

MODEL 345 & 350 LANDOLL HAULLOLL



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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 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.

CAUTION

The combined weight of the tractor, trailer and cargo must not exceed the gross vehicle weight rating (GVWR) of the tractor.

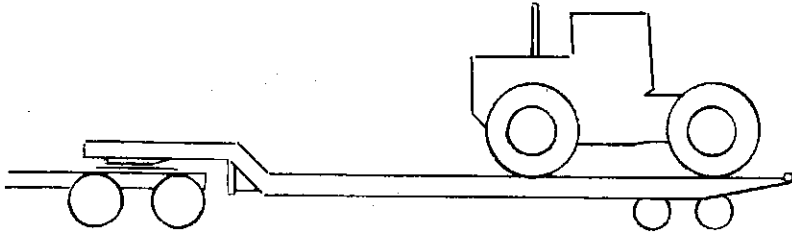
CAUTION

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

TRAILER OPERATION

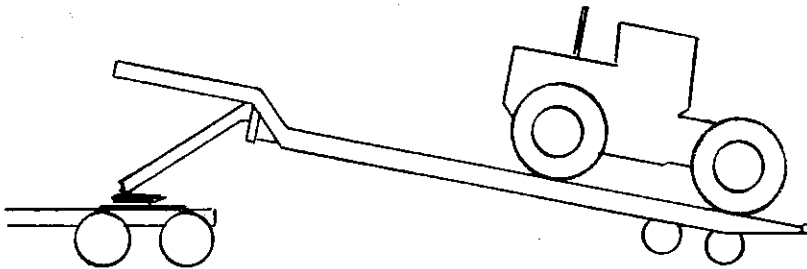
TO TILT TRAILER

1.



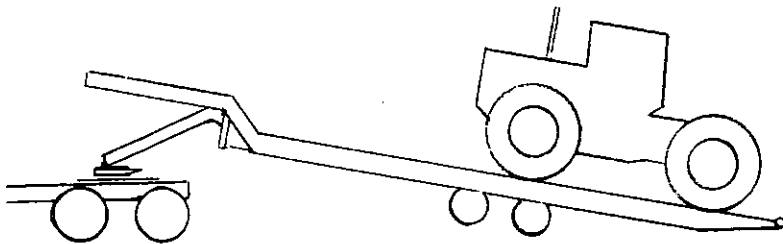
Park tractor and trailer in a straight line on relatively level ground.
Set tractor brakes and release trailer brakes.
Connect hydraulic lines from tractor to trailer.
Engage P.T.O. if truck mounted hydraulic.
Start engine if engine drive hydraulic.

2.



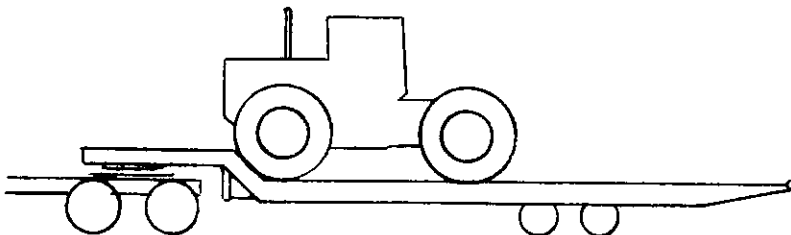
Raise trailer to the appropriate loading angle.

3.



Pull axles to the full forward position.
Adjust tilt angle if necessary until the rear of the trailer rests on the ground. The rear axle should carry part of the weight.

The above is recommended procedure for normal conditions. However if the load is unbalanced with more weight on the king pin than on the axles, reverse steps 2 and 3.



TO RETURN TRAILER TO LEVEL

1. Push axles to rear position.
2. Lower trailer to level position.
3. Disengage P.T.O.
4. Secure load.



CAUTION:

Always secure load before moving trailer.



CAUTION:

Always park tractor and trailer in a straight line on level ground when loading and unloading.

TRAILER MAINTENANCE AND LUBRICATION SCHEDULE	SERVICE INTERVALS										RECOM. LUB.	
	FIRST 100 MILES	FIRST 1000 MILES	DAILY	WEEKLY	30 DAYS	90 DAYS	180	YEARLY	30,000 40,000 MILES			
AXLE & SUSPENSION												
Rim Nuts	T											
Fasteners		T										
Axle Alignment		I				I						
Undercarriage Rollers					L						4	
Wheel Bearing Oil				I					R		3	
Air Tank				I								
Brake Linings		A							I			
Cam Rollers									I, L		5	
Retainer Springs									I, L		5	
Anchor Pins									I, L		5	
Slack Adjusters									I, L		4	
Cam Brackets									I, L		4	
Brake Spider Bushing									I, L		4	

TRAILER MAINTENANCE AND LUBRICATION SCHEDULE	FIRST 100 MILES	SERVICE INTERVALS										RECOM. LUB.	
		FIRST 1000 MILES	DAILY	WEEKLY	30 DAYS	90 DAYS	180	YEARLY	30,000 40,000 MILES				
GENERAL													
Tires			V	I									
Lights			V										
Hydraulic Oil					I						R		1
Hydraulic Oil Filter											R		
Gooseneck Hinge						L							4
WINCH													
Oil						I					R		2
Bearing Leg						L							4
Cable Drum						L							4
Worm Gear											V		
Fasteners							V						

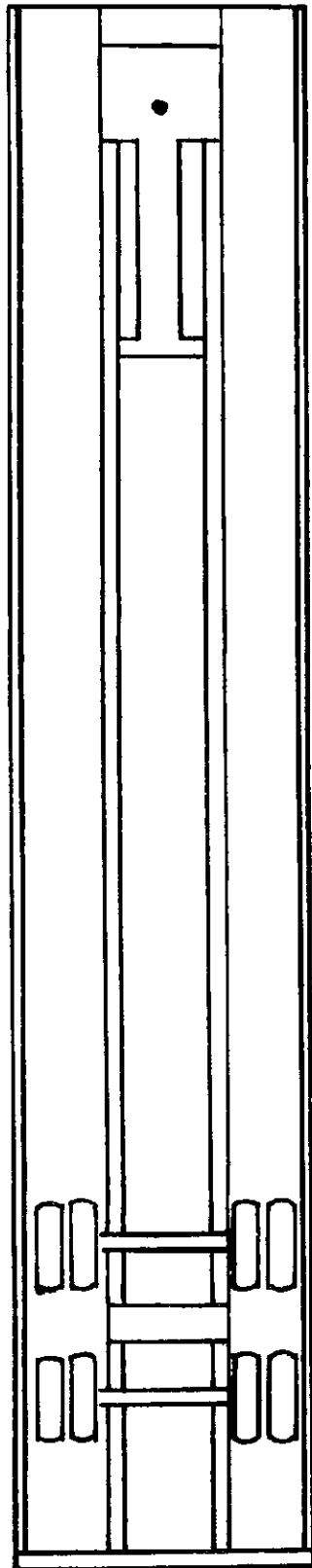
- A — Adjust.
- I — Inspect (correct, clean, or replace if necessary).
- L — Lubricate.
- R — Replace or change.
- T — Tighten or Re-torque.
- V — Visually inspect and if necessary, diagnose, correct, remove or replace.

LUBRICATION GUIDE

Number indicates suggested lubricant as listed on following page

- 1. Hydraulic Oil Tank
Check Fluid Level
3/4 Full **30 Days**

- Axles
- 5 Cam Rollers
- 5 Retainer Springs
- 5 Anchor Pins
- 4 Slack Adjusters
- 4 Cam Brackets
- 4 Brake Spider Bushings
- 3 Wheel Bearings
30,000 Miles



- 4 Fifth Wheel Plate
30 Days

- 4 Low Load Pivot Bushings (2 Fitting)
- 4 Hinge, Fifth Wheel
One fitting
30 Days

- Winch
- 4 Bearing Leg Bushing
- 4 Cable Drum (2 Fittings)
- 2 Gear Box (Change Yearly)
7 Days

- 4 Carriage Rollers
Eight Fittings
30 Days

RECOMMENDED LUBRICANTS

SYSTEM APPLICATION	AMOCO	EXXON	PHILLIPS	TEXACO
1	Summer	Amoco-All-Weather #30277	Exxon HDX Plus 10W	Mangus Oil 315
	Winter	Amoco-All-Weather #30277	Exxon HDX Plus 10W	Mangus Oil 150
2	Summer	Amoco Multi-Purpose 140	Gear Oil GX 85-140	Worm Gear Oil SAE 140 #93301
	Winter	Amoco Multi-Purpose 90	Gear Oil GX 85-140	Worm Gear Oil SAE 90 #93321
3	Summer	Amoco Multi-Purpose 90	Gear Oil GX 85-140	Phil-Lub All Prpse. Gear Oil SAE90 #90501
	Winter	Amoco Multi-Purpose 90	Gear Oil GX 85-140	Phil-Lub All Prpse. Gear Oil SAE 90 #90501
4	Summer	Amoco-Lit-Multi-Purpose Grease	Ronex Multi-Purpose	Phil Lub M.W. Grease All Purpose
	Winter	Amoco-Lit-Multi-Purpose Grease	Ronex Multi-Purpose	Phil Lub M.W. Grease All Purpose
5	Summer	Amoco Motor Oil 200	Exxon A.T.F.	Trop Artic Oil 20 Wt. Texaco Motor Oil 20 Wt.
	Winter	Amoco Motor Oil 200	Exxon A.T.F.	Trop Artic Oil 20 Wt. Texaco Motor Oil 20 Wt.

Transpro Heavyweight Trailer Suspension

Maintenance Recommendations

The Heavyweight trailer suspension, by design, requires an absolute minimum of maintenance. However, suspensions in "over the road operations" require periodic checks to assure continued trouble-free performance. We recommend, after an initial loaded run-in period of at least 1,000 miles, the trailer alignment should be rechecked and corrected. Furthermore, all fasteners, especially u-bolts, should be retorqued to specifications below.

1. Check u-bolt nuts to assure that 300 ft. lbs. torque is maintained.
2. Check equalizer thru-bolt to assure that 480-500 ft. lbs. torque is maintained.
3. Check torque arm bolts to assure that 250 ft. lbs. torque is maintained.
4. Check torque arm tube clamp nuts to assure that 55-60 ft. lbs. torque is maintained.

We recommend further inspections at 90 day intervals on the above items.

NEWAY AR-45

AIR SUSPENSION TORQUE REQUIREMENTS

After initial break in period (3,000 miles) and periodically during routine vehicle maintenance, check all nuts, bolts, and air line fittings for proper torque.

Minimum Torques with Clean Lubricated Threads

	<u>Size</u>	<u>Torque in Ft. Lbs.</u>
Air Spring Connections	1/2 "	25
	3/4 "	50
Shock Absorbers	3/4 "	150
U-Bolts	1 "	680
Pivot Pin	1 1/8 "	600

U-bolts must be tightened evenly until axle cap and beam seat are metal to metal, front and rear, approximately 680 Ft. Lbs. Be sure rubber wrapper does not become pinched between axle cap and beam seat.

TIRE-LOAD AND INFLATION DATA @ 55 MPH

**Gross Axle Weight Rating - 17,993 LBS.

10R17.5X - 14 Ply Rated, Michelin Tubless @ 110 PSI

1. Visually inspect tires daily. Always examine your tires for any damage that may shorten the life of the tire.
2. Check inflation pressures on all your tires at least once a week, including spares, before driving home when tires are cold.
3. Check how your tires are wearing. If your tires show signs of irregular wear, check the following:
 - a. Inflation
 - b. Proper tire alignment.
 - c. Correct axle alignment.
 - d. Worn or loose wheel bearings.
 - e. Worn or loose suspension bushings.

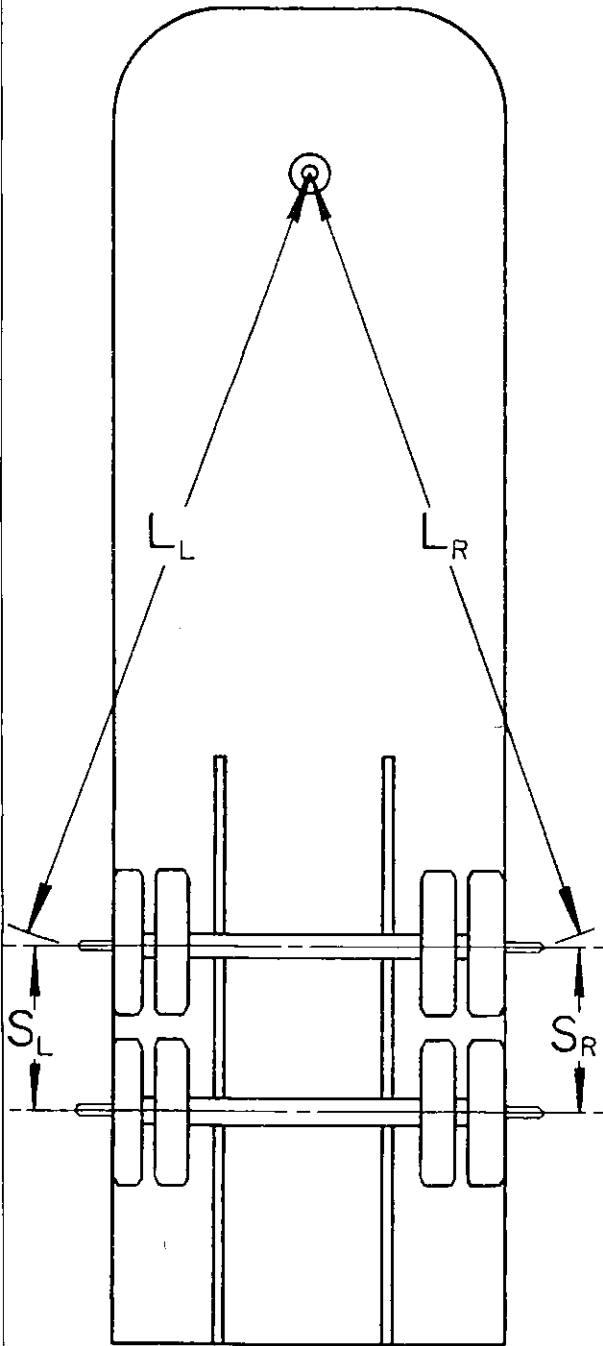
CAUTION



The maximum load that can be put on a trailer tire is dependent upon the speed at which the tire will be used. Consult tire dealer for complete information on the allowable loads for your tires in your application.

** Installed on Goodyear 675175 RTD Tubless Rims

AXLE ALIGNMENT INSTRUCTIONS
TRANSPRO HEAVYWEIGHT



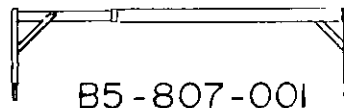
AFTER SUSPENSION INSTALLATION, AND PERIODICALLY THEREAFTER, AXLES SHOULD BE ALIGNED TO INSURE PROPER TRACKING OF TRAILER AND TO AVOID EXCESSIVE TIRE WEAR. FOR BEST RESULTS THE USE OF AXLE AND KING-PIN EXTENSIONS, OR A SUITABLE OPTICAL ALIGNMENT DEVICE, IS RECOMMENDED.

1. Level the empty trailer and bleed air reservoir.
2. Make certain that the equalizers are level and that all spring ends are bearing on wear pads.
3. Align the front axle with the king-pin by adjustment of the forward adjustable torque arm. When properly aligned L_L will equal L_R .
4. In like manner align the rear axle with front axle so that $S_L = S_R$.
5. Tighten adjustable torque arm clamp bolts to 50 lb. ft. torque.
6. After loaded run-in period of 1,000-2,000 miles the axle alignment should be checked and corrected if necessary.

NOTE:

The above procedure is recommended by the suspension manufacturer, however, experience has shown that the L_L dimension (left side) must be approximately $\frac{1}{4}$ inch longer for the trailer to track properly.

ALIGNMENT TOOL



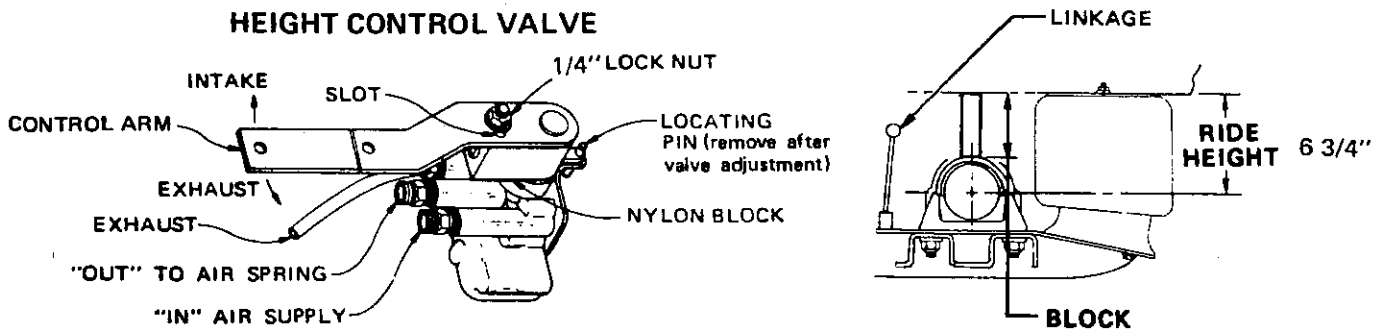
$$L_L = L_R \pm \frac{1}{16}$$

$$S_L = S_R \pm \frac{1}{16}$$

OPERATING & ADJUSTMENT FOR AIR RIDE

The trailer air pressure must be built up and maintained in excess of 65 PSI before operation. The 65 PSI is required to operate the Air Pressure Protection Valve, which maintains a safe air brake pressure in the event of an air loss in the suspension system.

