29	WOODRUFF KEY.....	1
N.S.	328346-10X	WIRE CONTROL CABLE ASSEMBLY (10X = 10 Foot Cable) .....	1
	328380X	WIRE CONTROL MOUNTING PARTS (contains Items 36-41) .....	1
36	50-P-17	BRACKET.....	1
37	50-P-19	SWIVEL BRACKET .....	1
38	500396-8	SCREW, hex head (1/4" - 20 x 3/4") .....	1
39	378326	NUT, hex (1/4" - 20) .....	1
40	378019	PIVOT PIN .....	1
41	500568-4	SET SCREW (1/4" - 20 x 1/2") .....	1
42	{ 35-P-9-1	GASKET, housing (.010") .....	A.R.
	{ 35-P-9-2	GASKET, housing (.020") .....	A.R.
		<b>PTO MOUNTING STUD KIT (See P400-A For Optional Kits)</b>	
N.S.	328170-76X	For Standard Mount .....	1
N.S.	328170-77X	For Deep Mount .....	1
		<b>GASKET &amp; SEAL KIT</b>	
N.S.	328356-13X	Must be Ordered Separate (contains 4 pieces Item 13; 2 pieces Item 33; 1 piece each Item 11, 21, 26 & 42).....	1

N.S.-Not shown  
A.R.-As Required  
N.S.S.-Not Sold Separately

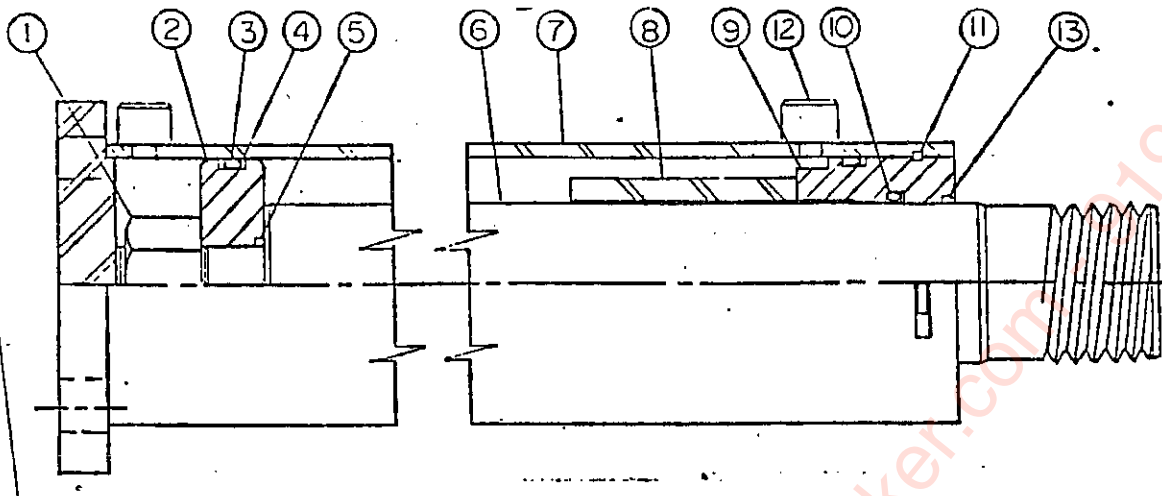
Winch HY-246 Motor

Landoll P/N 3-481-010002  
HPI Nichols P/N 100-1-ASO

100 SERIES MOTORS  
EXPLODED VIEW



www.easternwrecker.com 800-553-4038

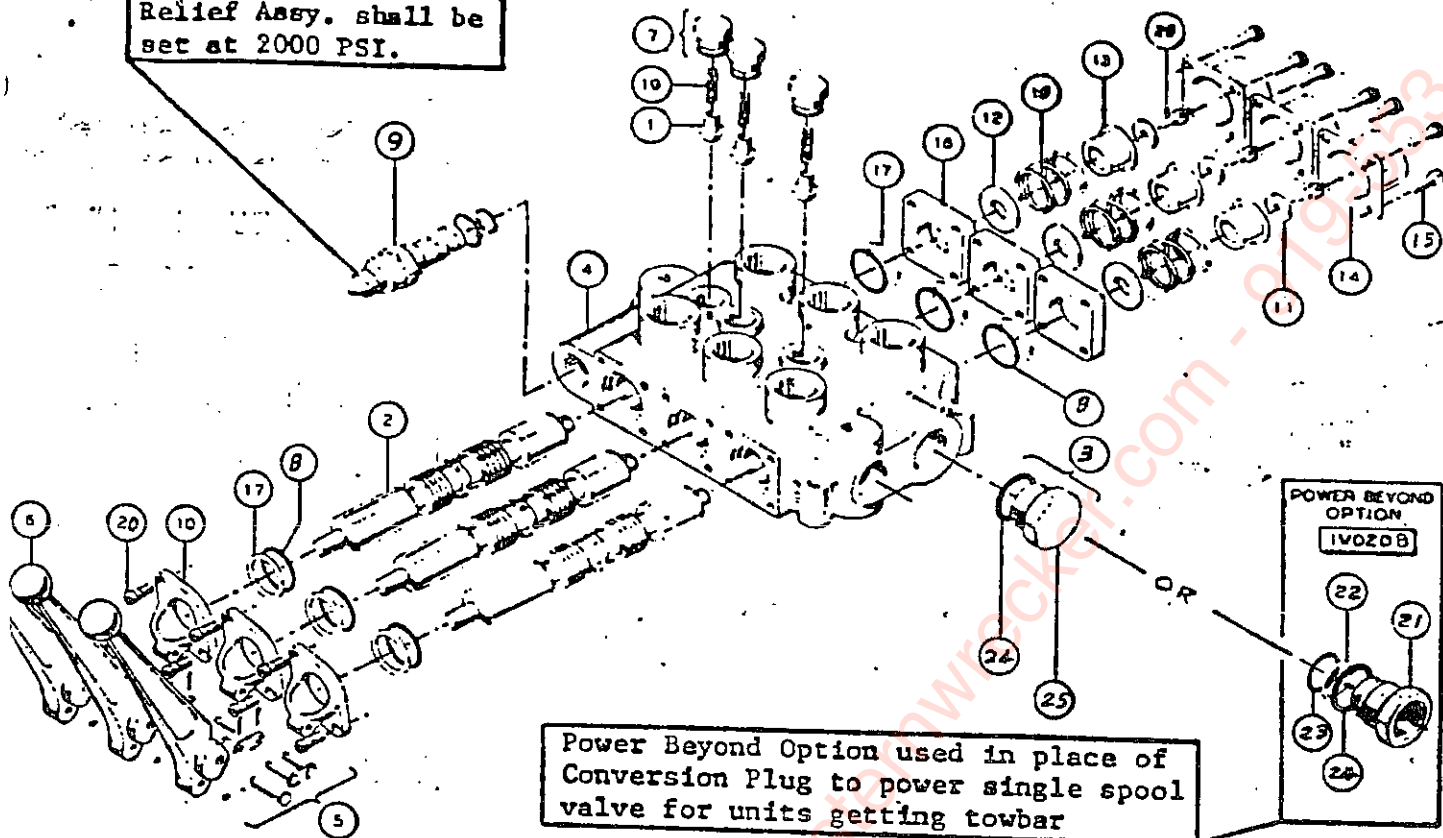


FOR: 3 1/2 x 90 BED CYLINDER  
 LANDOIL PART NUMBER 3-242-010044

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)

MODEL BA—three spool  
BA3111AAAG3ECO

Relief Assy. shall be set at 2000 PSI.



Power Beyond Option used in place of Conversion Plug to power single spool valve for units getting towbar

LANDOLL P/N 3-846-010007

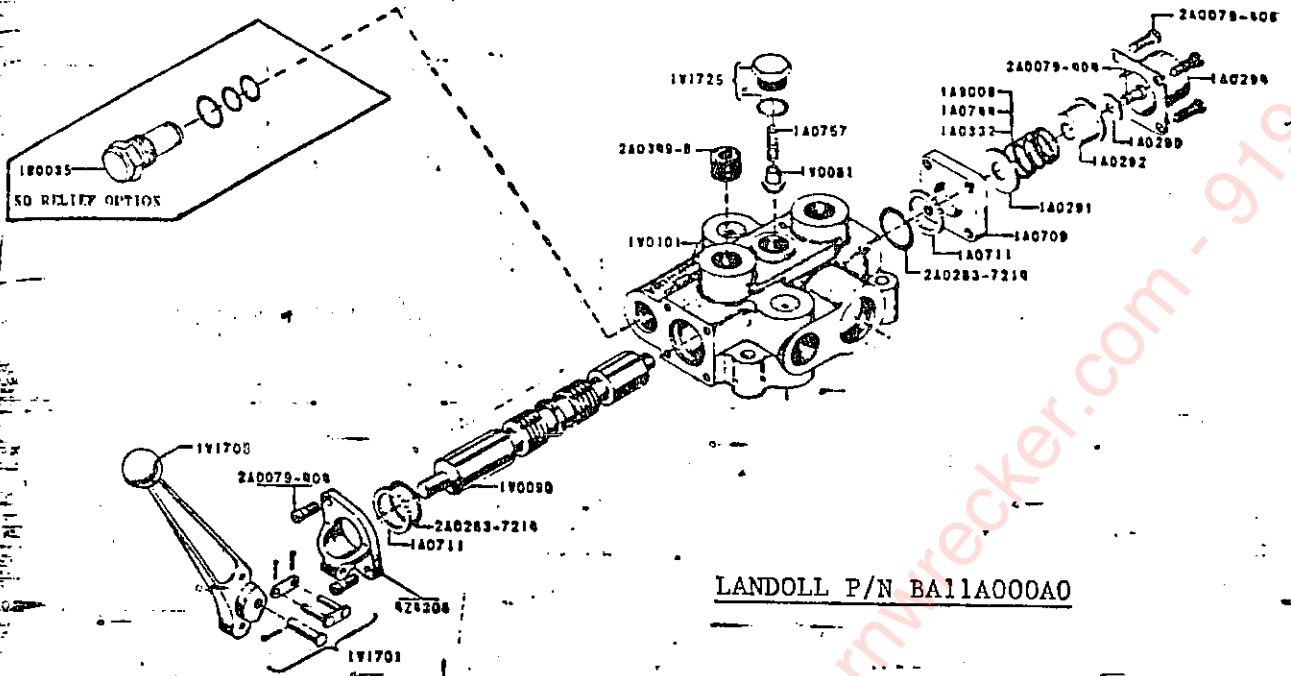
THREE SPOOL VALVE

Item	Part No.	Des.	Qty.
1	1V0081	Load Check Poppet	
2	1V0090	4-Way Spool	3
3	2A0354-121	Conversion Plug Assembly	3
4	1V0351	Valve Housing	1
5	1V1701	Pin Kit	1
6	1V1703	Handle	3
7	1V1725	Load Check Plug	3
8	2A0283-7214	Spool Seal	3
9	1R0017	Relief Assy. (1500-3000)	6
10	4Z4306	Handle Bracket	1
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	3
16	1A0709	End Spacer	12
17	1A0711	O-Ring Spool Washer	3
18	1A0744	Centering Spring (std.)	6
19	1A0757	Load Check Spring	3
20	2A0079	Cap Screw	3
21	1V0075	Power Beyond Sleeve	9
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

B111A000A0



LANDOLL P/N B111A000A0

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

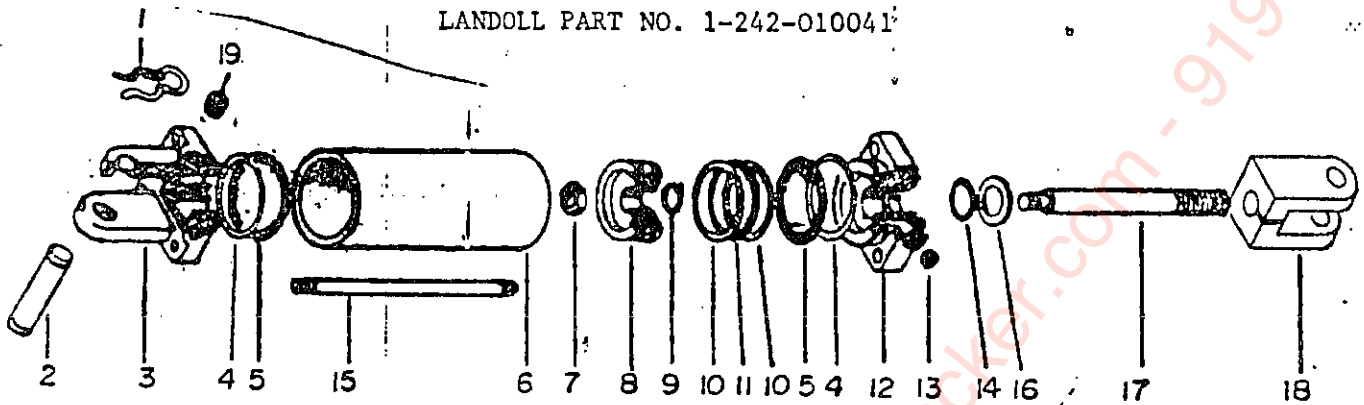
## PARTS LIST

PART NO.	DESCRIPTION	QU. REQ'D. (1-Spool)
1V0081	Load Check Poppet	
1V0090	4-Way Spool	
1V0098	3-Way Spool	
1V0101	Valve Housing (1 Spool)	
1V0125	Valve Housing (2 Spool)	
1V0351	Valve Housing (3 Spool)	
1V1701	Pin Kit	
1V1703	Handle	
1V1725	Load Check Plug Assy.	
180018	Relief Assy., Ad. (500-1500) Std.	
424306	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	
2A0079-004	Machine Screw	
2A0079-006	Machine Screw	
2A0283-7214	Spool Seal	
— SPECIAL PARTS FOR NO RELIEF —		
180035	Relief Plug Assy.	

\* 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.

**CROSS** MANUFACTURING, INC. LEWIS, KANSAS 67582 / 316 924-5525

TILT CYLINDER  
 LANDOLL PART NO. 1-242-010041



4 x 8 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	051900008
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	170301133
16	Wiper Seal	1	250001222
17	Piston Rod	1	010800005
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	1-242-010004

RAMSEY HYDRAULIC WORM WINCH

PARTS LIST FOR HY-246 SPEC. FOR LANDOLL

M NO.	QTY.	PART NO.	DESCRIPTION
1	1	276028	SHIFTER ASS'Y
2	1	300039	ADAPTER
3	1	316083	BEARING CAP
4	1	324137	JAW CLUTCH
5	1	328105	COVER
6	1	332007	DRUM-"Y"
7	1	334005	GEAR R.H. 46:1
8	1	336010	HANDLE
9	1	338208	HOUSING-CLUTCH
10	1	338237	HOUSING-GEAR
11	1	340001	HUB-GEAR
12	1	342029	KEY
13	2	342075	KEY
14	1	357443	SHAFT-DRUM-"Y"
15	1	364019	SHIP-STRAP
16	1	368017	WORM R.H. 46:1
17	2	402002	BEARING-BALL
18	4	412003	BUSHING
19	1	412045	BUSHING
20	1	413013	COVER-HYD. ADAPTER
21	8	414038	CAPSCREW 1/4-20NCx3/4 LG. HX.HD. GR.5
22	4	414045	CAPSCREW 1/4-20NCx7/8 LG. HX.HD. GR.5
23	6	414110	CAPSCREW 5/16-18NCx3/4 LG. HX.HD. GR.8
24	2	414232	CAPSCREW 3/8-16NCx3/4 LG. HX.HD. GR.8
25	2	414521	CAPSCREW 1/2-13NCx1 LG. HX.HD.
26	4	414842	CAPSCREW 1/4-20NCx1-3/4 LG. SOC.HD.
27	1	416030	SETSCREW 1/4-20NCx3/8 SOC.HD.LESS
28	1	416057	SETSCREW 3/8-16NCx3/8 SOC.HD.LESS
29	1	431007	COUPLING
30	2	438014	DISC-BRAKE
31	1	442001	GASKET
32	2	442002	GASKET
33	2	450006	KEY-BARTH
34	1	456001	FITTING-LUB
35	1	456008	FITTING-RELIEF
36	1	468002	REDUCER
37	2	468011	PIPE PLUG
38	2	470033	SPIROL PIN
39	1	472012	PLUG-RUBBER
40	1	472013	PLASTIC PLUG
41	1	486009	OIL SEAL
42	1	486017	OIL SEAL
43	2	494002	SPRING
44	1	494053	SPRING
45	1	518014	THRUST WASHER
46	2	518015	THRUST WASHER