In the event that an air loss should occur on the side, it is recommended that the suspension be completely deflated and temporarily operated on the air springs internal rubber bumpers, which carry the load. The trailer can be carefully operated to the nearest place of service. To deflate the air suspension, remove the link assemblies from the height control valve control arm and axle bracket. Then rotate the control arm to a vertical down (exhaust) position.



ADJUSTMENT PROCEDURE "BLOCK METHOD"

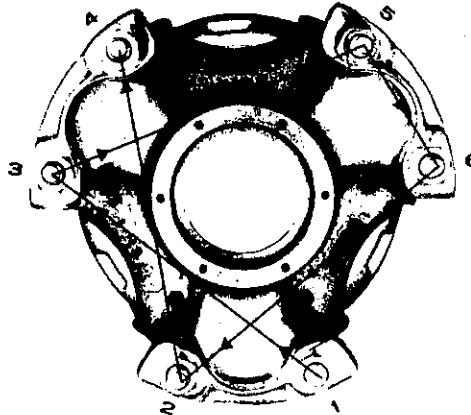
1. Prior to adjustment, the vehicle must be in an unladen condition and supported at king pin at operating height.
2. Disconnect linkage at lower bracket, push control arms to "up" position, and raise vehicle. Position 3" spacer blocks between the frame and axle caps or a jack stand between the trailer frame and ground. Lower vehicle by deflating all air from system. Recheck for proper ride height.
3. Move valve control arms to a 45° "down" position for duration of 10-15 seconds. Return the control arms slowly to the center position and insert wood locating pins into the nylon block and bracket on the height control valves. Then loosen the 1/4" lock nut located on the nylon blocks. This will allow the control arms to oscillate approximately ± 1 ". Reconnect the linkage to the lower brackets.
4. Retighten the 1/4" lock nuts at the nylon blocks to 30-45 in. lbs. Complete this operation on both valves.
5. REMOVE the wood locating pins that were inserted in Step 3 and raise vehicle to remove the spacer blocks or jack stands. The height control valves may be used as an improvised jack, whereas the linkage must be disconnected at the lower bracket. Then push control arms to an "up" position to raise vehicle and remove spacers. Completely exhaust system and reconnect linkage. The suspension system will return to and maintain the proper ride height.

If the correct height cannot be attained, check and correct one or more of the following:

1. Adequate Air Supply Pressure
2. Air Leakage
3. Defective Air Pressure Protection Valve
4. Over-Extension of Air Spring

INSTRUCTIONS FOR PROPER RIM AND TIRE ALIGNMENT

3-SPOKE WHEEL



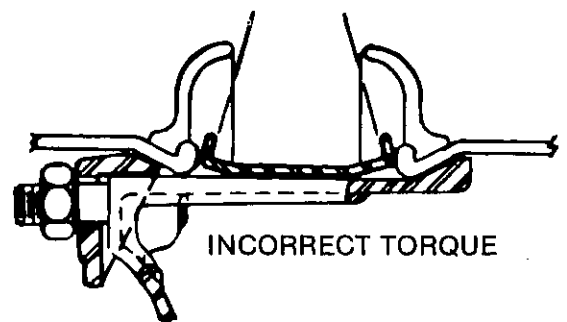
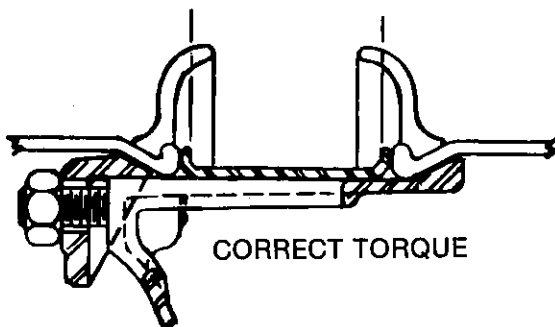
3-SPOKE WHEEL

1. Lightly tighten hex nuts on studs 1, 3, and 5 until rims are properly seated and tires are aligned.
2. Lightly tighten hex nuts on studs 2, 4, and 6.
3. Tighten all hex nuts on studs to recommended torque as listed below.
4. Recheck tire alignment.

RECOMMENDED TORQUE FOR RIM NUTS

Stud Size	Torque Foot/Pounds
3/4-10	175-200

IMPORTANT NOTICE: The rim clamps are **NOT** designed to "heel" against the face of the spoke. Over-torqueing can deform rim spacer and rim lugs. **DO NOT OVER TORQUE.** Check and retorquing after unit has been in service for approximately 100 miles. This **MUST** be done after each tire change.



BRAKE ADJUSTMENT

Prior to shipping, Standard Forge axles with brakes and drums have the brakes adjusted to provide maximum braking. However, if after the axle is installed on the trailer, or when linings are later replaced and the brakes require re-adjusting, the following procedure should be followed:

1. Have the wheel raised off the ground-

While many people attempt to adjust brakes with the wheel on the ground, it is very unlikely that satisfactory adjustment can be made in this manner. Bearing and drum wear, lining radius tolerances, and the relationship of the radial dimensions of component parts with the weight of the trailer on the axle, will not allow for true alignment to afford maximum braking without brake "drag".

2. Adjusting slack-

- A. With the wheel turning slightly (by hand), rotate the adjusting screw on the slack adjuster until the wheel is locked by the brakes.
- B. Back off the adjusting screw until the wheel turns freely with no evidence of brake "drag". Usually two (2) "clicks" of the slack adjuster screw is sufficient to provide the proper clearance.

3. Brake lining-

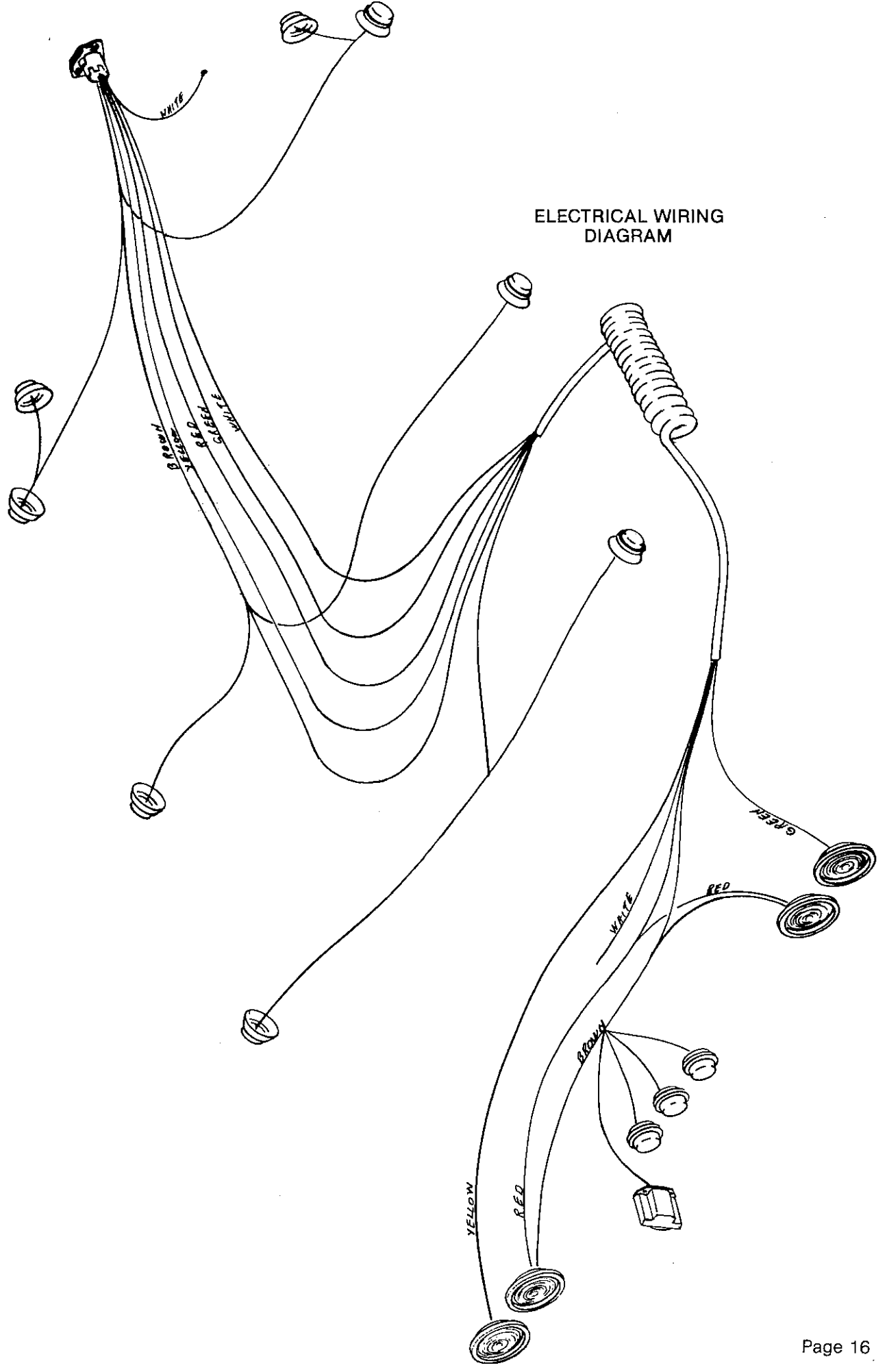
- A. Linings should be inspected for wear at least every 30,000 to 40,000 miles.
- B. Lining wear, "Rule of Thumb"
After adjusting brakes, if the brake will not release (cam returns to closed position), the linings should be replaced.

Under no circumstances should linings be used to the point where the rivets or screws are above or level with the lining surface.

WHEEL BEARING ADJUSTMENT

Tighten inner nut while turning the wheel in both directions, until there is a slight bind so all bearing surfaces are in contact. Then back off inner nut 1/3 turn to allow the wheel to rotate freely. Install lockwasher and tongue washer. Tighten jam or outer nut to 250 to 300 foot-pounds torque. Final bearing adjustment should be with .001" to .010" end play. Lock nuts in this position.

ELECTRICAL WIRING
DIAGRAM



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.



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

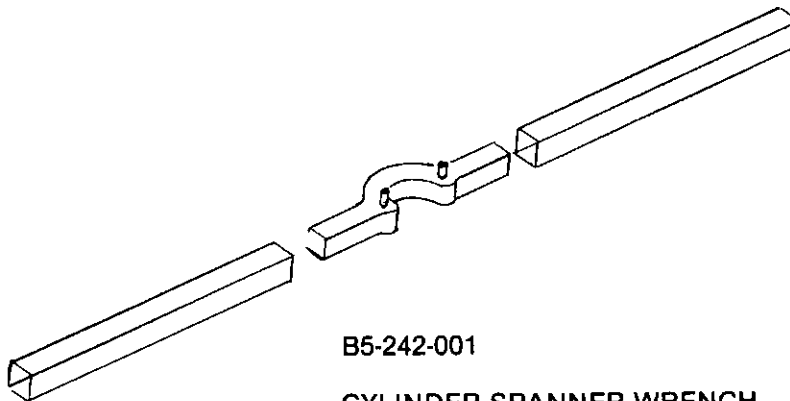
With the cylinder removed from the machine, retracted, and drained of oil, proceed as follows:

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.

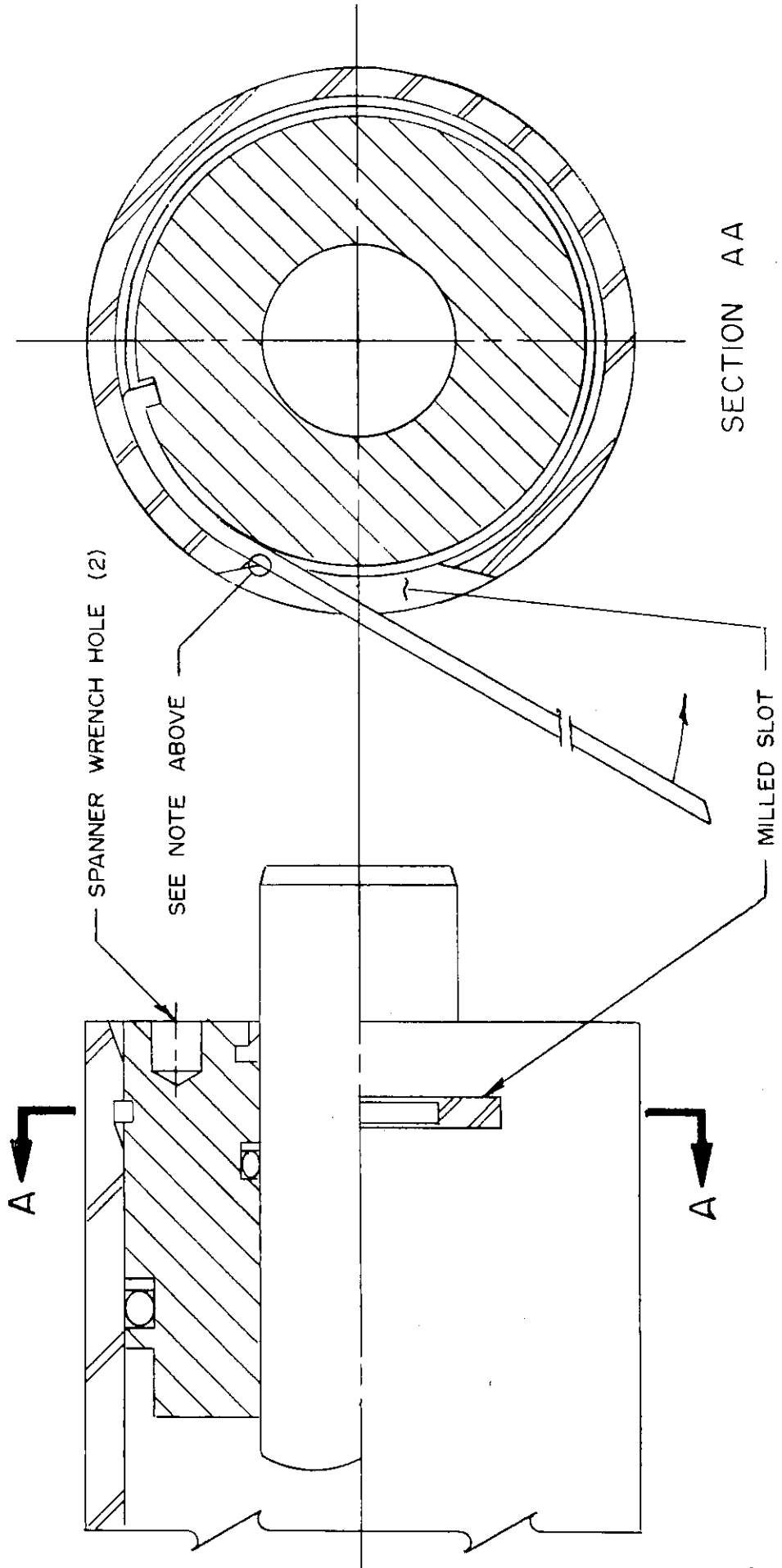


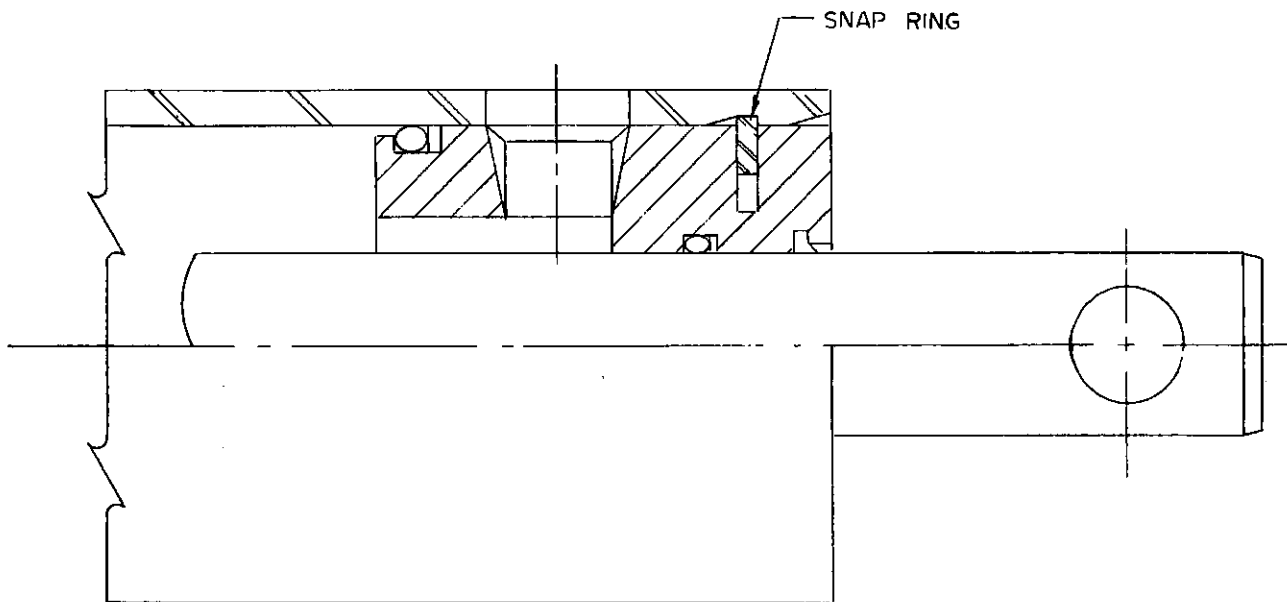
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CYLINDER SPANNER WRENCH

DISASSEMBLY & REASSEMBLY DIAGRAM
SPIN-IN RING RETAINER

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





DISASSEMBLY & REASSEMBLY
SNAP RING RETAINER

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

DISASSEMBLY

1. Secure cylinder in a vise or other method to prevent rotation. Insure immediate area is clean so parts can be layed out.
2. Using snap ring pliers remove snap ring from gland of cylinder.
 - A. Unretained snap ring just compress and remove.
 - B. Retained (can only see pin holes in window area) snap ring, pull rod within 3-6 inches of full extension, compress ring and at the same time with a quick pull of rod drive gland out of cylinder.
3. After rod assembly has been removed from cylinder, remove gland.
 - A. If rod clevis is welded on, remove piston to get gland off. If not, just remove clevis and slip gland off.
 - B. If no clevis, slip gland over end of rod. Take care not to damage rod finish.
4. Remove all seals from piston and gland.
5. Inspect parts for damage (nicks, scratches, cracks, etc.)