Eastern Wrecker Sales - www.easternwrecker.com - 919-553-4038

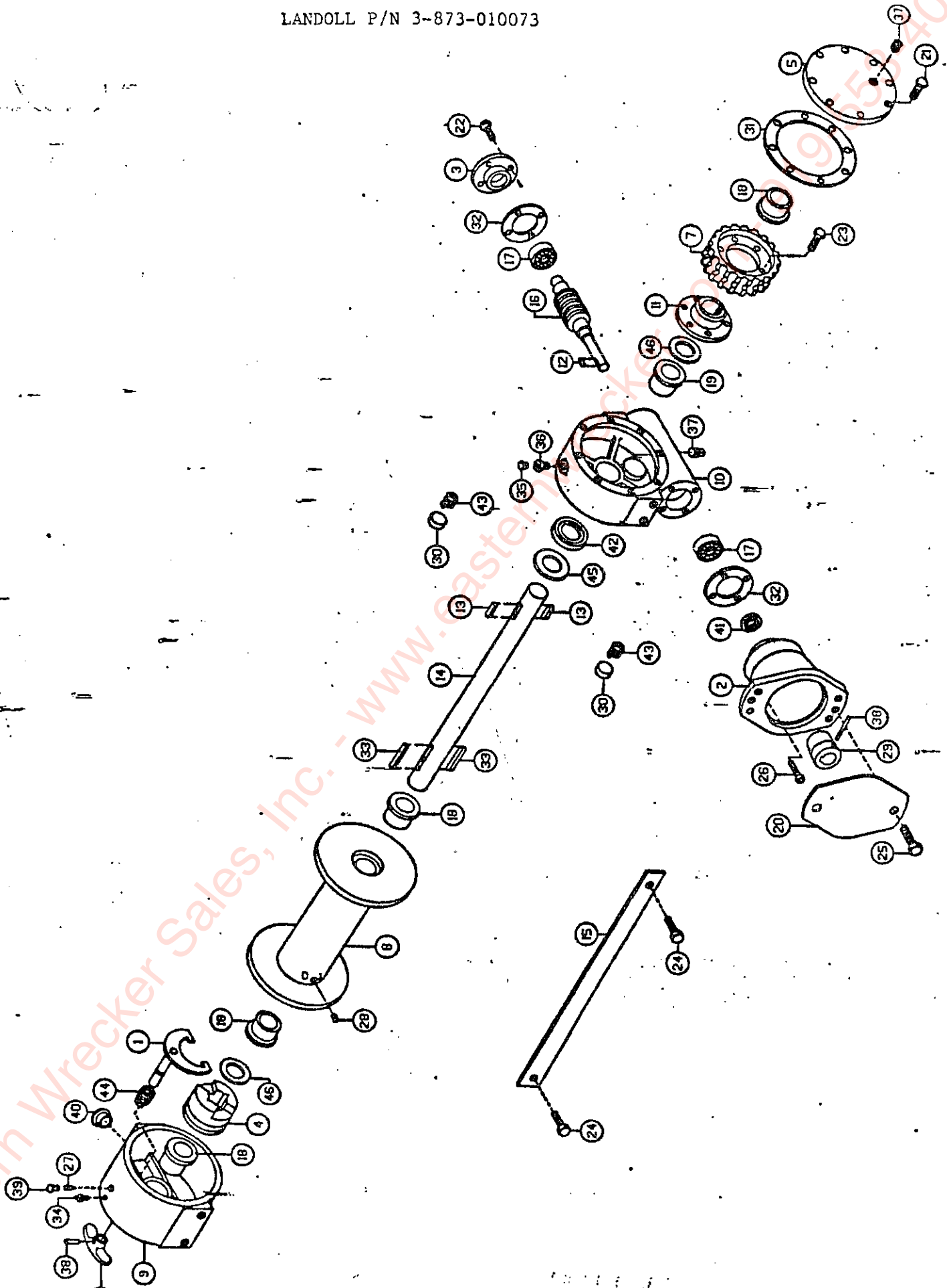
## ELECTRICAL EXTENSION FRAME

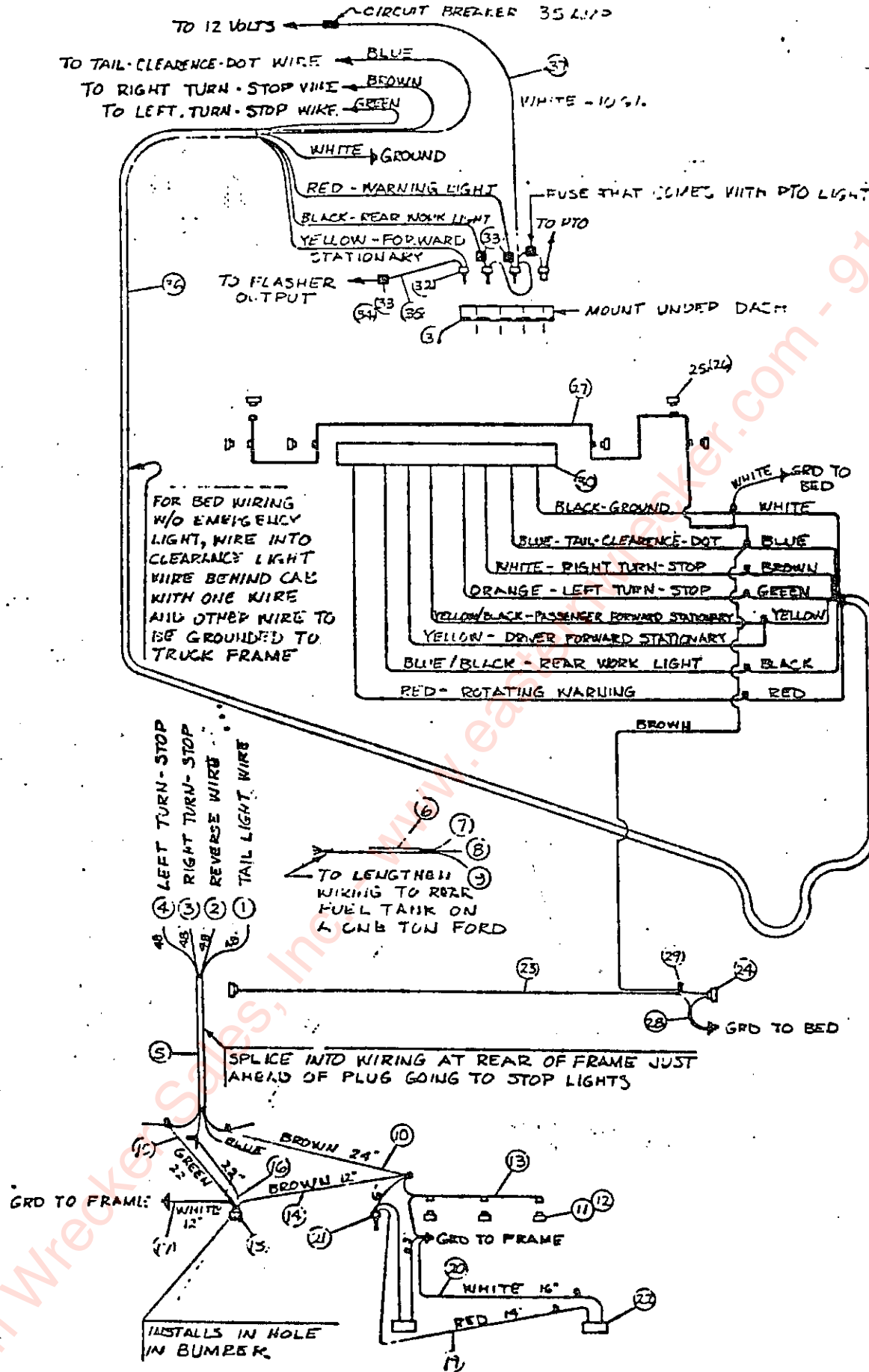
Item	Part Number	Description	Quantity
1	1-879-010005	14 AWG Brown Wire (Ford & GMC)	4.0 FT
2	1-879-010008	14 AWG Blue Wire (Ford & GMC)	4.0 FT
3	1-879-010012	14 AWG Orange Wire (Ford)	4.0 FT
	1-879-010007	14 AWG Yellow Wire (GMC)	4.0 FT
4	1-879-010006	14 AWG Green Wire (Ford & GMC)	4.0 FT
5	239-90008-1	5/16 Plastic Flex Conduit (GMC & Ford)	4.0 FT
6	239-90008-1	5/16 Plastic Flex Conduit (GMC & Ford)	2.0 FT
7	1-879-010005	14 AWG Brown Wire (Ford)	2.0 FT
8	1-879-010007	14 AWG Yellow Wire (Ford)	2.0 FT
9	1-879-010012	14 AWG Orange Wire (Ford)	2.0 FT
<b>ELECTRICAL FRAME</b>			
10	1-879-010005	14 AWG Brown Wire	2.0 FT
11	30200R	2 In. Sealed Clearance Red	3.0 EA
12	30700	Grommet for 2" Lamp	3.0 EA
13	93906	M/C Bar Lamp Harness w/6" center	1.0 EA
<b>WIRING 4 POLE CONNECTOR FOR UNITS WITH TOWBAR</b>			
14	1-879-010005	14 AWG Brown Wire	1.00 FT
15	1-879-010006	14 AWG Green Wire	2.00 FT
16	1-879-010012	14 AWG Orange Wire (Ford)	2.00 FT
	1-879-010007	14 AWG Yellow Wire (GMC)	2.00 FT
17	1-879-010010	14 AWG White Wire	1.00 FT
18	3-272-010003	4 Pole Elect. FM Connector	1 EA
<b>REAR WORK LIGHT WIRING</b>			
19	1-879-010004	14 AWG Red Wire	1.50 FT
20	1-879-010010	14 AWG White Wire	1.50 FT
21	3-272-010004	SPST Toggle Switch	1 EA
22	60004	3 x 7 Back-up Lamp w/Grommet	2 EA
<b>BED CLEARANCE LIGHT WIRING</b>			
23	3-368-010019	PL-10 Plug 8 1/2 FT	1 EA
24	30200R	2 In. Sealed Clearance Red	2 EA
25	30200Y	2 In. Sealed Clearance Yellow	6 EA
26	30700	Grommet For 2" Lamp	8 EA
27	3-368-010018	Front M/C Harness	1 EA
28	94927	PL-10 W/Shunt	1 EA
29	6013	0.156 Ø Bullet Term	1 EA
<b>WIRING BED WITH EMERGENCY LIGHT</b>			
30	3-446-010001	CF Light Bar w/Hook-up Kit	1 EA
31	3-272-010005	Switch Plate Cab	1 EA
32	3-272-010004	SPST Toggle Switch	3 EA
33	3-318-010002	12 Volt 15 AMP Fuse Holder	3 EA
34	3-318-010001	12 Volt 15 AMP Fuse	3 EA
35	1-879-010007	14 AWG Yellow Wire	2 FT
36	59A-7	Multi-Conductor Cable	33 FT
37	1-879-010009	10 AWG White Wire	3 FT
<b>WIRING BED WITHOUT EMERGENCY LIGHT</b>			
31	3-272-010007	PTO Plate Cab	1 EA
36	14-2 SO	Two Conductor Wire	27 FT