Before assembly install new seals on piston and gland. Insure all parts are free of contamination (dirt, etc.). Install snap ring on gland.

ASSEMBLY

1. Coat ID of gland with light grease and replace on rod. Replace piston if removed and secure.
2. Coat OD of piston and seal area on gland with light grease. Apply light coat of hydraulic oil to ID of tube. Insert rod assembly into tube taking care not to damage threads, rod or seals.
3. Rotate gland to locate port with hole in tube, compress snap ring and lightly tap gland into place, relax snap ring. **Insure that snap ring is in groove.**
4. Replace clevis if removed.
5. Test cylinder-cylinder is now ready for reassembly in machine.

COMMON REPLACEMENT ITEMS

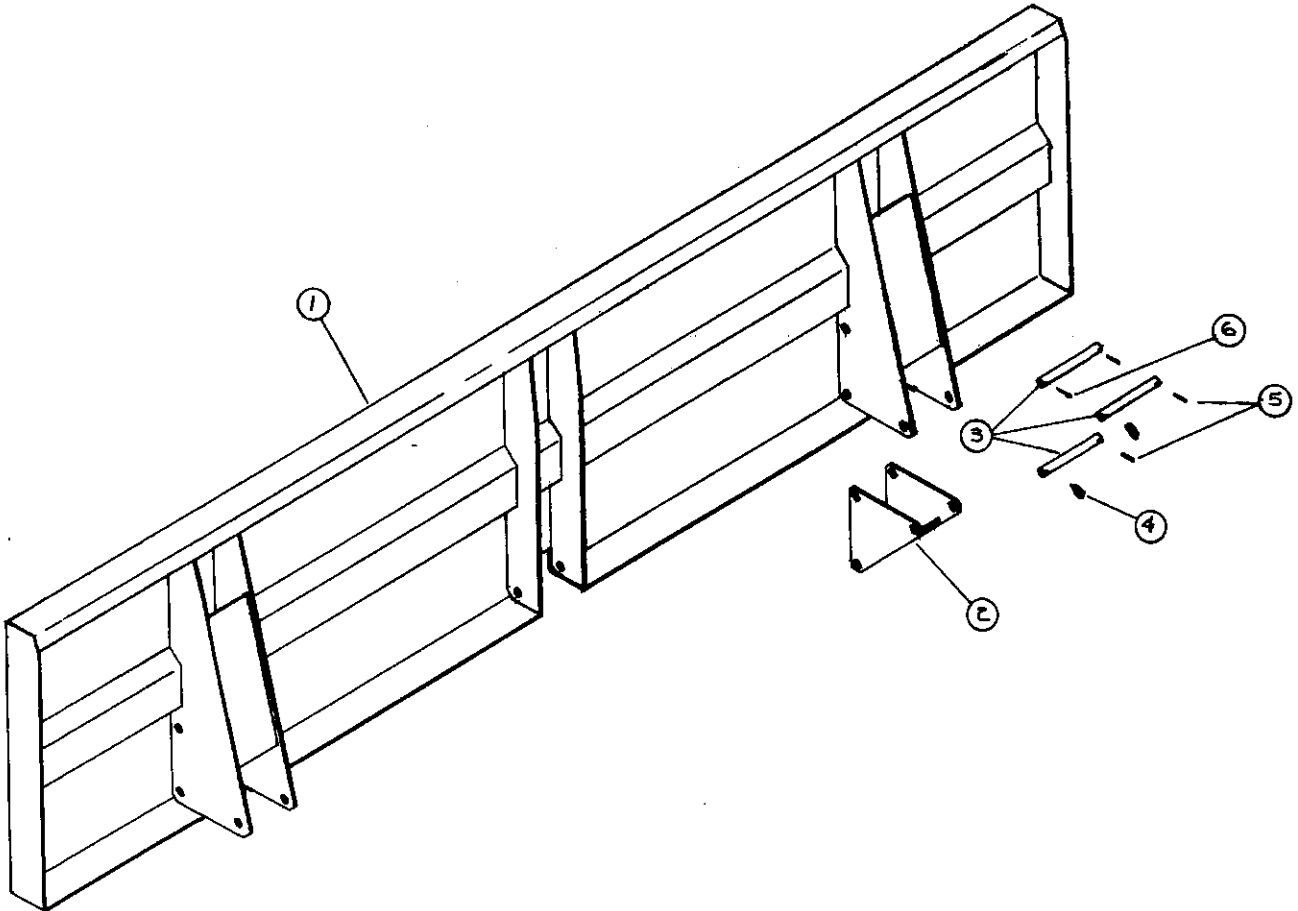
Item	Part Number	Description	Quantity
1	1/2-6 x 25	Wire rope 1/2"	Spec. lgth. req.
2	1426-562-02	3/8" High test chain	3 ft.
3	6470-431-00	3/8 Clevis grab hook	1
4	1/2 W R clamp	Wire rope clamp	2
5			1
6			1
7	1-DSL Latch	Tool box latch	1
8	BSL-6-4	Rivet	4

DECALS

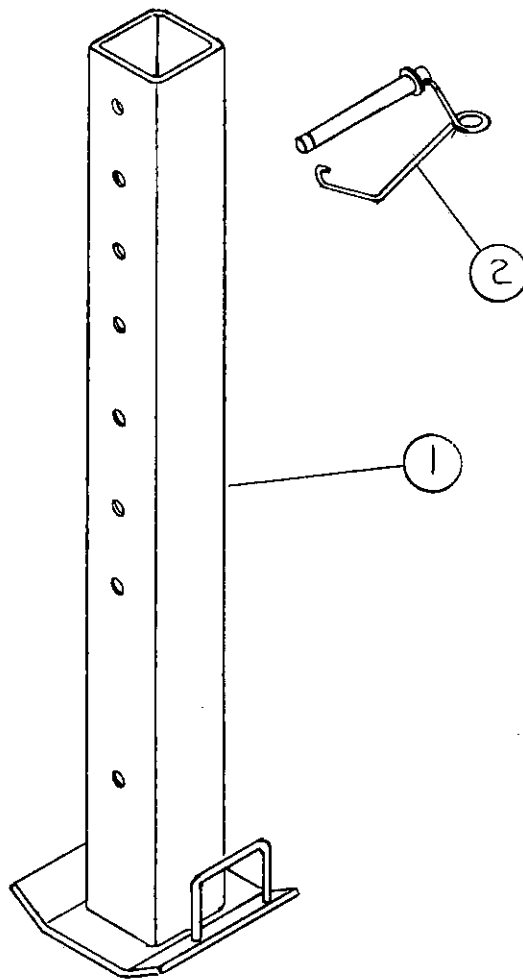
9	1-573-010001	Decal, Landoll Black (6 1/2 x 11 1/4)
10	3-573-010039	Instruction Decal, hyd. controls
11	1-573-010013	Decal, Landoll White (6 1/2 x 11 1/4)
12	3-573-010025	Decal, Winch warning
13	3-573-010031	Decal, Bumper
14	3-573-010035	Decal, Concentrated load
15	3-573-010036	Patent Decal
16	3-573-010038	Decal, Caution, axle position
17	3-573-010039	Decal, Trailer operation
18	3-573-010042	Decal, Front Stripe White (Left)
19	3-573-010043	Decal, Front Stripe White (Right)
20	3-573-010046	Decal, Tapered Stripe White (Left)
21	3-573-010047	Decal, Tapered Stripe White (Right)
22	3-573-010049	Decal, Landoll White
23	3-573-010051	Decal, Hauloll White
24	3-573-010040	Decal, Front Stripe Black (Left)
25	3-573-010041	Decal, Front Stripe Black (Right)
26	3-573-010044	Decal, Tapered Stripe Black (Left)
27	3-573-010045	Decal, Tapered Stripe Black (Right)
28	3-573-010048	Decal, Landoll Black
29	3-573-010050	Decal, Hauloll Black

350 FRONT EXTENSION

Item	Part Number	Description
1	3-276-010309	Front Extension 350
2	3-276-010311	Support Assy Ft. Ext.
3	3-557-010052	Pin
4	7637	Lynch Pin
5	0600-250-01000	¼ x 1 Roll Pin
6	¾/16 x 1 ¼	Cotter Pin

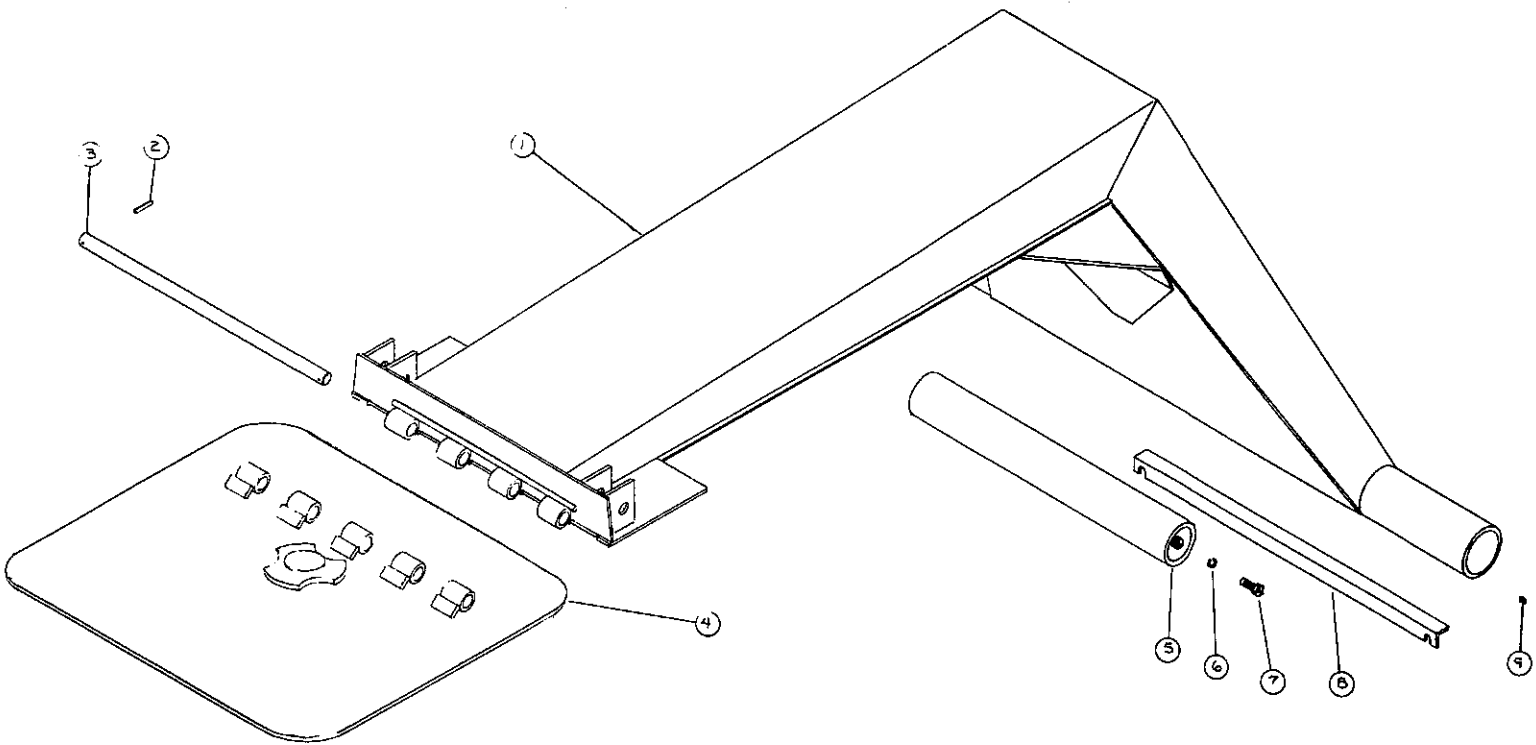


Item	Part Number	Description
1	3-311-010145	Parking Stand
2	346SL	Lock Hitch Pin



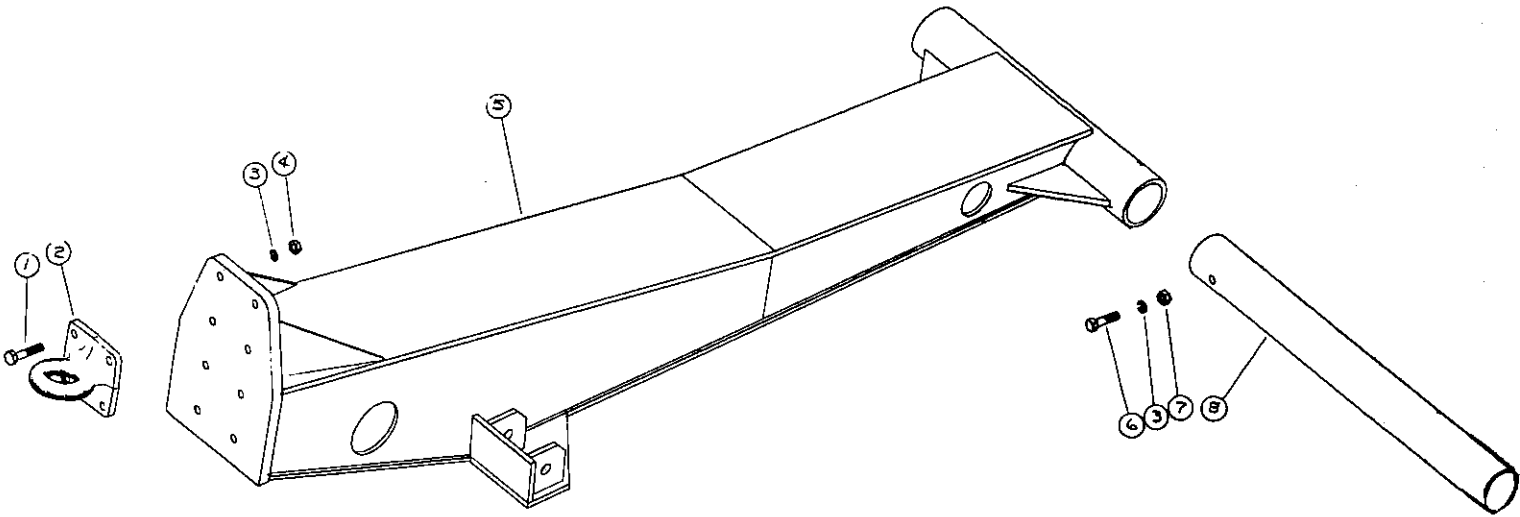
350 FIFTH WHEEL GOOSENECK

Item	Part Number	Description	Quantity
1	3-375-010154	5th Wheel Hitch Assy.	1
2	0600-375-0200	Roll Pin	2
3	3-557-010030	Hinge Pin, Fifth Wheel	1
4	3-375-010250	5th Wheel	1
5	3-375-010171 3-375-010228	Inner Hinge Tube 96" Wide Inner Hinge Tube 102"/9' Wide	2
6	¾ SLW	Split Lockwasher	2
7	¾-10 x 2½ CS	Hex Cap Screw	2
8	3-120-010074	Lock Inner Hinge Tube	1
9	5010	Zerk Fitting ¼ SAE	2