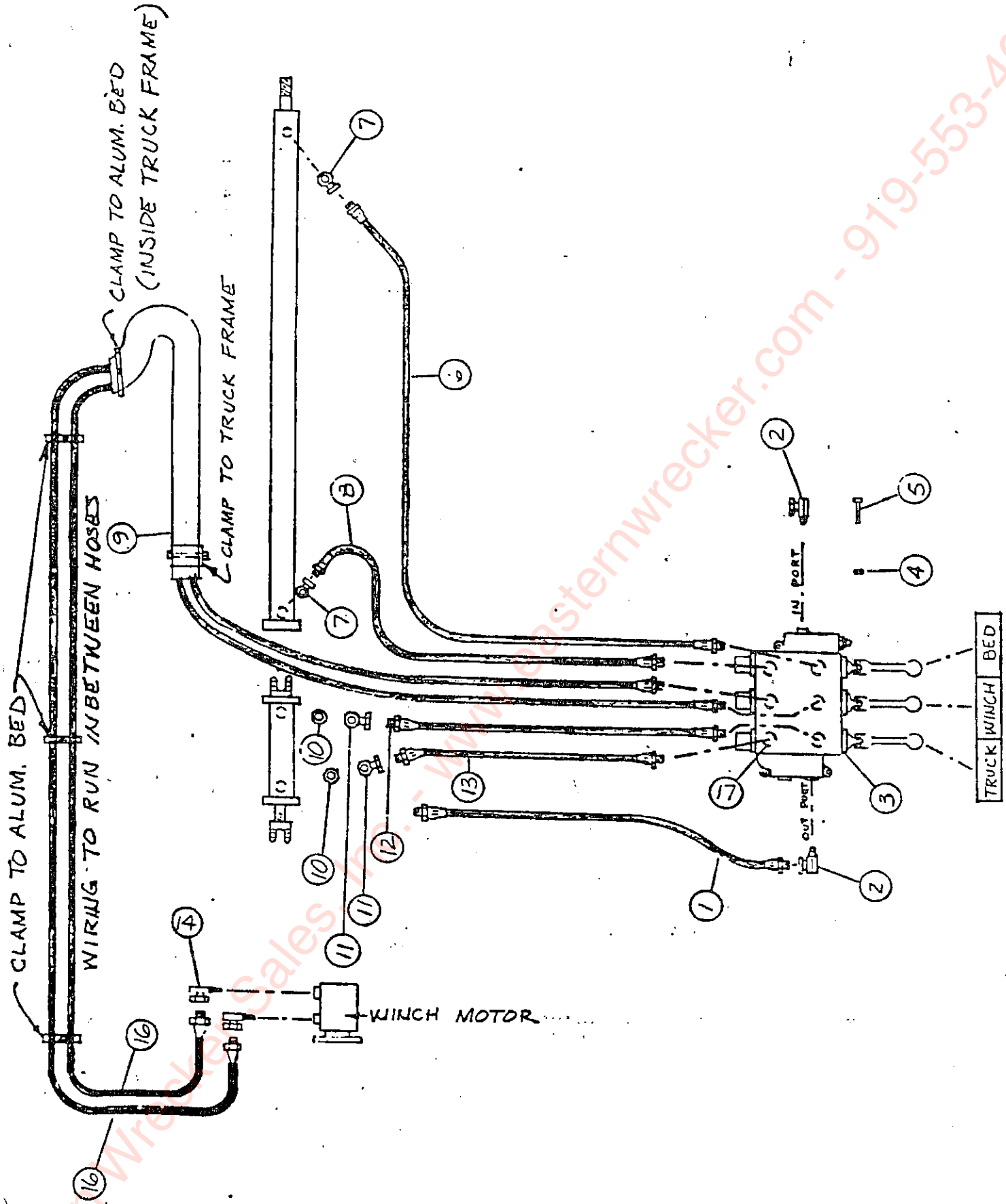
RAMSEY WORM WINCH HY-246

LANDOLL P/N 3-873-010073





Eastern Wrecks, Inc. www.easternwrecks.com - 919-553-4039

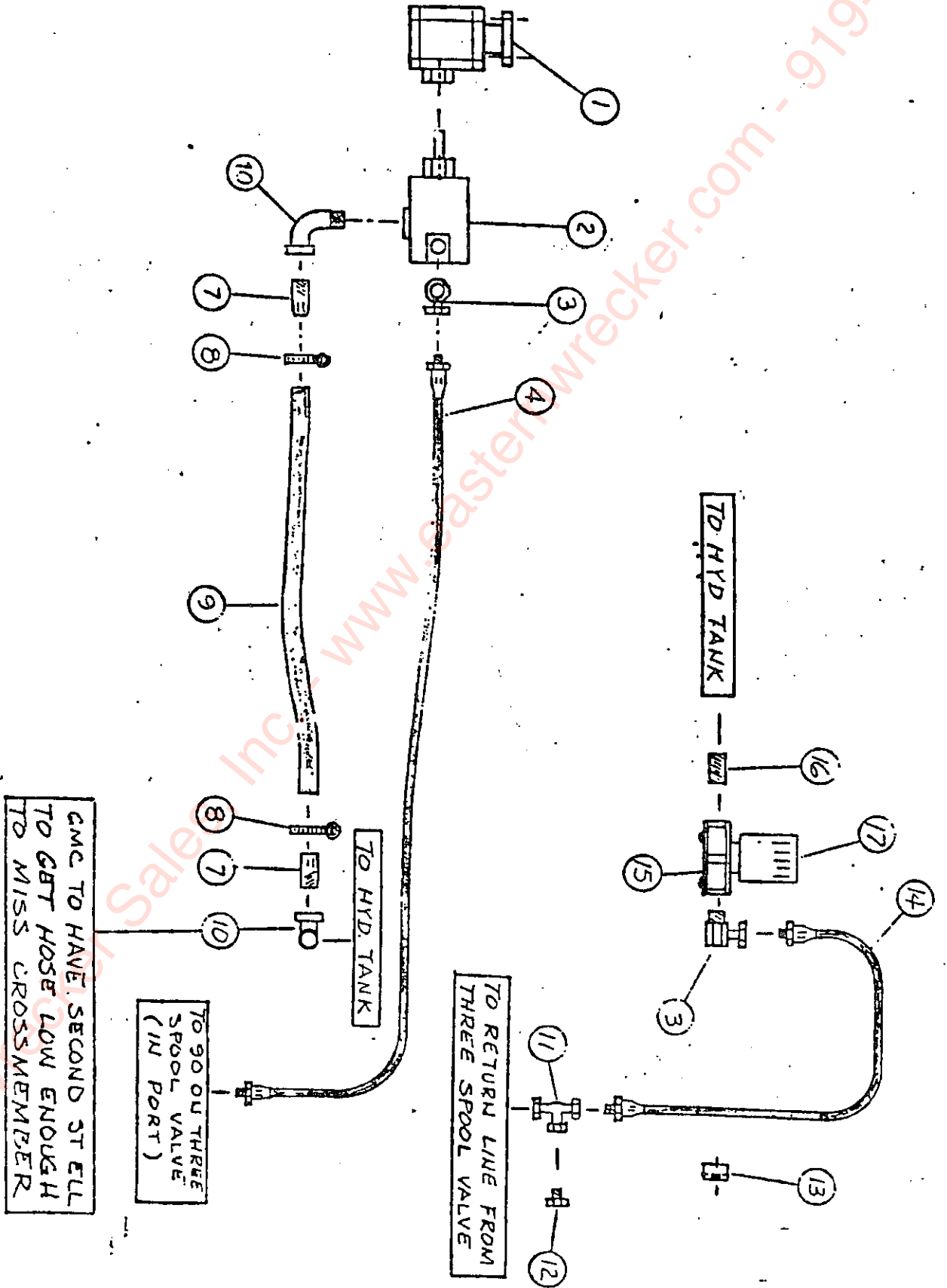


Eastern Wrecker Sales  
 Easternwrecker.com - 919-553-4000

CENTERFOLD MAIN FRAME HYDRAULICS

Item	Part Number	Description	Qty.
1	3-397-010092	41 Hose Assembly (Ford)	1
	3-397-010093	28 Hose Assembly (GMC)	1
	3-397-010094	36 Hose Assembly (Dodge)	1
2	3-846-010011	1/2 NPTF x 3/4 O-Ring 90° Swivel (Ford, GMC, Dodge)	2
3	3-846-010007	Valve 3 Spool w/Power Beyond (Ford, GMC, Dodge)	1
4	3/8-16HFLN	Lock Nut (Ford, GMC, Dodge)	3
5	3/8-16 x 1-3/4CS	Hex Cap Screw GR 5 (Ford, GMC, Dodge)	7
6	1-397-010052	3/8 Hose Assembly 164IN (Ford)	1
	1-397-010048	3/8 Hose Assembly 144IN (GMC)	1
	1-397-010060	3/8 Hose Assembly 152IN (Dodge)	1
	2047-6-6S	INT P Swiv 3/8NPT (Ford, GMC, Dodge)	2
8	1-397-010057	3/8 Hose Assembly 72IN (Ford)	1
	1-397-010051	3/8 Hose Assembly 52IN (GMC, Dodge)	1
9	3-395-010001	1-1/2 Fire Hose Jacket (Ford, GMC, Dodge)	7 1/2 FT
10	2216-6-8S	3/8 FPT 3/4 MPT O-Ring Adpt. (Ford, GMC, Dodge)	2
11	1-007-010005	3/8 90 Swivel w/3/32 Rest Rict. (Ford, GMC, Dodge)	2
12	1-397-010051	3/8 Hose Assembly 52IN (Ford)	1
	1-397-010050	3/8 Hose Assembly 40IN (GMC)	1
	1-397-010061	3/8 Hose Assembly 46IN (Dodge)	1
	1-397-010050	3/8 Hose Assembly 40IN (Ford)	1
13	1-397-010049	3/8 Hose Assembly 32IN (GMC)	1
	1-397-010063	3/8 Hose Assembly 37IN (Dodge)	1
	1-007-010017	3/8 to 7/8 O-Ring 90 (Ford, GMC, Dodge)	2
16	1-397-010053	3/8 Hose Assembly 252IN (Ford)	2
	1-397-010054	3/8 Hose Assembly 236IN (GMC)	2
	1-397-010062	3/8 Hose Assembly 246IN (Dodge)	2
17	2066-8-85	3/4-16 O-Ring x 1/2 NPTF Adapter	6

Eastern Wrecker Sales, Inc. - www.easternwrecker.com - 919-553-4038

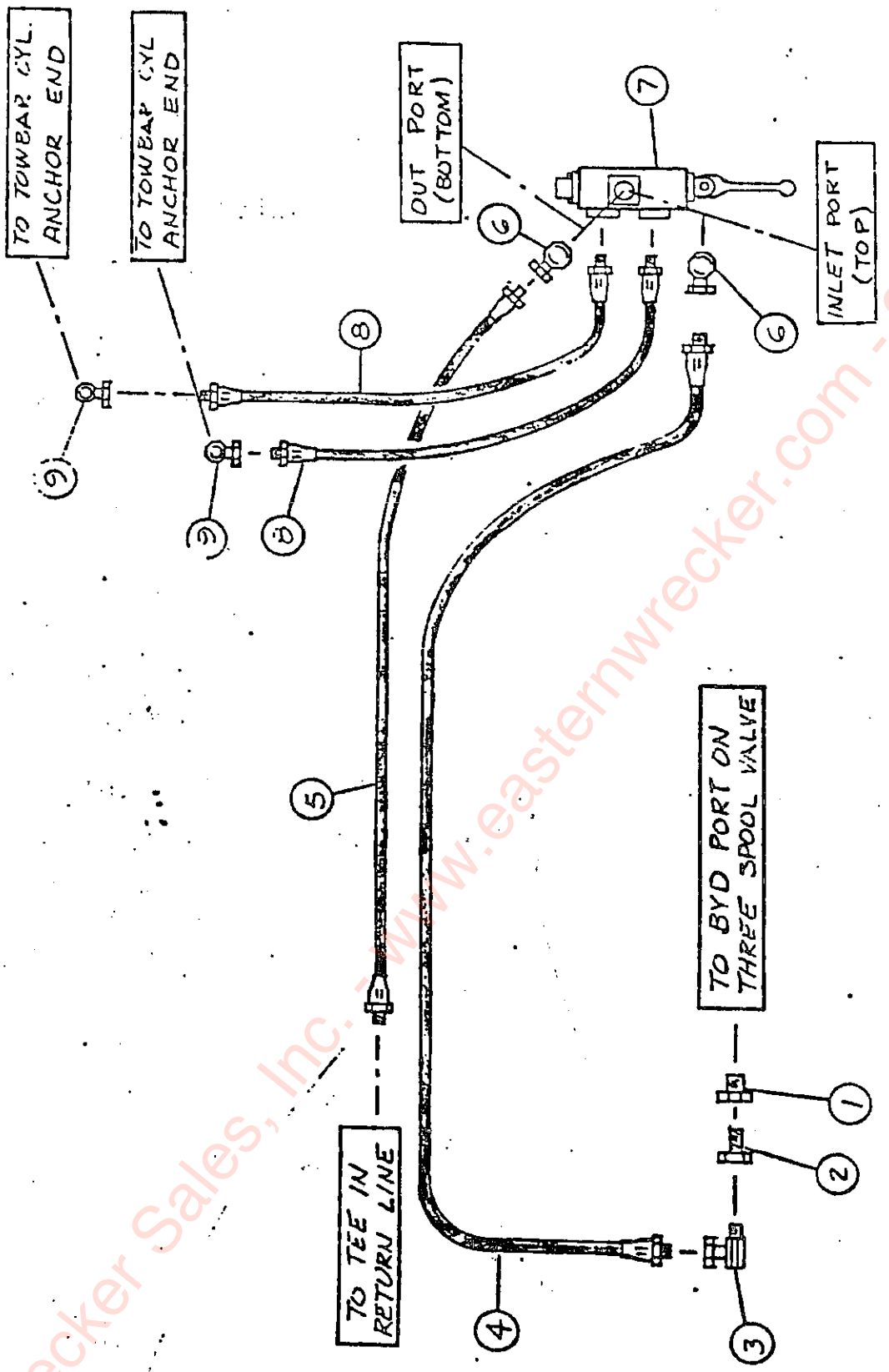


HYDRAULIC WET KIT WITH P.T.O.

Item	Part Number	Description	Qty.
1	PTO	Power Take Off (GMC, Ford, Dodge)	1
2	V-201P13P1C11	Pump Vickers (GMC, Ford, Dodge)	1
3	1-007-010013	1/2 FPT 3/4 MPG 90 Swivel (GMC, Ford, Dodge)	1
4	1-397-010058	1/2 Hose Assembly 154 (Ford & Dodge)	1
	3-397-010013	122 Hose Assembly (GMC)	1
7	3-561-010001	Hose Barb 1-1/4 NPT (GMC, Ford, Dodge)	1
8	6828	Ideal Hose Clamp (GMC, Ford, Dodge)	2
9	19B	Hose 1-1/4 (GMC)	7 ft.
	19B	Hose 1-1/4 (Ford & Dodge)	4 1/2 ft.
10	1-1/4ST ELL	BLK Pipe Elbow 90 ST (GMC, Ford, Dodge)	2
11	2255-8-8S	Tee Internal Pipe Swivel (GMC, Ford, Dodge)	1
12	1/2 Pipe Plug	Black (GMC, Ford, Dodge)	1
13	2-181-010001	Hose Clamp (GMC, Ford, Dodge)	2
14	1-397-010028	16 Hose Assembly (GMC)	1
	2-397-010002	36 Hose Assembly (Ford & Dodge)	1
15	1-295-010001	Return Line Filter (GMC, Ford, Dodge)	1
16	3/4NIPPLE	All Thread Nipple (GMC, Ford, Dodge)	1
17	1-295-010002	Replacement Filter Element	1
18	2092-8-8S	Tee 1/2 External/Internal Pipe (GMC, Ford, Dodge)	1
19	C3109 x 12 x B	Steel Bush 3/4 MPT x 1/2 FPT (GMC, Ford, Dodge)	1

\*For PTO that is mounted on the left side of the transmission instead of the right side a 1/2" Hose Assembly 114" - Part Number 3-397-010038 can be used.

Eastern Wrecker Sales, Inc. - www.easternwrecker.com - 919-553-4038



Eastern Wrecker Sales, Inc. www.easternwrecker.com - 919-553-4030

ALUMINUM BED STANDARD SIDE RAILS

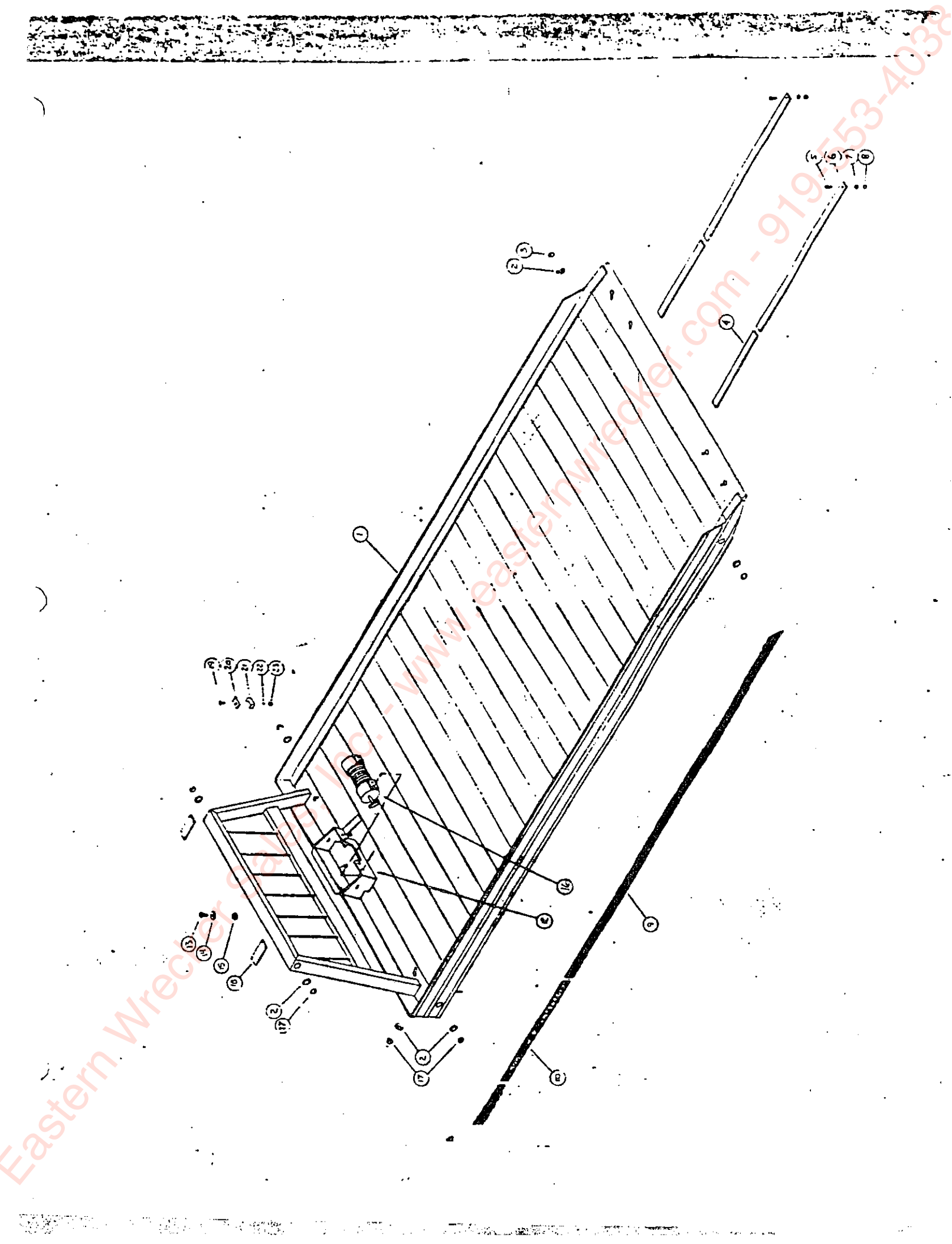
<u>Item</u>	<u>Part Number</u>	<u>Description</u>	<u>Qty.</u>
1	3-080-010022	17FT Alum. Bed w/Side Rails	1
2	30401	2IN Grommet Mount Kit	8
3	30200R	2IN Sealed Clearance Red	2
4	RPRB3999x59.875	1/2x2 1/2x59-7/8 UHMW Polyethylene	2
5	1/2-13x1-1/2CS	ZP GR5	2
6	RPRB3999 x 120	1/2 x 2-1/2 x 120 UHMW Polyethylene	2
7	1/2FW	Flat Washer ZP	2
8	1/2-13HFLN	Hex Lock Nut GR B Cad w/Wax	2
9	3-573-010063	Centerfold Decal	3
10	3-573-010066	Black Stripe 3IN	47 ft.
11	3-481-010002	MOTOR FOR HY-246 WINCH HD.	1
12	3-311-013069	WORM WINCH MOUNT ASSY.	1
13	5/8-11HFN	Nut ZP GR2 (Not Shown)	8
14	5/8SLW	Split Lock Washer ZP (Not Shown)	8
15	5/8-11x2 CS-5	Hex Cap Screw GR5	8
16	3-873-010073	8,000 LB. WORM GEAR WINCH	1
17	30200Y	2IN Sealed Clearance Yellow	6
18	3-120-010130	Mtg. Brkt. Emergency Lights	2
19	3/8-16x1-3/4CS	Hex Cap Screw GR5	5
20	3-181-010007	Hose Clamp Top Plate	4
21	3-181-010008	Bottom Hose Clamp	5
22	3/8SLW	Split Lock Washer	5
23	3/8-16HFN	Hex Nut ZP GR2	5
24	3-141-010024	Removable Bulkhead Assy.	1



## STANDARD TOW BAR HYDRAULICS

Item	Part Number	Description	Qty.
1	1V0208	Power Beyond Remote (GMC, Ford, Dodge)	1
2	3/4 x 1/2 BUSH	BLK Pipe Bushing (GMC, Ford, Dodge)	1
3	2047-8-8S	Adapter (GMC, Ford, Dodge)	1
4	3-397-010014	164 Hose Assembly (GMC)	1
	3-397-010024	184 Hose Assembly (Ford)	1
	3-397-010023	172 Hose Assembly (Dodge)	1
5	1-397-010059	1/2 Hose Assembly 142 (GMC)	1
	3-397-010021	148 Hose Assembly (Ford & Dodge)	1
6	1-007-010013	1/2 FPT 3/4 MPT 90 Swivel (GMC, Ford, Dodge)	2
7	BA11AD00AO	Single Spool Valve (GMC, Ford, Dodge)	1
8	1-397-010051	3/8 Hose Assembly 52 (GMC, Ford, Dodge)	2
9	2047-6-6S	Int. P Swiv. 3/8 NPT (GMC, Ford, Dodge)	2