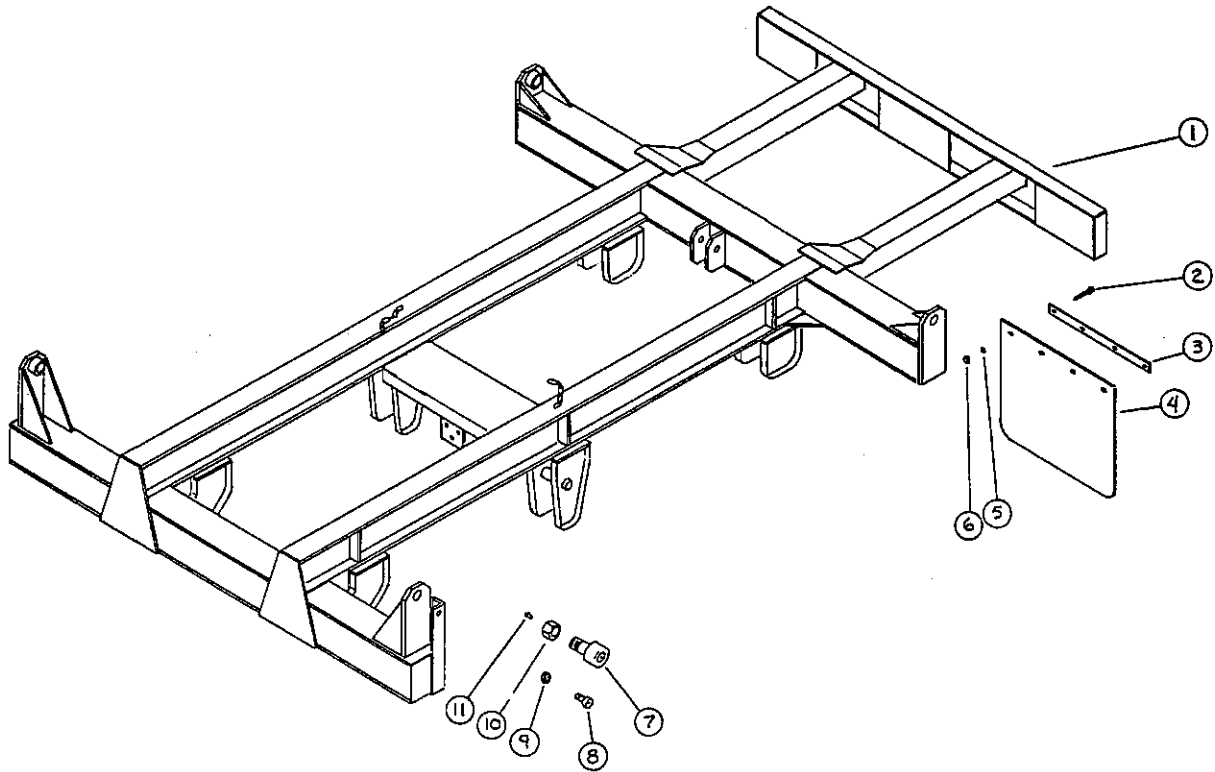
345 HITCH

Item	Part Number	Description	Quantity
1	3/4-10 x 3CS GR8	3/4 x 3 Bolt Grade 8	4
2	1385	Pintle Eye	1
3	3/4 SLW	Split Lock Washer	5
4	3/4-10 HFN GR8	Hex Nut Grade 8	4
5	3-375-010140	5' Hitch Assy	1
	3-375-010152	4' Hitch Assy (Standard)	
	3-375-010147	7' Hitch Assy	
6	3/4-10 x 2-1/2 CS	3/4 x 2-1/2 Bolt Grade 5	1
7	3/4-10 HFN	Nut Grade 2	1
8	3-311-010578	Hinge Tube	1

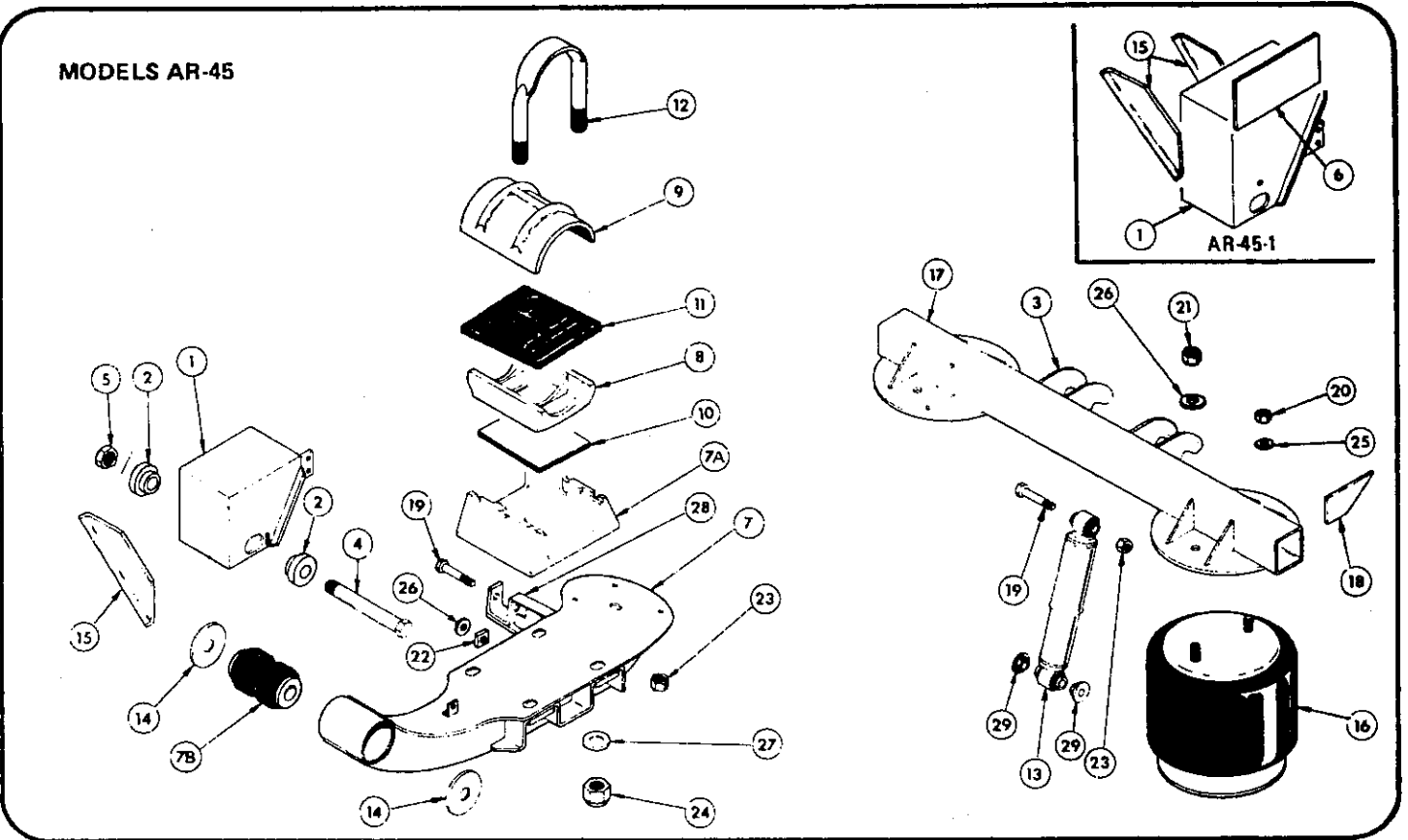


UNDERCARRIAGE

Item	Part Number	Description	Quantity
1		Undercarriage Perimeter Beam	1
2	3/8-16 x 3 HHCS	3/8 x 3 Bolt	8
3	3-762-010017	Clamp, Mud Flap	2
4	2-485-010001	Mud Flap	2
5	3/8 SLW	3/8 Lockwasher	8
6	3/8-16 HFN	3/8 Nut	8
7	3-076-010005	4" Diameter Cam Follower	4
8	3-076-010006	1 1/2" Diameter Cam Follower	4
9	5/8-18 HFN	5/8 Nut	4
10	2-12 HFN	2" Nut	4
11	5029	Zerk Fitting, Drive In	4



MODELS AR-45



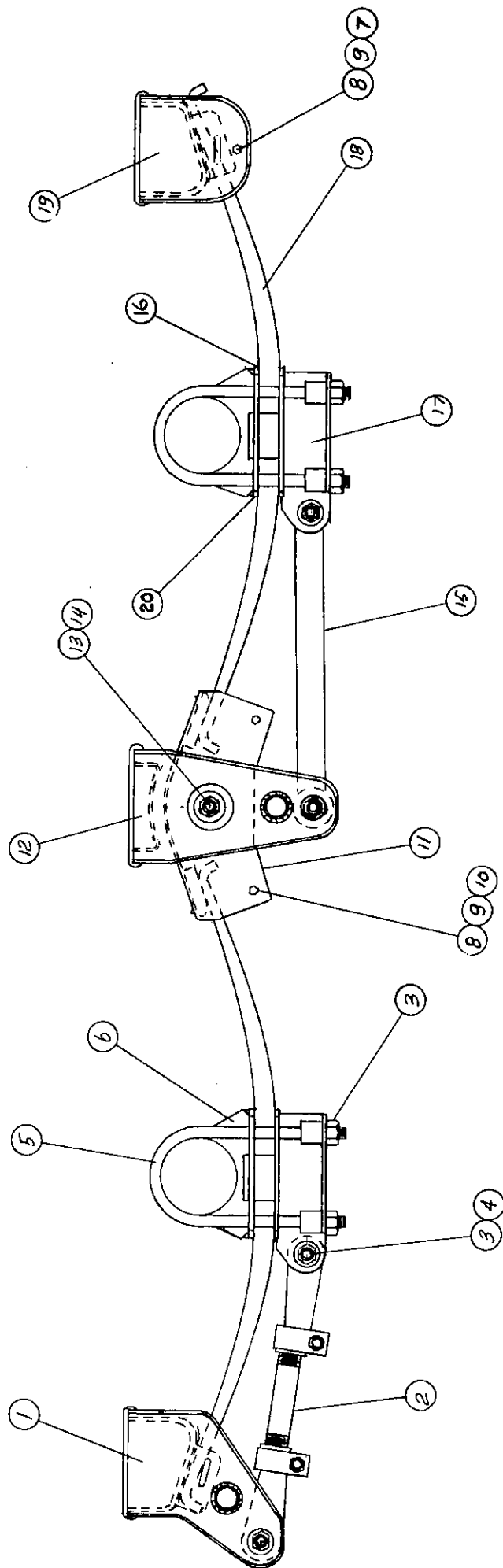
AR-45 PARTS LIST

Item	Part Number	Description	Quantity
1	905 19 361	Frame Bracket - Adj. L.H. (Shown) (AR-45)	1
	905 19 434	Frame Bracket - Adj. L.H. (Shown) (AR-45-1)	1
	905 19 362	Frame Bracket - Fixed R.H. (AR-45)	1
	905 19 435	Frame Bracket - Fixed R.H. (AR-45-1)	1
2	900 08 141	Alignment Bushing	4
3	900 32 561	Upper Shock Mount Bracket	4
4	932 01 046	Cap Screw 1 1/8"-7	2
5	934 00 506	Lock Nut 1 1/8"-7	2
6	900 31 437	Plate (AR-45-1)	2
7	905 15 857	Equalizing Beam Assy. L.H. (Includes 7A & 7B)	1
	905 15 858	Equalizing Beam Assy. R.H. (Includes 7A & 7B)	1
7A	900 01 006	Beam Seat	2
7B	900 08 139	Bushing	2
8	900 01 082	Axle Adapter 5" Rd.	2
9	900 10 032	Axle Cap 5" Rd.	2
10	900 28 075	Rubber Pad	2
11	900 28 047	Rubber Wrapper 5" Rd.	2
12	900 41 878	U-Bolt	4
13	900 44 162	Shock Absorber	2
14	900 36 140	Spacer Washer	4
15	900 23 002	Angle Brace (AR-45)	2
	900 23 002	Angle Brace (AR-45-1)	4
16	905 57 023	Air Spring Assembly	2
17	905 44 573	Crossmember Assembly	1
18	900 31 443	Gusset	2
19	930 03 595	Cap Screw 3/4"-10 x 3 1/2"	4
20	934 00 136	Hex Nut 1/2"-13	2
21	934 00 149	Hex Nut 3/4"-16	2
22	934 00 367	Square Nut 3/4"-10	2
23	934 00 492	Lock Nut 3/4"-10	4
24	934 00 502	Lock Nut 1"-8	8
25	936 00 072	Lock Washer 1/2"	2
26	936 00 077	Lock Washer 3/4"	4
27	939 00 027	Flat Washer 1"	8
28	905 19 425	Lower Shock Bracket	2
29	905 08 004	Replacement Bushing (Four Per Shock Absorber)	8

Equalizing Beam and axle connection parts for 5" rd., 20" wheels; 5" rd., 15" wheels with cam 22 1/2" up from horizontal centerline.

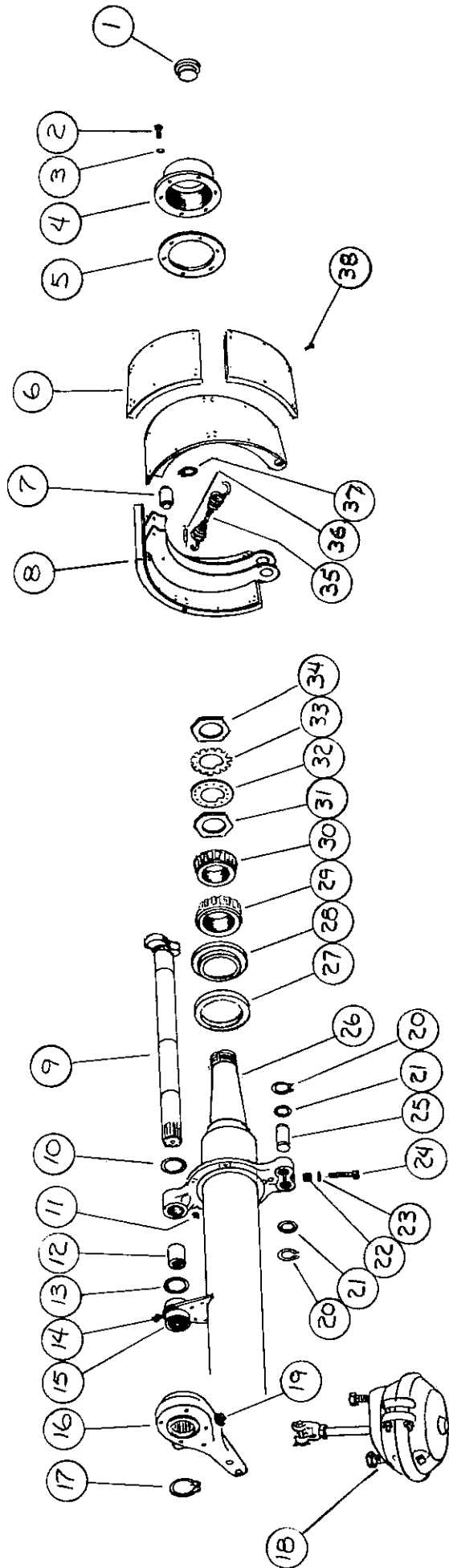
SUSPENSION, SINGLE LEAF
(HW-UM-2-5R-1-U-1H)

Item	Part Number	Description	Quantity
1	0049-00	Hanger, front, undermount	2
2	0030-20	Torq. arm adjust, complete assy., includes the following:	2
	0032-01	eye end, L.H. adj. torq. arm	
	0032-02	eye end, R.H. adj. torq. arm	
	0029-20	adjusting screw	
	0022-00	torque arm bushing	
	0001-19	bolt, 1/2-20 x 3	
	0002-10	nut, hex, 1/2"-20	
3	0002-12	Lock nut 7/8-14	24
4	0001-08	Bolt 7/8-14 x 5 1/4, Gr.5	8
5	0102-12	U-Bolt	8
6	0647-01	Axle Seat	4
7	0379-00	Spring Roller, rear hanger	2
8	0001-10	Hex bolt 1/2-20 x 5	6
9	0002-05	Hex Nut 1/2-20	6
10	0378-00	Spring roller, eq. hanger	4
11	0058-00	Equalizer beam assy. w/bushing & shaft includes the following:	2
	0106-01	Equalizer bushing	
	0106-03	Equalizer shaft	
12	0065-00	Hanger, equalizer, undermount	2
13	0001-14	Bolt, hex 1"-14 x 6 1/4, Gr.5	2
14	0274-01	Lock nut 1-14	2
15	0575-00	Rigid torque arm	2
16	0375-00	Spring liner, delrim	4
17	0508-00	Bottom plate underslung	4
18	0179-01	Spring, one leaf, high arch	4
19	0053-00	Rear hanger, undermount	2
20	0506-01	Spacer	8

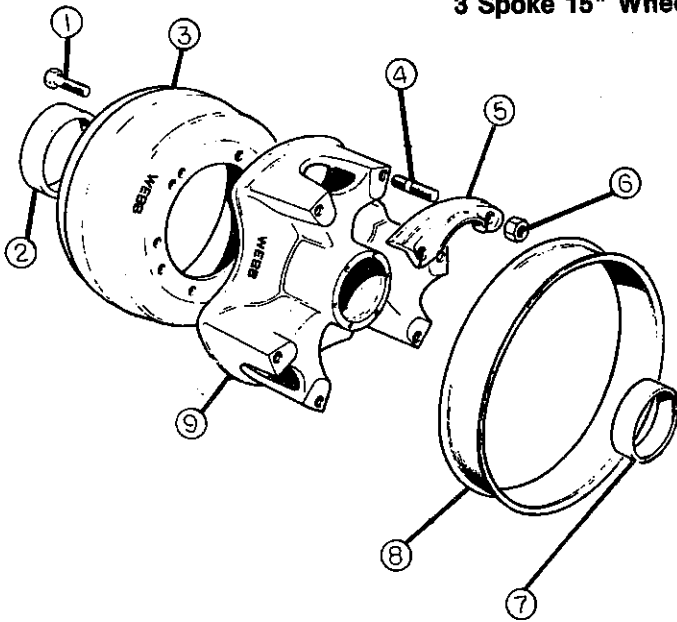


A 19S Axles

Item	Part Number	Description
1	5990	Plug
2	400128	Bolt, hub cap
3	403115	Lock washer
4	4009	Hub cap
5	3067	Gasket, hub cap
6	4591D-MIF-65	Lining set, one set/axle
7	204108-001	Roller
8	201 999-042-1	Brake shoe assy.
9	202103-184	Cam shaft (specify left or right)
10	403149-403150	Washer
11	407101	Grease fitting
12	405129	Spider bushing
13	408101-001	Spider seal
14	407107	Grease fitting
15	209999-019	Cam bracket assy.
16	212128	Slack adjuster
17	214104	Cam lock ring
18	217024-040	Air chamber
19	407110	Zerk fitting
20	214107	Anchor lock ring
21	403147	Washer
22	402102	Clamp nut
23	403113	Clamp bolt washer
24	401101	Clamp bolt
25	203108	Anchor pin
26	A19S-NBLHD	Axle bar assy. 64½ " track
27	1507	Ring-Stemco
28	2109	Seal-Stemco
29	104107	Inner bearing cone
30	104108	Outer bearing cone
31	103103-002	Inner spindle nut
32	105107	Lock washer
33	105106	Tongue washer
34	103102-001	Outer spindle nut
35	208106	Retract spring
36	207100	Retract spring pin
37	214102	Roller retainer
38	404101-001	Rivet (96/Axle)
39	201140	Shoe

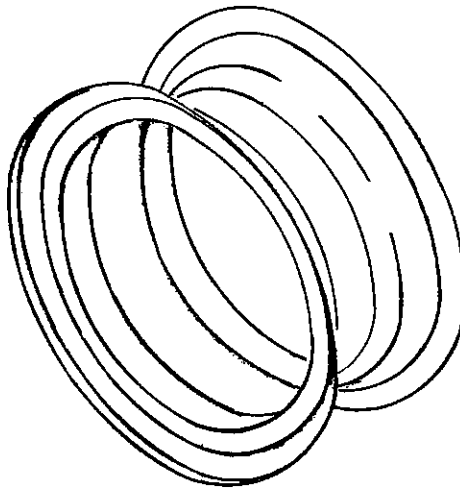


**3-870-010011
3 Spoke 15" Wheel**

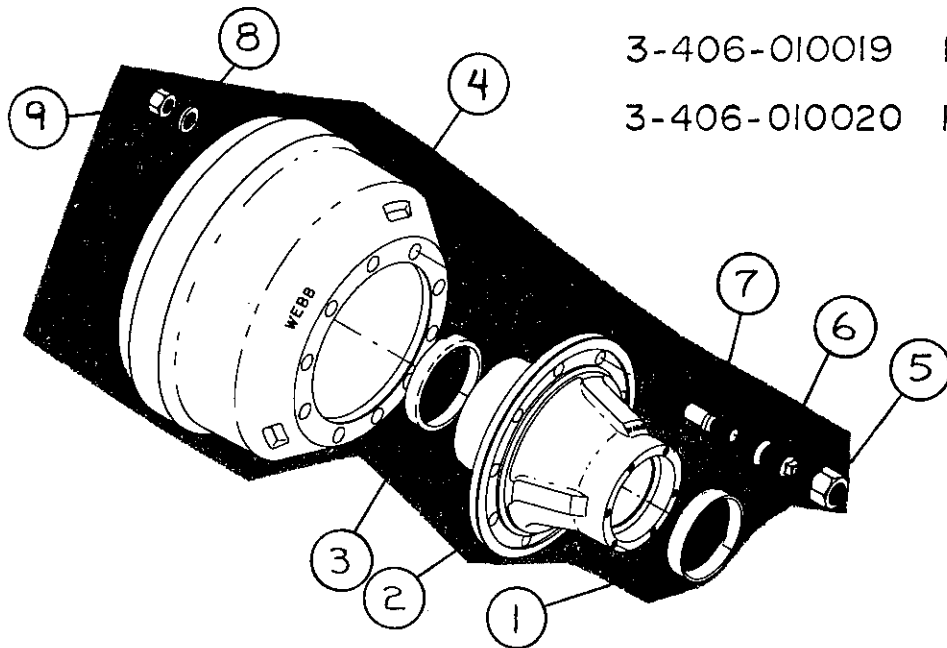


Item	Part Number	Description	Quantity
1	96218	5/8-18 Hex C.S.	6
2	653	Inner Cup	1
3	63617	Brake Drum	1
4	171027	3/4-10 Stud	6
5	3314	Rim Clamp	3
6	74710	3/4-10 Hex Nut	6
7	HM212011	Outer Cup	1
8	41533	Rim Spacer	1
9	8315	Wheel	1

**GOODYEAR
TUBELESS RIM**



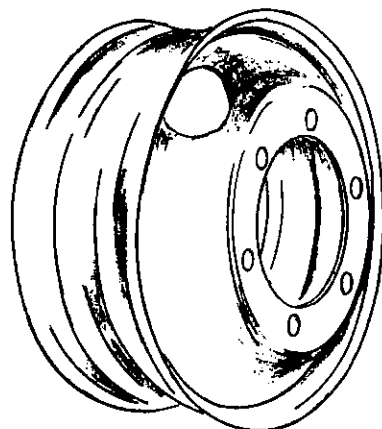
675175 RTD



3-406-010019 L.H. Hub & Drum

3-406-010020 R.H. Hub & Drum

Item	Part Number	Description	Quantity
1	HM212011	Outer Bearing Cup	1
2	1256	Hub	1
3	653	Inner Bearing Cup	1
4	63635	Brake Drum	1
5	178910	R.H. Outer Cap Nut	6
	178921	L.H. Outer Cap Nut	6
6	107080	R.H. Inner Cap Nut	6
	107091	L.H. Inner Cap Nut	6
7	139902	R.H. Stud 3/4-10 UNC	6
	139913	L.H. Stud 3/4-10 UNC	6
8	257	3/4 Flat Washer	6
9	75716	3/4-10 Hex Lock Nut	6



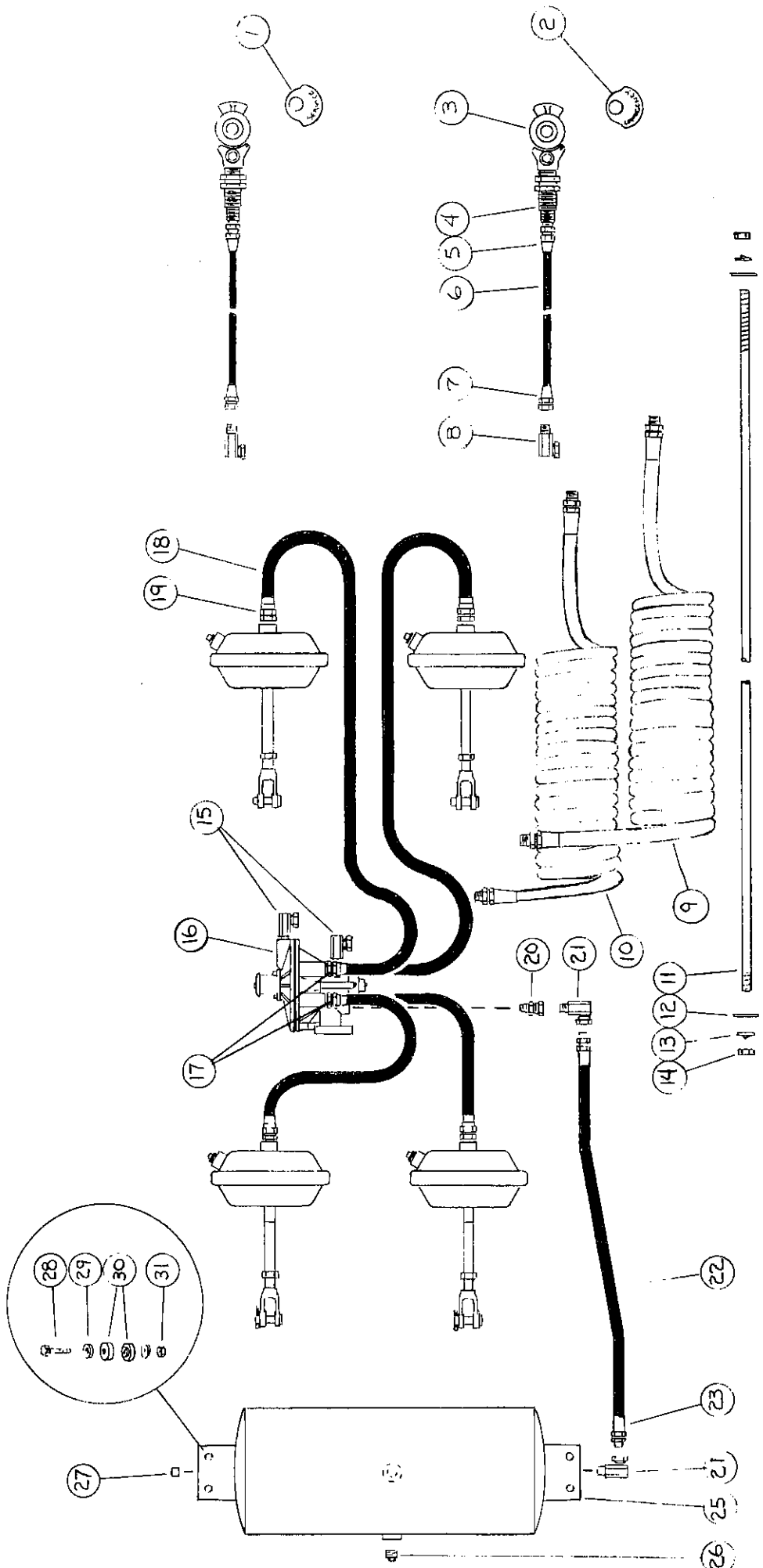
3-870-010012
6.75x17.5 Disc Wheel

MODEL 350 AIR BRAKE SYSTEM

Item	Part Number	Description	Quantity
1	55B61-7	Tag, Service Line	1
2	55B61-6	Tag, Emergency Line	1
3	55B11	Glad Hand	2
4	55B61	Frame Union	2
5	H0168 - 6 x 4	Fitting, 3/8 Tube x 1/4 NPT	2
6	62P6 3/8	3/8 Tubing	
7	1466 x 6 x 6	Fitting 3/8 Tube x 3/8 FPT	2
8	2047-8-6S	Adapt 3/8M 1/2F 90 SWIV	2
9	3-384-010001	Coiled Air Brake Hose, Red	1
10	3-384-010002	Coiled Air Brake Hose, Blue	1
11	3-642-010007	Rod, Hose Support	1
12	5/8FW	Flat Washer	2
13	5/8SLW	Split Lock Washer	2
14	5/8-11HFN	Hex Nut	2
15	2047-6-6S	Adapt 3/8M 3/8F 90 SWIV	2
16	90W101	Relay Valve	1
17	55C31	Hose Fitting 1/4 NPT	4
18	54A6 x 250S	Hose, Air 3/8	
19	55C21	Hose Fitting 3/8 NPT	4
20	2045-8-8S	INT P SWIV EXT P	1
21	2047-8-8S	Adapt 1/2M 1/2F 90 SWIV	2
22	62P8	1/2" Tubing	
23	HO-168-8 x 8	Fitting 1/2 Tube x 1/2 NPT	2
24	HO-159-8BP	1/2" Insert	2
25	55D-74	Air Tank	1
26	3/4 Plug	Black Pipe Plug	1
27	1/2 Plug	Black Pipe Plug	1
28	3/8-16 x 1-3/4CS	Hex Cap Screw	4
29	3/8FW	Flat Washer	8
30	805-2	Step Bushing	8
31	3/8-16HFLN	Hex Lock Nut	4

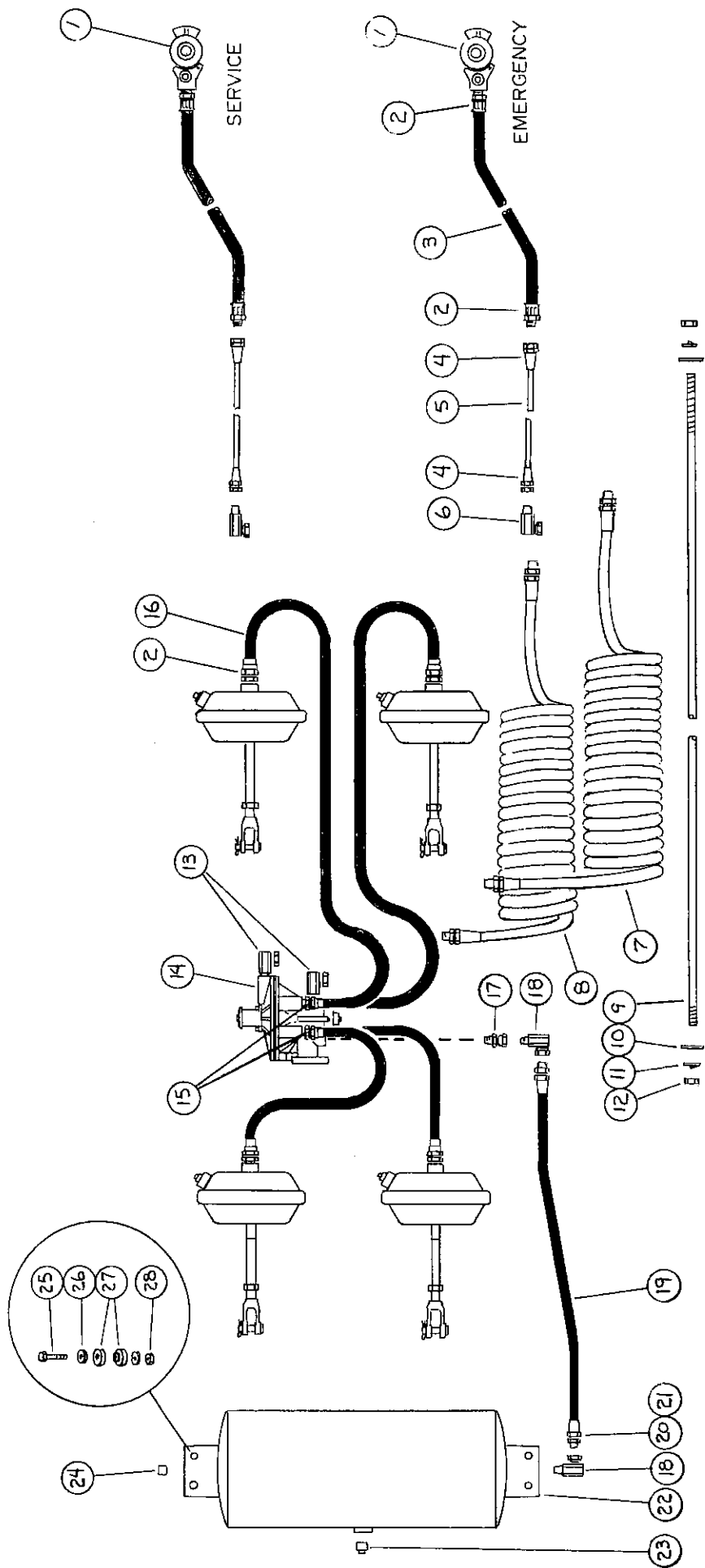
CORRECTIONS

Item	Part Number	Description	Quantity
9	3-384-010001	Coiled Air Brake Hose, Red (15 Ft. Extended)	1
10	3-384-010002	Coiled Air Brake Hose, Blue (15 Ft. Extended)	1
10A	3-384-010003	Coiled Air Brake Hose (20 Ft. Extended)	1
10B	3-384-010004	Coiled Air Brake Hose (20 Ft. Extended)	1



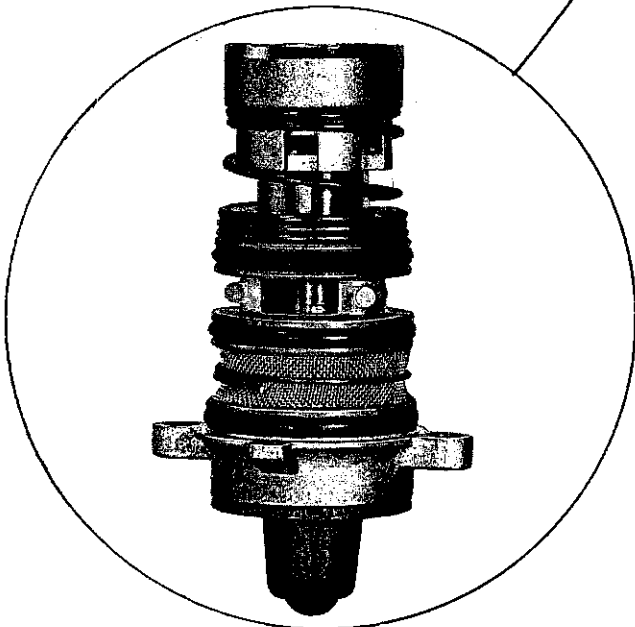
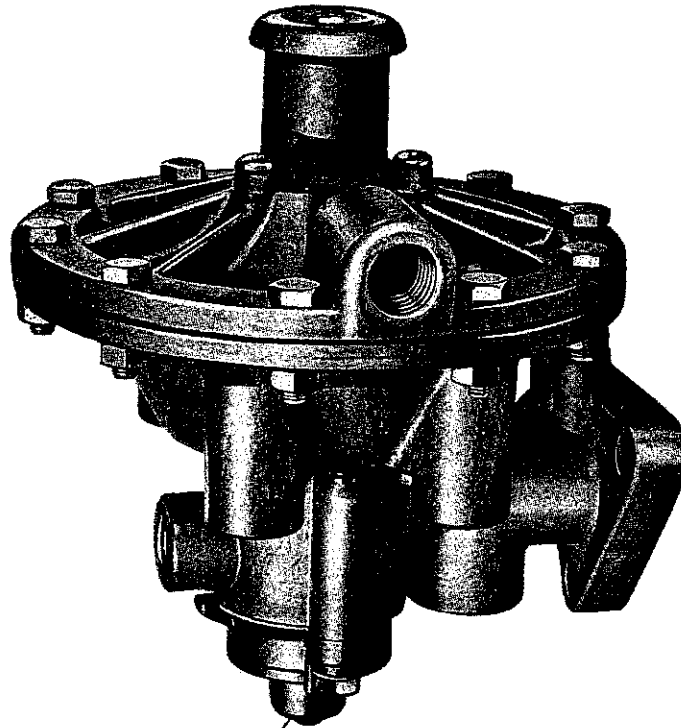
MODEL 345 AIR BRAKE SYSTEM