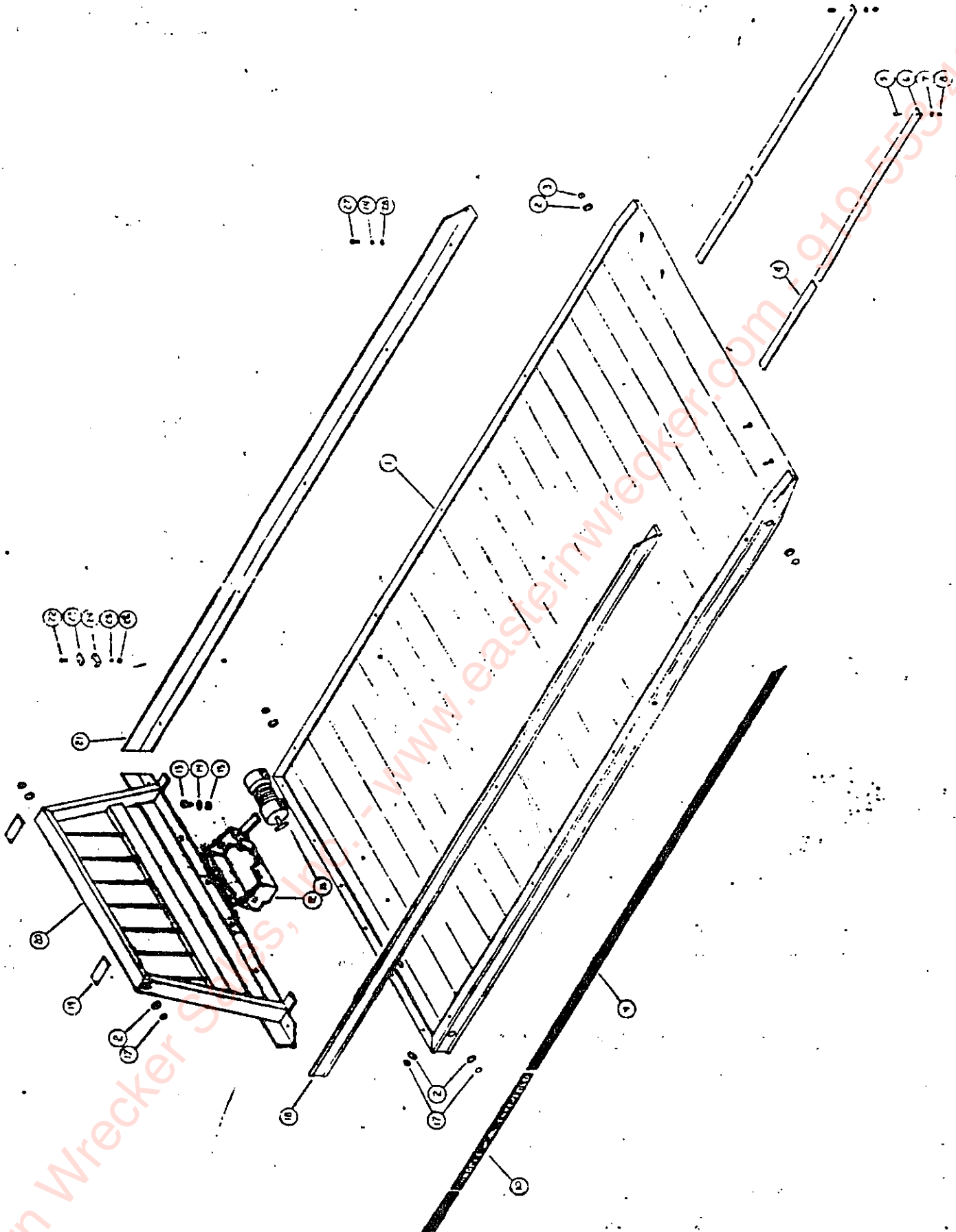
Eastern Wrecker Sales, Inc. - www.easternwrecker.com - 919-553-4082

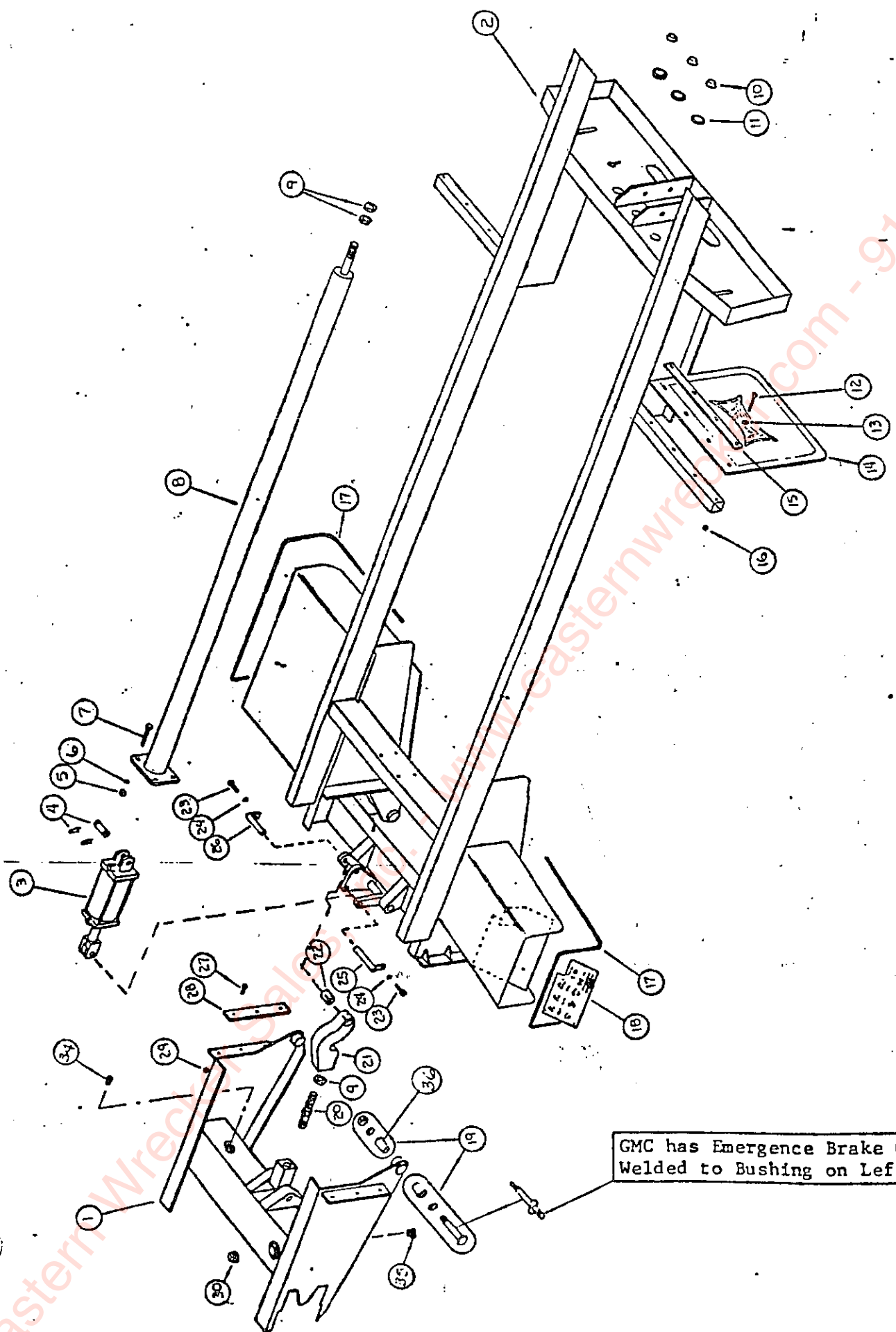


17FT ALUMINUM BED W/REMOVABLE SIDE RAILS

<u>Item</u>	<u>Part Number</u>	<u>Description</u>	<u>Qty.</u>
1	3-080-010021	17FT Aluminum Flatbed	1
2	30401	2IN Grommet Mount Kit	8
3	30200R	2IN Sealed Clearance Red	2
4	RPRB3999x59.875	1/2x2 1/2x59-7/8 UHMW Polyethylene	2
5	1/2-13x1-1/2CS	ZP GR5	2
6	RPRB3999 x 120	1/4x2-1/2x120UHMW Polyethylene	2
7	1/2FW	Flat Washer ZP	2
8	1/2-13HFLN	Hex Lock Nut GR B Cad w/Wax	2
9	3-573-010063	Centerfold Decal	3
10	3-573-010066	Black Stripe 3IN	47 ft.
11	3-481-010002	Motor for HY-246 Winch HD	1
12	3-311-013069	Worm Winch Mount Assy.	1
13	5/8-11HFN	Nut ZP GR2	4
14	5/8SLW	Split Lock Washer ZP	18
15	5/8-11x2CS-5	Hex Cap Screw GR5 (Not Shown)	4
16	3-873-010073	8,000 LB. Worm Gear Winch	1
17	30200Y	2IN Sealed Clearance Yellow	6
18	3-080-010013	Lt. Top Side Rail	1
19	3-120-010130	Mt. Brkt. Emergency Light	2
20	3-141-010019	Bulkhead Assy. CF	1
21	3-080-010012	Rt. Top Side Rail	1
22	3/8-16x1-3/4 CS	Hex Cap Screw GR5	4
23	3-181-010007	Hose Clamp Top Plate	4
24	3-181-010008	Bottom Hose Clamp	4
25	3/8SLW	Split Lock Washer	4
26	3/8-16HFN	Hex Nut ZP GR2	4
27	5/8-11x2-1/2CS	HHCS ZP GR5	14
28	5/8FW	Flat Washer ZP	18