Item	Part Number	Description	Quantity
1	55B11	Glad Hand	2
2	55C21	Hose Fitting $\frac{3}{8}$ NPT	6
3	54A6 x 250S	Hose, Air $\frac{3}{8}$	
4	1466 x 6 x 6	Fitting $\frac{3}{8}$ Tube x $\frac{3}{8}$ FPT	4
5	62P6 $\frac{3}{8}$	$\frac{3}{8}$ Tubing	
6	2047-8-6S	Adapt $\frac{3}{8}$ M $\frac{1}{2}$ F 90 SWIV	2
7	3-384-010001	Coiled Air Brake Hose, Red	1
8	3-384-010002	Coiled Air Brake Hose, Blue	1
9	3-642-010007	Rod, Hose Support	1
10	$\frac{5}{8}$ FW	Flat Washer	2
11	$\frac{5}{8}$ SLW	Split Lock Washer	2
12	$\frac{5}{8}$ -11HFN	Hex Nut	2
13	2047-6-6S	Adapt $\frac{3}{8}$ M $\frac{3}{8}$ F 90 SWIV	2
14	90W101	Relay Valve	1
15	55C31	Hose Fitting $\frac{1}{4}$ NPT	4
16	54A6 x 250S	Hose, Air $\frac{3}{8}$	
17	2045-8-8S	INR P SWIV EXT P	1
18	2047-8-8S	Adapt $\frac{1}{2}$ M $\frac{1}{2}$ F 90 SWIV	2
19	62P8	$\frac{1}{2}$ " Tubing	
20	HO-168-8 x 8	Fitting $\frac{1}{2}$ Tube x $\frac{1}{2}$ NPT	2
21	HO-159-8BP	$\frac{1}{2}$ " Insert	2
22	55D-74	Air Tank	1
23	$\frac{3}{4}$ Plug	Black Pipe Plug	1
24	$\frac{1}{2}$ Plug	Black Pipe Plug	1
25	$\frac{3}{8}$ -16 x 1- $\frac{3}{4}$ CS	Hex Cap Screw	4
26	$\frac{3}{8}$ FW	Flat Washer	8
27	805-2	Step Bushing	8
28	$\frac{3}{8}$ -16HFLN	Hex Lock Nut	4

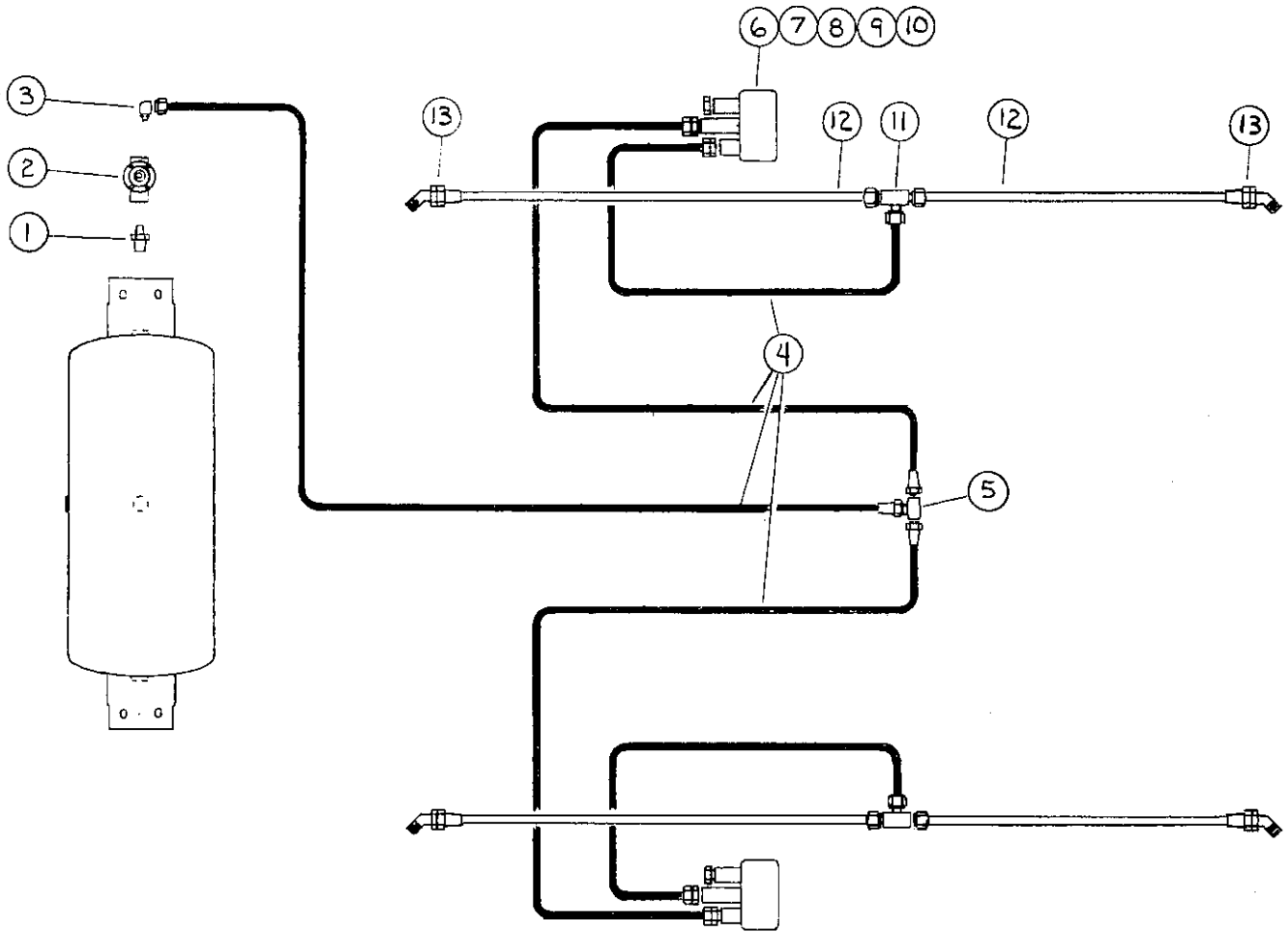


90W-101 VALVE

R90W-101 KIT
VALVE REPAIR



90W-101-4 CARTRIDGE
R90W-101-4 KIT CART. REPAIR



NEWAY AIR RIDE SYSTEM

Item	Part Number	Description	Quantity
1	2083-8-4S	1/2 x 1/4 Hex Nipple	1
2	90554107	*Pressure Protection Valve & Filter	1
2A	SRK-143	Air Filter & O Ring	1
3	1469x4x4	1/4 Pipe x 1/4 Tube 90° Elbow	1
4	62P4	1/4" Tubing	As Required
5	HO-164-4	Tee End Tube 1/4	1
6	90054113	*Height Control Valve & Fitting	2
7	90054442	*Link 5-1/4"	2
8	93400060	*1/4-20 Lock Nut	8
9	93002361	*1/4-20x1-1/4 Cap Screw	4
10	93002349	*1/4-20x3/4 Cap Screw	4
11	1464x6x6x4	Union Tee 3/8x3/8x1/4	2
12	62P6	3/8" Tubing	As Required
13	1480x6	45° Male Elbow 3/8 Tube 1/4 NPT	4

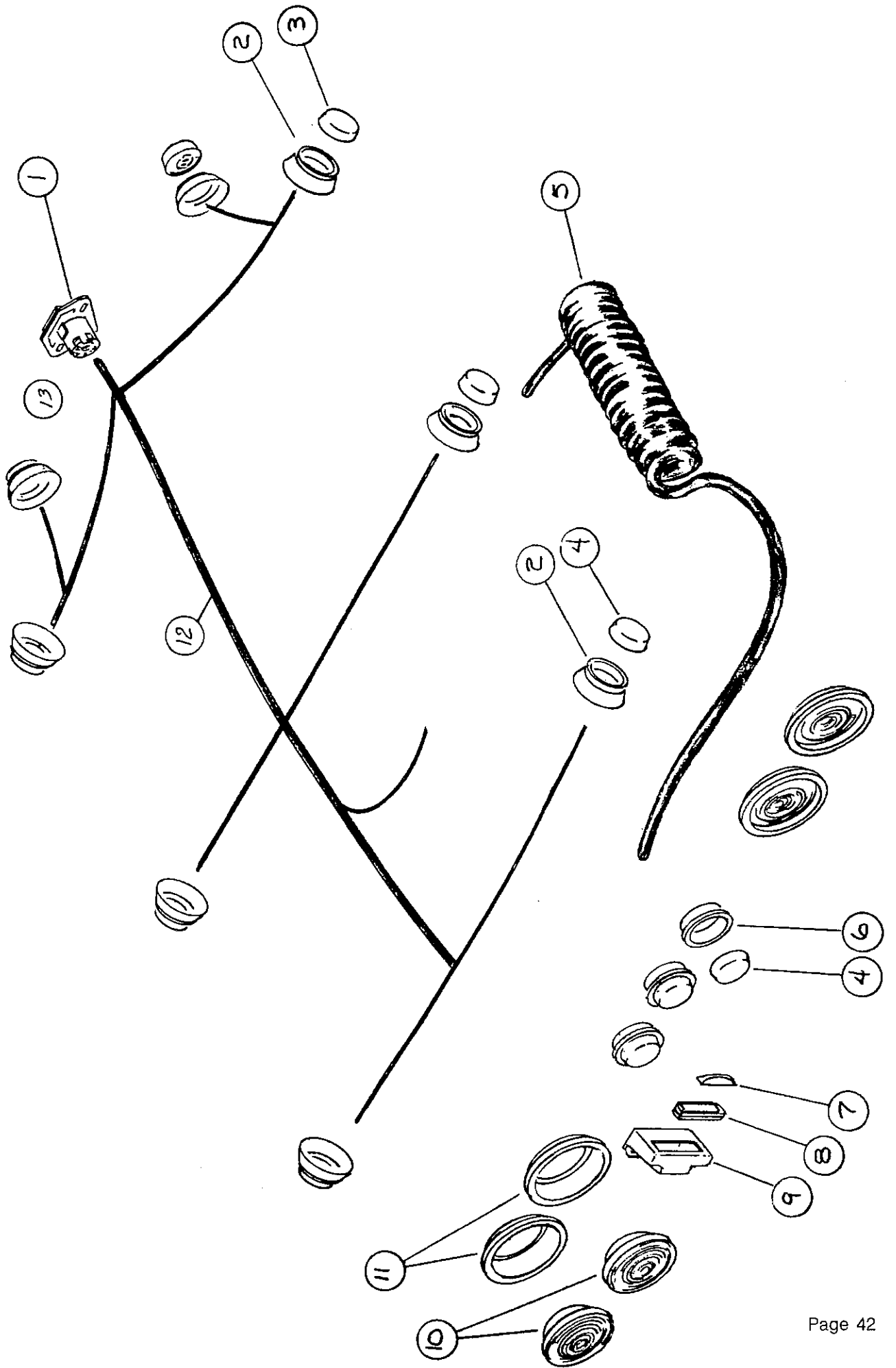
*Parts of Air Control Kit AC-6400

ELECTRICAL SYSTEM

Item	Part Number	Description
1	59 S-7	Electrical Socket (350)
	59 P-7	Electrical Plug (345)
2	10403	Grommet Mount
3	10205 Y	Clearance Light Amber w/Reflector
4	10205 R	Clearance Light Red w/Reflector
5	3-156-010001	Coiled Cable, Elect.
6	10404	Grommet Mount 3"
7	15206	License Plate Lamp
8	15700	Grommet
9	15725	Mounting Bracket
10	40215R	4" Tail Lamp, Red w/Reflector
11	40700	Grommet 4"
12	59 A-7	Multi Conductor Cable
13	59 W-2-3	Rubber Boot

CORRECTIONS

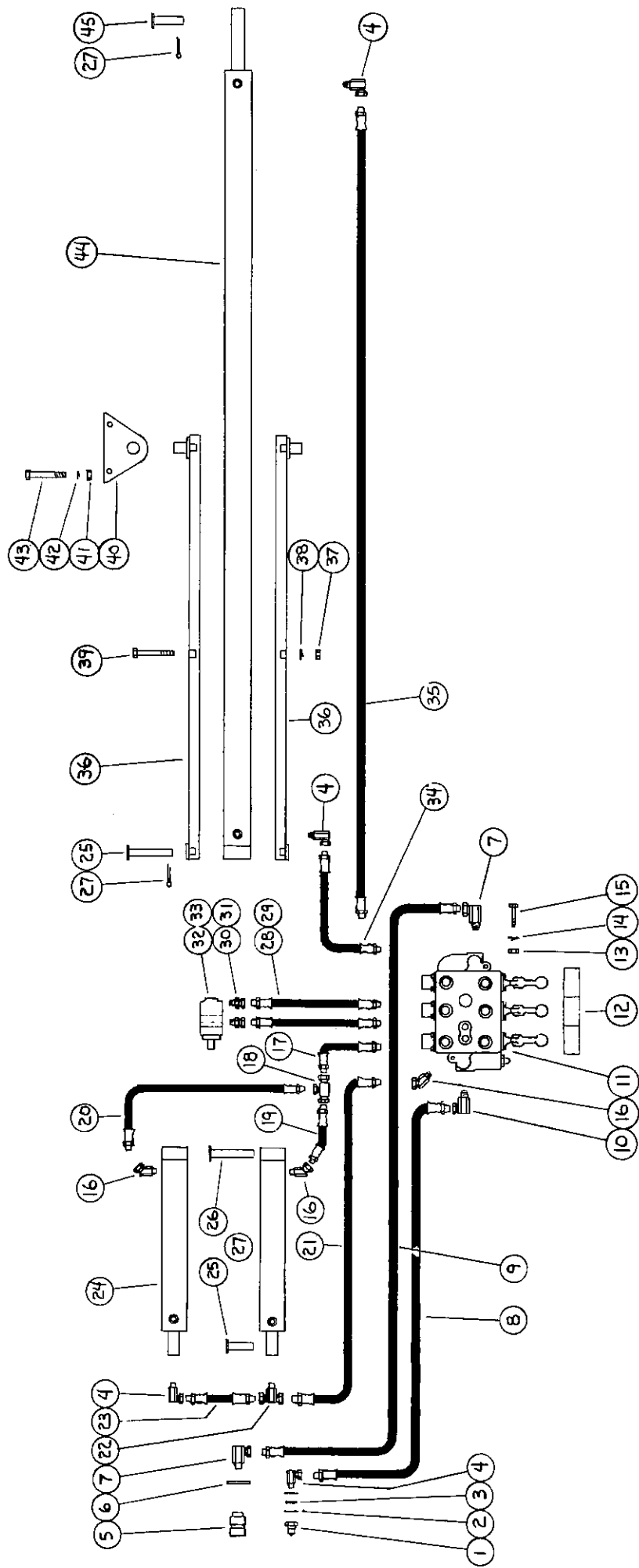
Item	Part Number	Description
5	3-156-010001	Coiled Cable, Elect. (15 Ft. Extended)
5A	3-156-010002	Coiled Cable, Elect. (20 Ft. Extended)