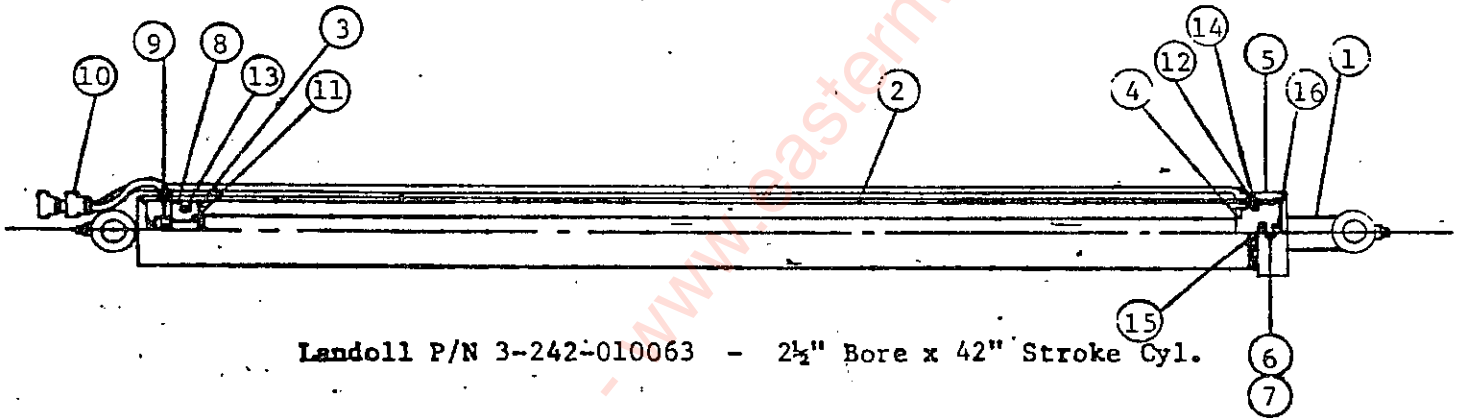
<u>Item</u>	<u>Part Number</u>	<u>Description</u>	<u>Qty.</u>
1	3-311-011792	Ford Front Hinge Assembly	1
	3-311-011765	GMC Front Hinge Assembly	1
	3-311-012211	Dodge Front Hinge Assembly	1
2	3-311-011804	Ford Centerfold Assembly	1
	3-311-011877	GMC Centerfold Assembly	1
	3-311-012210	Dodge Centerfold Assembly	1
3	1-242-010041	4 x 8 Tie Rod Cylinder	1
4		Cyl. Pins (See Cyl. Break Down)	
5	5/8-11HFN	Hex Nut ZP GR2	4
6	5/8SLW	Split Lock Washer	4
7	5/8-11x 4 1/2 CS	Hex Cap Screw GR5	4
8	3-242-010044	3 1/2 x 90 Hyd. Cyl.	1
9	1 1/2-12 JN	Jam Nut ZP	3
10	30200R	2IN Sealed Clearance Red	3
11	30401	2IN Grommet Mount Kit	3
12	3/8-16x3EHCS	Hex Cap Screw GR5	8
13	3/8FW	Flat Washer ZP	8
14	3-485-010001	Mud Flap 21IN	2
15	3-762-010017	Clamp Mud Flap	2
16	3/8-16HFLN	Lock Nut	8
17	1-822-010002	3/16 Trim	As Req.
18	3-573-010061	Operator Instruction Decal	1
19	3-762-010267	Pivot Bushing Assembly (1 Pair) (Ford)	1
	3-762-010303	Radius Rod Bushing W/Guide (GMC)	1
20	3-311-011791	Adjustment Rod	1
21	3-311-011813	Rt. Hand Adj. Bracket	1
22	3-150-010005	1 1/2 I.D. Bronze Sleeve Bearing	1
23	1/2-13x1 1/2 CS	Hex Cap Screw	2
24	1/2SLW	Split Lock Washer ZP GR5	2
25	3-557-010124	Pivot Pin Cyl.	1
26	3-557-010123	Pivot Pin Adj.	1
27	5/16-18x1 1/2	Hex Soc Flat Head Cap Screw	6
28	3-146-010003	Armorite Cushion Hinge	2
29	5/16-18HFN	Hex Nut ZP GR2	6
30	3-299-010010	2" Pipe Plug W/Vent	1
31	1-DSL LATCH	Zinc Finish Paddle (Not Shown)	1
32	BSL-6-4	Rivet (Not Shown)	4
33	5010	Zerk Fitting 1/2 SAE (Not Shown)	5
34	3/4 Plug	Black Pipe Plug 20 FT 300	1
35	1-1/4 Pipe Plug	Black 1-1/4 SQ Head	1
36	3-762-010354	Radius Rod Bushing	2





STANDARD TOWBAR RUBBER RING

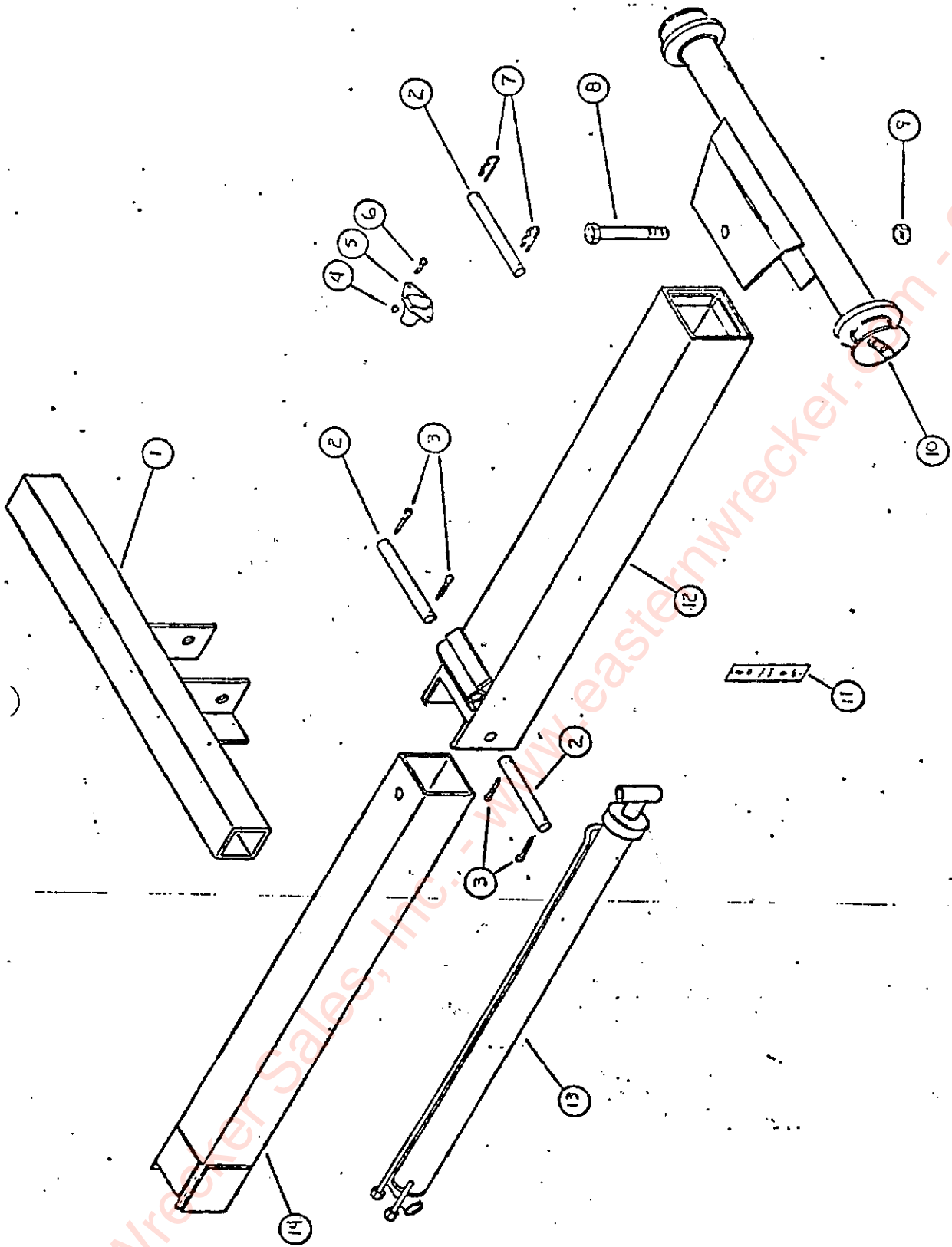
<u>Item</u>	<u>Part Number</u>	<u>Description</u>	<u>Qty.</u>
1	3-311-013005	Tow Bar Anchor Assembly	1
2	2-557-010097	Pin Hinge	2
3	1/4 x 2	Cotter Pin ZP	4
4	1/2-20HFLN	Hex Lock Nut GRB Cad w/Wax	2
5	3-272-010003	4 Pole Elect. FM Connector	1
6	1/2-20x1HHCS	Cap Screw ZP	2
7	1-557-010014	Hair Pin 1/4 Dia.	2
8	1-8x6 C 5	Hex Cap Screw GR5 ZP	1
9	1-8HFLN	Lock Nut Ding Type ZP	1
10	3-375-010311	Rubber Ring Towbar Weldment 2	1
11	3-573-010067	Tow Bar Operation Decal	1
12	3-375-010308	Outer Tube Tow Bar Weldment 2	1
13	3-242-010063	2 1/2 x 42 Tow Bar Cylinder (See Below)	1
14	3-375-010309	Inner Tube Tow Bar Weldment 2	1
15	2-557-010006	Pin Radius Rod Lower	1



Landoll P/N 3-242-010063 - 2 1/2" Bore x 42" Stroke Cyl.

<u>ITEM</u>	<u>QTY.</u>	<u>PMC PART NO.</u>	<u>DESCRIPTION</u>
1	1	020800156	Piston Rod Assy.
2	1	061300375	Butt & Tube Assy.
3	1	071300110	Piston
4	1	081300164	Gland
5	1	261400002	Gland Cap
6	1	220000701	Set Screw
7	1	220000851	Aluminum Lock
8	2	270010016	Grease Zerk
9	1	220000208	Lock Nut
10	2	200018002	Pipe Plug (3/8 NPTF)
11	1*	240000018	O-Ring
12	1*	240000330	O-Ring
13	1*	240016119	Crown Seal
14	1*	240005330	BU-Washer
15	1*	240020148	U-Cup
16	1*	250001222	Wiper

\* PMCK AE-148 Packing Kit



STANDARD TOWBAR



EMERGENCY BRAKE COMPONENTS

<u>Item</u>	<u>Part Number</u>	<u>Description</u>	<u>Qty</u>
1	3-158-010002	Emergency Brake Cable Clip (Ford, Dodge)	1
	3-158-010002	Emergency Brake Cable Clip (GMC)	2
2	3-158-010001	Emergency Brake Cable Ext. (Ford, GMC, Dodge)	1
3	3-588-010002	Emergency Brake Cable Pulley (Ford)	2

BRAKE LINE COMPONENTS

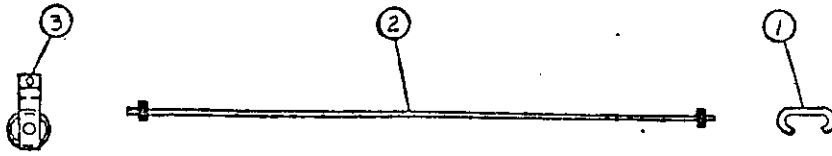
<u>Item</u>	<u>Part Number</u>	<u>Description</u>	<u>Qty</u>
4	3-158-010009	1/4 Standard Nut (GMC)	2
5	3-158-010004	3/16 Inverted Flare Union (Ford, Dodge)	1
	3-158-010007	1/4 Inverted Flare Union (GMC)	1
6	3-158-010003	3/16 Steel Brake Line (Ford, Dodge)	2
	3-158-010008	1/4 Steel Brake Line (GMC)	1
7	3-158-010005	Brake Hose 3/16 Tube (Ford, Dodge)	1
	3-158-010006	Brake Hose 1/4 Tube (GMC)	1

DRIVE LINE COMPONENTS

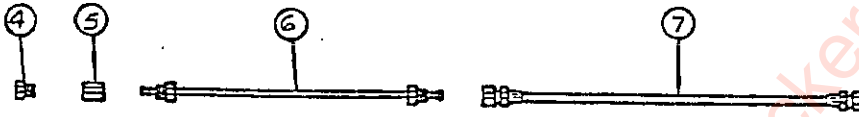
<u>Item</u>	<u>Part Number</u>	<u>Description</u>	<u>Qty</u>
8	1/2-13x1HHCS	ZP GR5 (Ford, Dodge)	2
	1/2-13x2 1/2 CS	Hex Cap Screw GR5 (GMC)	2
9	1/2-13HFLN	Hex Lock Nut ZP (Ford, GMC, Dodge)	2
10	3-311-013060	Ford Rear Bearing Spacer	1
	3-311-011821	GMC Bearing Support (GMC)	3
11	3-266-010004	Ford Drive Train Ext. 2 (Ford)	1
	3-266-010001	GMC Drive Train Ext. (GMC)	1
	3-266-010003	Dodge Drive Train Ext. (Dodge)	1

FUEL LINE COMPONENTS

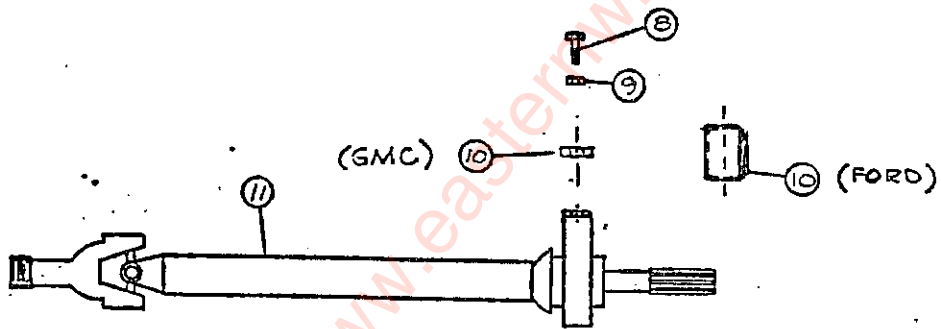
<u>Item</u>	<u>Part Number</u>	<u>Description</u>	<u>Qty</u>
		Low Pressure Fuel Hose 5/16 (Dodge)	4
12	1-316-010001	Low Pressure Fuel Hose 5/16 (Ford)	21
13	6806	Ideal Hose Clamp 7/8 Max.-3/8 Min. (Ford, Dodge)	8
14	1-316-010002	Low Pressure Fuel Hose 3/8 (Ford)	21
		Low Pressure Fuel Hose 3/8 (Dodge)	4
15	3-316-010007	CF Filler Tube Rear (Ford)	1
16	3-311-011962	Mtg. Bracket, Fuel Rear (Ford)	1
17	3-155-010001	Throttle Cable (Not Shown)	1
18	3-316-010005	Fuel Filler Anchor (Dodge)	1
19	3-316-010006	CF Filler Tube Front (Ford)	1
20	3-311-012903	Fuel Filler Mtg. Brkt.	1
21	3-828-010001	Vent Tubing	2



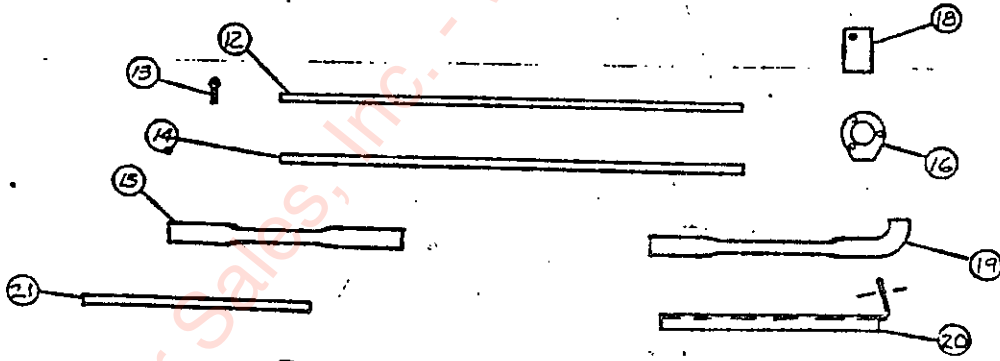
EMERGENCY BRAKE COMPONENTS



BRAKE LINE COMPONENTS



DRIVE LINE COMPONENTS



FUEL LINE COMPONENTS

Bed Care and Maintenance.....

Bed Operation.....

Center of Gravity.....

Certification Label.....

Cylinder (Hydraulic).....

Inspection Sheet Final.....

Safety Suggestions.....

Service and Lubrication.....

Tow Bar Operation.....

Trouble Shooting Guide Hydraulic System.....

Warranty.....

Winch Operation.....

SERVICE PARTS

Steel Bed.....

Aluminum Bed Standard.....

Brakes.....

Cylinders.....

Frame Parts.....

Hydraulic Frame.....

Hydraulic Wet Kit.....

Power Take Off.....

Pump.....

Single Spool Valve.....

Three Spool Valve.....

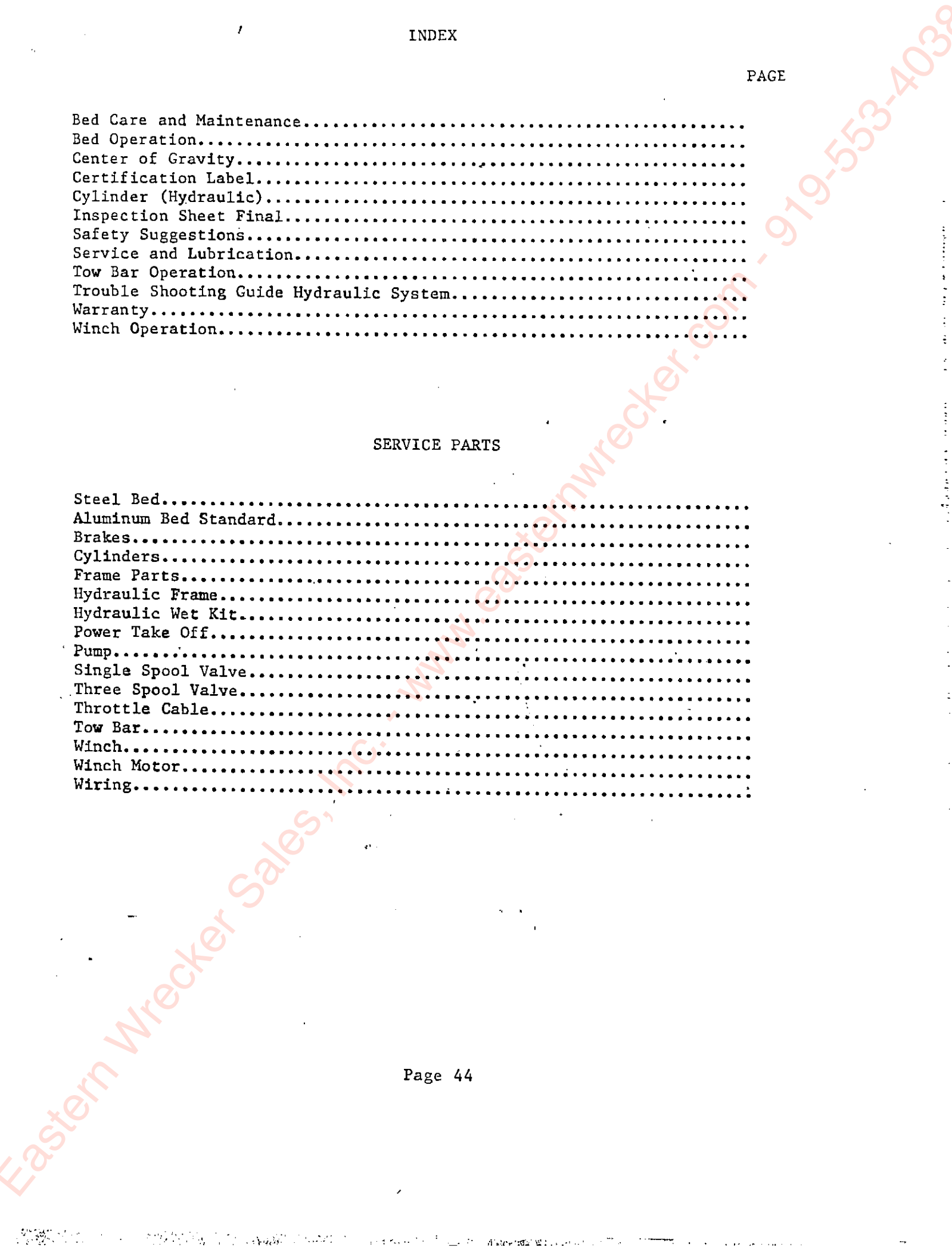
Throttle Cable.....

Tow Bar.....

Winch.....

Winch Motor.....

Wiring.....





**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.