MODEL 350 HYDRAULIC SYSTEM

Item	Part Number	Description	Quantity
1	8010-4	1/2 " Male Coupler Half	1
2	7/8 Mach Bush	7/8 Machinery Bushing	2
3	1/2 Hose Washer	Garden Hose Washer	1
4	2047-8-8S	Adapt 1/2M 1/2F 90 Swiv	4
5	S25F-6	3/4 " Female Coupler Half	1
6	110-7391	1-1/4 SAE Flat Washer	7
7	2047-12-12S	Adapt 3/4M 3/4F 90 Swiv	2
8		1/2 " Hose Assy. 197 "	1
9		3/4 " Hose Assy. 202 "	1
10	1-007-010013	Adapt 1/2F 3/4M 90 Swiv	1
11	BA3111AAAG3EAO	Valve 3 Spool w/Power Beyond	1
12	3-573-010057	Instruction Decal	1
13	3/8-16HFN	Hex Nut	3
14	3/8SLW	Split Lock Washer	3
15	3/8-16x2CS GR5	Hex Head Cap Screw	3
16	2049-8-8S	Adapt 1/2M 1/2F 45 Swiv	8
17	2-397-010002	Hose Assy. 36 "	1
18	2255-8-8S	Tee Internal Pipe Swivel	1
19	2-397-010006	1/2 " Hose Assy. 28 "	1
20	2-397-010008	1/2 " Hose Assy. 68 "	1
21	3-397-010020	1/2 " Hose Assy. 118 "	1
22	2254-8-8S	Adapt Tee 1/2P x 1/2P x 1/2	1
23	3-311-010031	Hose Assy. 31 "	1
24	3-242-010061	Cylinder 4 x 42 (R964)	2
25	3-557-010059	Pin, Cyl. Rod End	2
26	3-557-010033	Pin, Cyl. Butt End	3
27	3/16 x 2-1/4	Cotter Pin	6
28	2-397-010006	1/2 " Hose Assy. For Winch in Slope	2
29	3-397-010021	1/2 " Hose Assy. 148 " For Winch in upper deck	2
30	2066-8-10S	O-Ring Adapt 12000# Winch	2
31	2166-8-12S	O-Ring Adapt 20000# Winch	2
32	104-1003	Winch Motor 12000# Winch	1
33	109-1117	Winch Motor 20000# Winch	1
34		1/2 " Hose Assy.*	1
35		1/2 " Hose Assy.*	1
36	3-120-010073	Brkt. Assy., Cylinder Trunion	2
37	1/2-13HFN	Hex Nut	6
38	1/2SLW	Split Lock Washer	6
39	1/2-13x6HHCS	Hex Head Cap Screw	6
40	3-311-010762	Mtg. Brkt. Cylinder Trunion	2
41	3/4-10HFN	Hex Nut	4
42	3/4SLW	Split Lock Washer	4
43	3/4-10 x 6 HHCS	Hex Head Cap Screw	4
44	3-242-010060	Cylinder 4 x 126 (K797)	1
45	3-557-010032	Pin, Cyl. Rod End	1

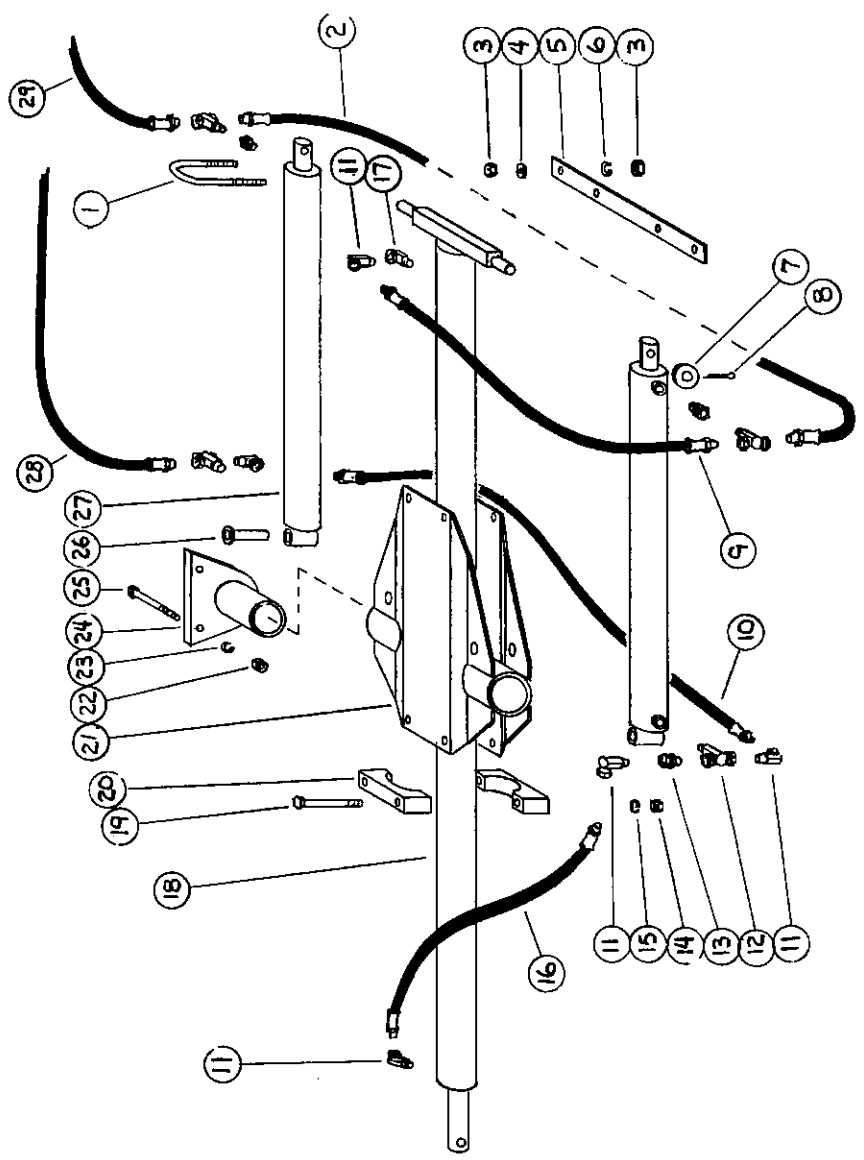
* Hose Length as Required



LOW LOAD ANGLE PARTS LIST

Item	Part Number	Description	Quantity
1	3-102-010022	U-Bolt Cyl. Support	2
2	3-397-010032	Hose Assy. 33"	1
3	1/2-13HFN	Hex Nut	4
4	1/2FW	Flat Washer	4
5	3-146-010001	Rubber Bumper, Cylinder	2
6	1/2SLW	Split Lock Washer	4
7	RRT146 x .25	2" O.D. x 1 1/4 I.D. x 1/4	2
8	3/16 x 2 1/4	Cotter Pin	5
9	2-397-010008	Hose Assy. 68"	1
10	2-397-010003	Hose Assy. 44"	1
11	2047-8-8S	Adapt 1/2M 1/2F 90 Swiv	5
12	2254-8-8S	Adapt Tee 1/2P x 1/2P x 1/2	4
13	2045-8-8S	Int. P Swivel Ext. P	3
15	5/8SLW	Split Lock Washer	4
16	2-397-010009	Hose Assy. 86"	1
17	2049-8-8S	Adapt 1/2M 1/2F 45 Swiv	1
18	3-242-010032	Cylinder Assy. LLA	1
19	5/8-11 x 8 HHCS	Hex Cap Screw	4
20	3-120-010117	Nylatron Bearing	4
21	3-120-010125	Cylinder Trunnion Assy.	1
22	3/4-10 HFN	Hex Nut	4
23	3/4SLW	Split Lock Washer	4
24	3-120-010128	Cylinder Trunnion Mt. Assy.	2
25	3/4-10 x 6 HHCS	Hex Cap Screw	4
26	3-557-010031	Pin Cyl.	2
27	3-242-010061	Cylinder 4 x 42 (R964)	2
28		1/2" Hose Assy.*	1
29		1/2" Hose Assy.*	1

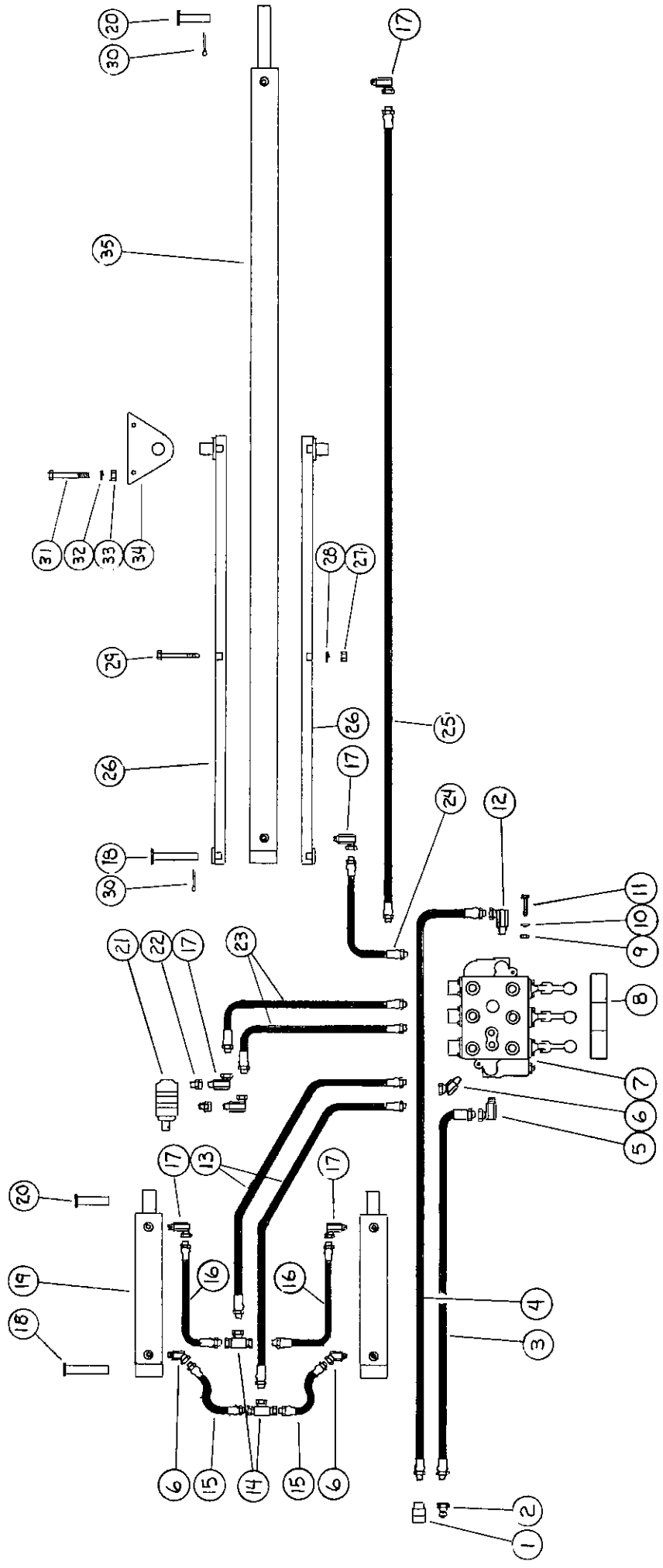
*Hose Length as Required



MODEL 345 HYDRAULIC SYSTEM

Item	Part Number	Description	Quantity
1	S25F-6	3/8" Female Coupler Half	1
2	8010-4	1/2" Male Coupler Half	1
3		1/2" Hose Assy.*	1
4		3/4" Hose Assy.*	1
5	1-007-010013	Adapt 1/2 F 3/4 M 90 Swiv	1
6	2049-8-8S	Adapt 1/2 M 1/2 F 45 Swiv	8
7	BA3111AAAG3EAO	Valve 3 Spool w/Power Beyond	1
8	3-573-010057	Instruction Decal	1
9	3/8-16HFN	Hex Nut	3
10	3/8SLW	Split Lock Washer	3
11	3/8-16 x 2CS GR5	Hex Head Cap Screw	3
12	2047-12-12S	Adapt 3/4 M 3/4 F 90 Swiv	1
13	3-397-010019	1/2" Hose Assy. 99"	2
14	2255-8-8S	Tee Internal Pipe Swivel	2
15	3-397-010018	1/2" Hose Assy. 21"	2
16	3-397-010037	1/2" Hose Assy. 48"	2
17	2047-8-8S	Adapt 1/2 M 1/2 F 90 Swiv	6
18	3-557-010033	Pin, Cyl. Butt End	3
19	3-242-010062	Cylinder 4 x 24	2
20	3-557-010032	Pin, Cyl. Rod End	3
21	104-1003	Winch Motor	1
22	2066-8-105	O-Ring Adapt	2
23	2-397-010003	1/2" Hose Assy. 44"	2
24		1/2" Hose Assy.*	1
25		1/2" Hose Assy.*	1
26	3-120-010073	Brkt. Assy. Cylinder Trunnion	2
27	1/2-13HFN	Hex Nut	6
28	1/2SLW	Split Lock Washer	6
29	1/2-13 x 6HHCS	Hex Head Cap Screw	6
30	3/16 x 2-1/4	Cotter Pin	6
31	3/4-10 x 6HHCS	Hex Head Cap Screw	4
32	3/4SLW	Split Lock Washer	4
33	3/4HFN	Hex Nut	4
34	3-311-010762	Mtg. Brkt. Cylinder Trunnion	2
35	3-242-010060	Cylinder 4 x 126 (K797)	1

*Hose Lengths as Required



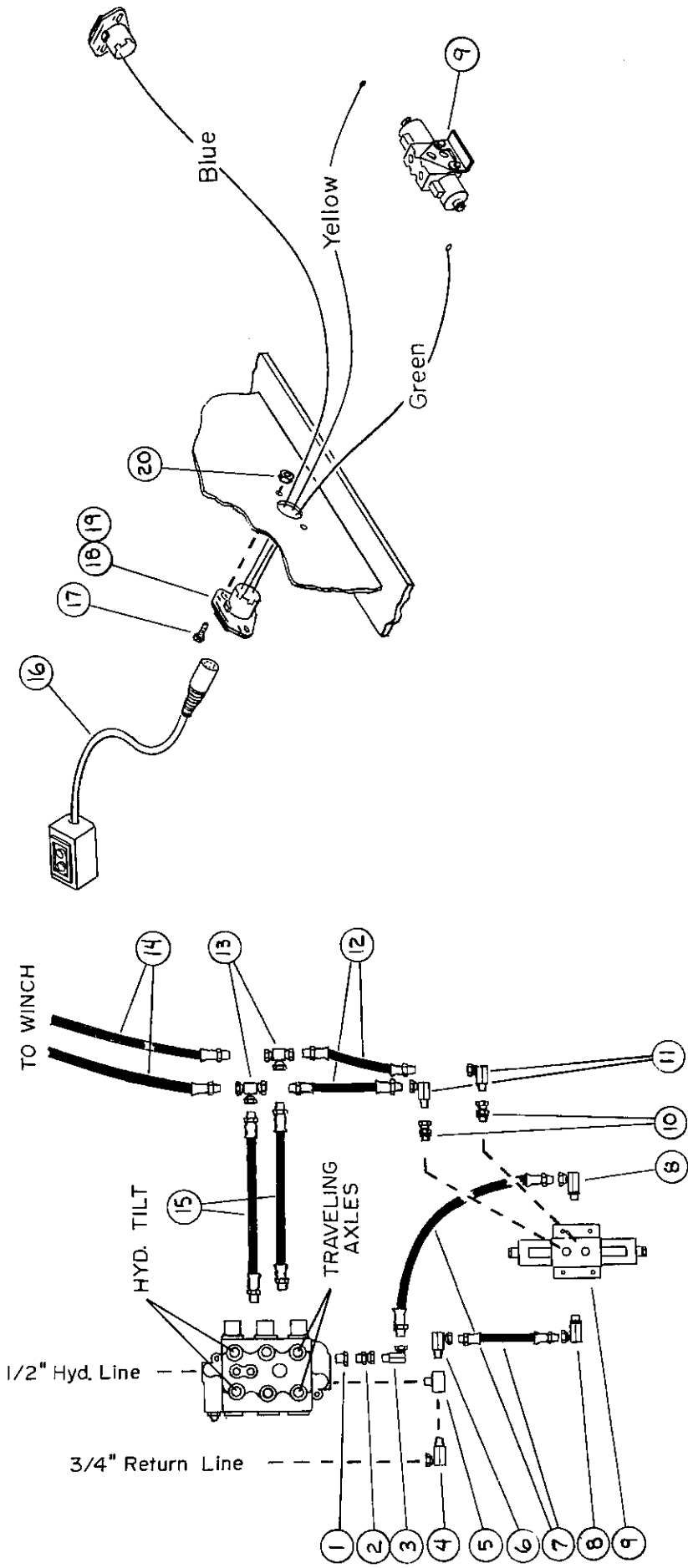
REMOTE CONTROL HYDRAULICS

Item	Part Number	Description	Quantity
1	1V0208	Power Beyond Remote	1
2	2045-12-12S	3/4-14 Straight Male Pipe Swiv	1
3	2047-8-12S	Adapt 3/4M 1/2F 90 Swiv	1
4	2047-12-12S	Adapt 3/4M 3/4F 90 Swiv	1
5	2091-12-12S	Branch Tee 3/4-14NPT	1
6	1-007-010013	Adapt 1/2F 3/4M 90 Swiv	1
7		1/2" Hose Assy.*	2
8	2068-8-8S	3/4 O-Ring 1/2 90 Swiv	2
9	4843-12VDC-IGS	Solenoid Valve Single Bank	1
10	2066-8-8S	3/4-16 O-Ring to 1/2 Pipe	2
11	2047-8-8S	Adapter 1/2M 1/2F 90 Swiv	2
12		1/2" Hose Assy.*	2
13	2255-8-8S	Tee Internal Pipe Swivel	2
14		1/2" Hose Assy.*	2
15		1/2" Hose Assy.*	2
16	3-765-010001	Switch Remote Control	1
17	5/16-18 x 1-1/4 CS	Hex Cap Screw	2
18	59S7	Trailer Elect Socket	1
19	59W-2-3	Rubber Boot	1
20	5/16-18HFN	Hex Nut	2

*Hose Length as Required

CORRECTION

Item	Part Number	Description	Quantity
3	1-007-010013	Adapt 3/4M 1/2F 90 Swiv	1



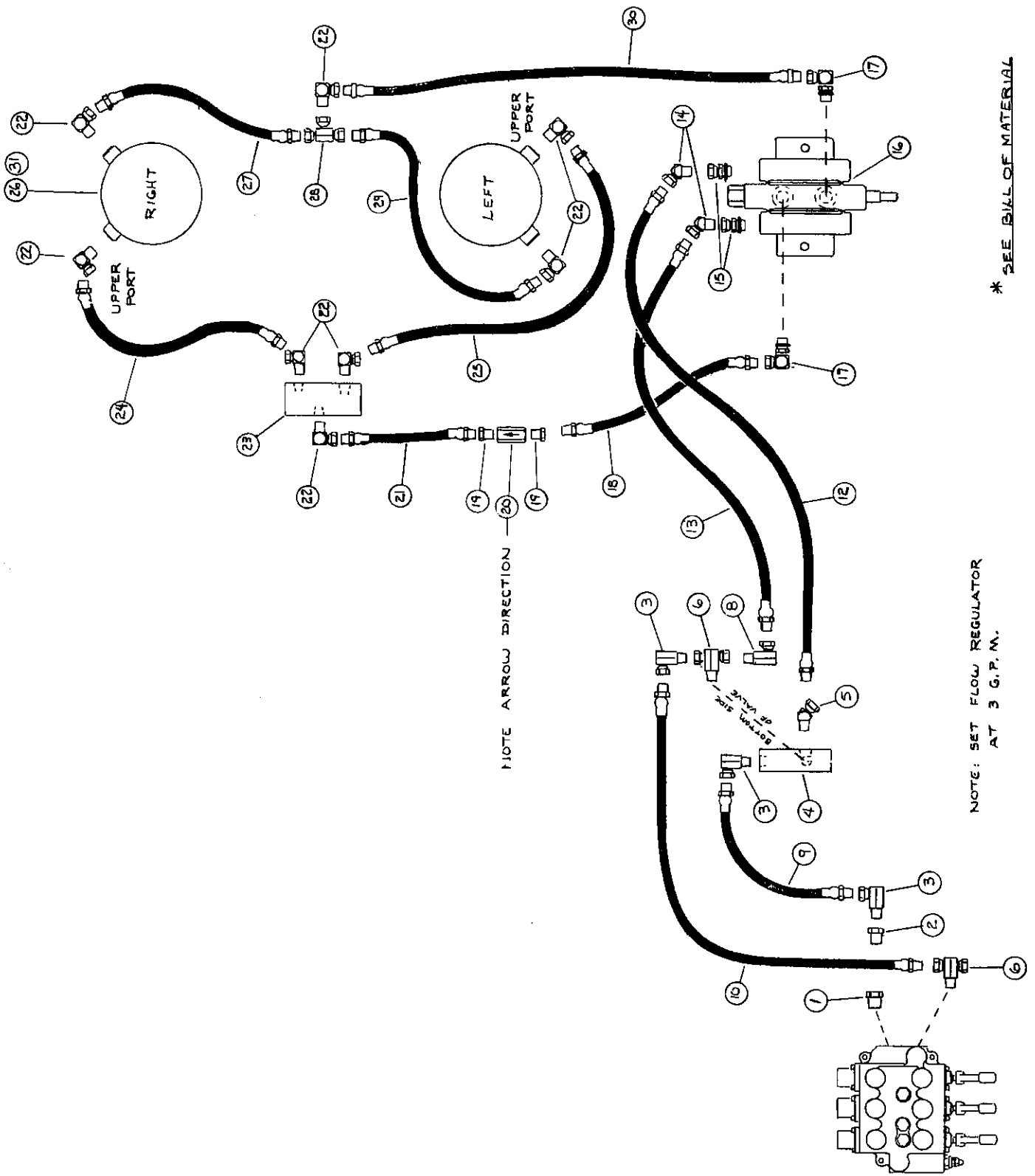
DOCK LEVEL HYDRAULICS

Item	Part Number	Description	Quantity
1	1V0208	Power Beyond Remote	1
2	3/4 x 1/2 BUSH	Reducer Bushing	1
3	2047-8-8S	Adapt 1/2 M 1/2 F 90 Swiv	3
4	2F85-P444-15S	1/2 Bypass Flow Regulator	1
5	2049-6-8S	Adapt 1/2 M 3/8 F 45 Swiv	1
6	2254-8-8S	Adapt Tee 1/2 P x 1/2 P x 1/2	2
8	2047-6-8S	Adapt 3/8 M 1/2 F 90 Swiv	1
9		1/2" Hose Assy.*	1
10		1/2" Hose Assy.*	1
11		3/8" Hose Assy.*	1
12		3/8" Hose Assy.*	1
13	2049-6-6S	Adapt 3/8 M 3/8 F 45 Swiv	2
14	2066-6-6S	3/8-18 Pipe to 9/16-18 O-Ring	2
15	3-846-010003	Single Spool Valve	1
16	2068-6-6S	3/8 Pipe 9/16 O-Ring 90° Swiv	2
17		3/8" Hose Assy.*	1
18	1/2 x 3/8 BUSH	Reducer Bushing	2
19	PM-R-19	Restrictor Check Valve	1
20		3/8" Hose Assy.*	1
21	2047-6-6S	Adapt 3/8 F 1/2 M 90° Swiv	8
22	2V13-3-3S	Flow Divider	1
23		3/8" Hose Assy.*	1
24		3/8" Hose Assy.*	1
25	3-242-010030	Lift Cylinder 16"	2
26		3/8" Hose Assy.*	1
27	2255-6-6S	3/8 Tee Internal Pipe Swivel	1
28		3/8" Hose Assy.*	1
29		3/8" Hose Assy.*	1
30	3-242-010058	Lift Cylinder For Triple Axle	2

*Hose Length as Required

12		3/8" Hose Assy.*	1
13		3/8" Hose Assy.*	1
14	2049-6-6S	Adapt 3/8 M 3/8 F 45 Swiv	2
15	2066-6-6S	3/8-18 Pipe to 9/16-18 O-Ring	2
16	3-846-010003	Single Spool Valve	1
17	2068-6-6S	3/8 Pipe 9/16 O-Ring 90° Swiv	2
18		3/8" Hose Assy.*	1
19	1/2 x 3/8 BUSH	Reducer Bushing	2
20	PM-R-19	Restrictor Check Valve	1
21		3/8" Hose Assy.*	1
22	2047-6-6S	Adapt 3/8 F 1/2 M 90° Swiv	8
23	2V13-3-3S	Flow Divider	1
24		3/8" Hose Assy.*	1
25		3/8" Hose Assy.*	1
26	3-242-010030	Lift Cylinder 16"	2
27		3/8" Hose Assy.*	1
28	2255-6-6S	3/8 Tee Internal Pipe Swivel	1
29		3/8" Hose Assy.*	1
30		3/8" Hose Assy.*	1
31	3-242-010058	Lift Cylinder For Triple Axle	2

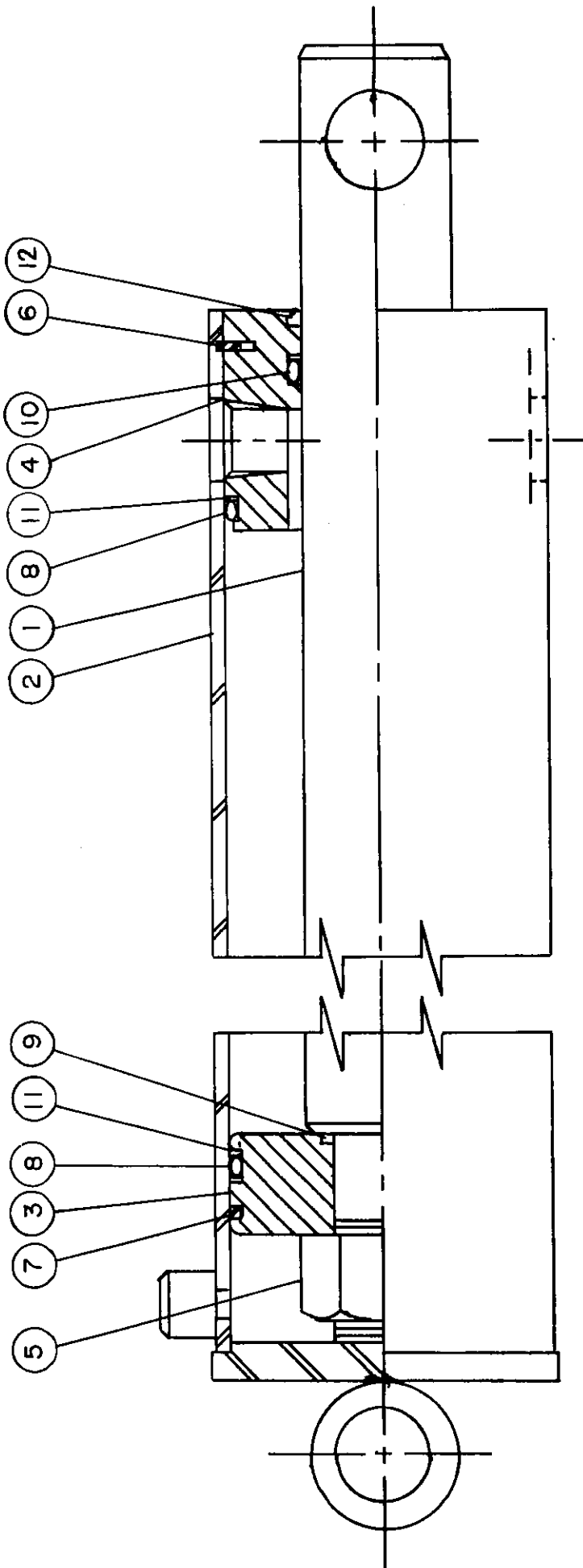
*Hose Length as Required



NOTE: SET FLOW REGULATOR AT 3 G.P.M.

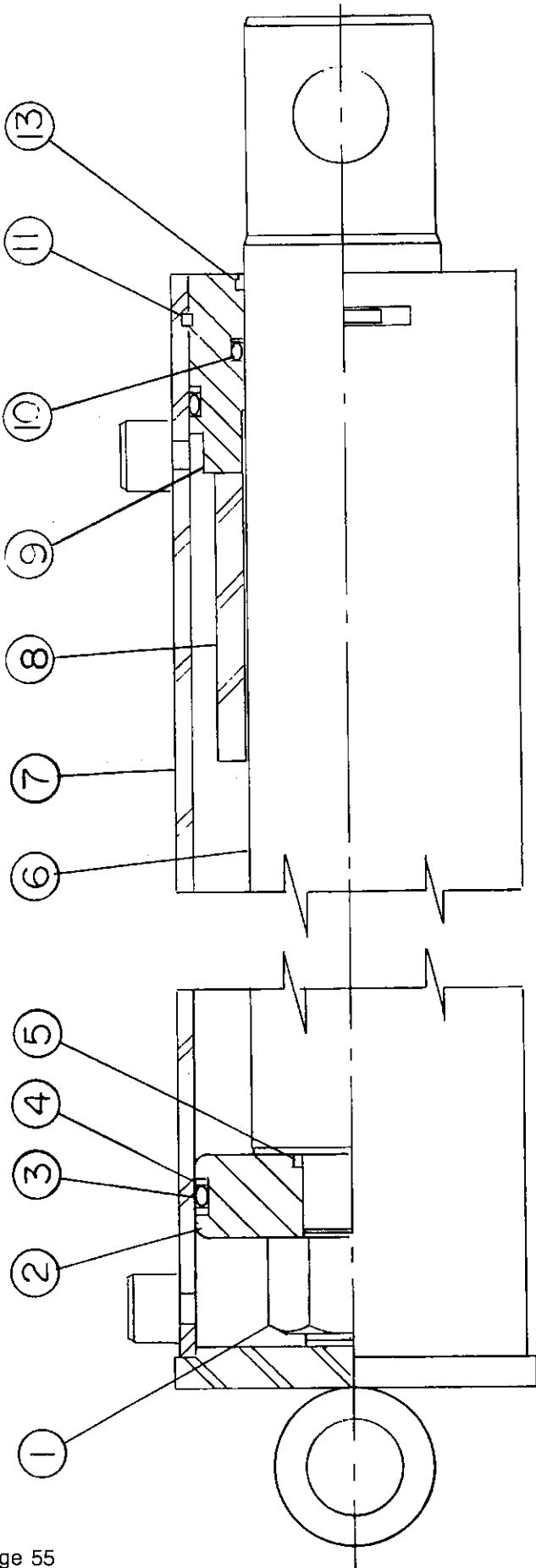
* SEE BILL OF MATERIAL

NOTES



3-242-010061 HYD. CYLINDER 4 x 42 (R964)

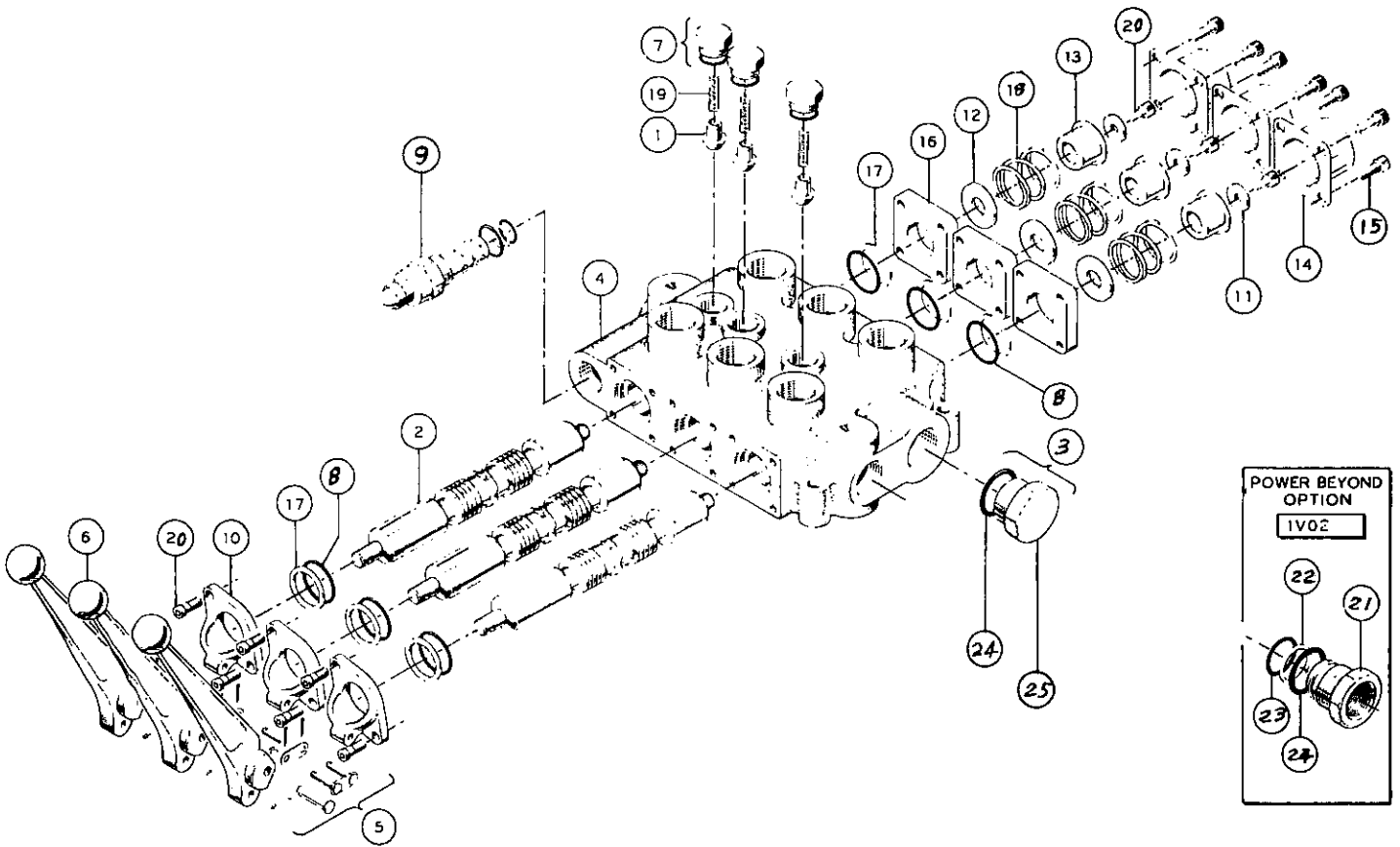
Item	Qty.	Part No.	Description
1	1	011100080	Piston Rod
2	1	061900250	Butt & Tube Assy.
3	1	071900019	Piston
4	1	081900222	Gland
5	1	220000212	Lock Nut
6	1	*230001400	Snap Ring
7	1	*240004008	Piston Ring
8	2	*240000342	O-Ring
9	1	*240000026	O-Ring
10	1	*240020009	U-Cup
11	3	*240005342	Bu-Washer
12	1	*250001329	Wiper
		*PMCK-R-964	Packing Kit



3-242-010060 & 3-242-010032 CYLINDER 4 x 126

Item	Qty.	Part No.	Description
1	1	22000212	Lock Nut (1 1/4-12)
2	1	071900003	Piston
3	2*	240000342	O-Ring
4	3*	240005342	Bu-Washer
5	1*	240000026	O-Ring
6	1	011300179	Piston Rod Assy
7	1	061900198	Butt & Tube Assy
8	1	211300024	Spacer
9	1	081900190	Gland
10	1*	240020015	U-Cup
11	1*	230007400	SQ Retaining Ring
12	1	250001383	Bu-Washer
	*	PMCK-K-797	Wiper Packing Kit

MODEL BA—three spool



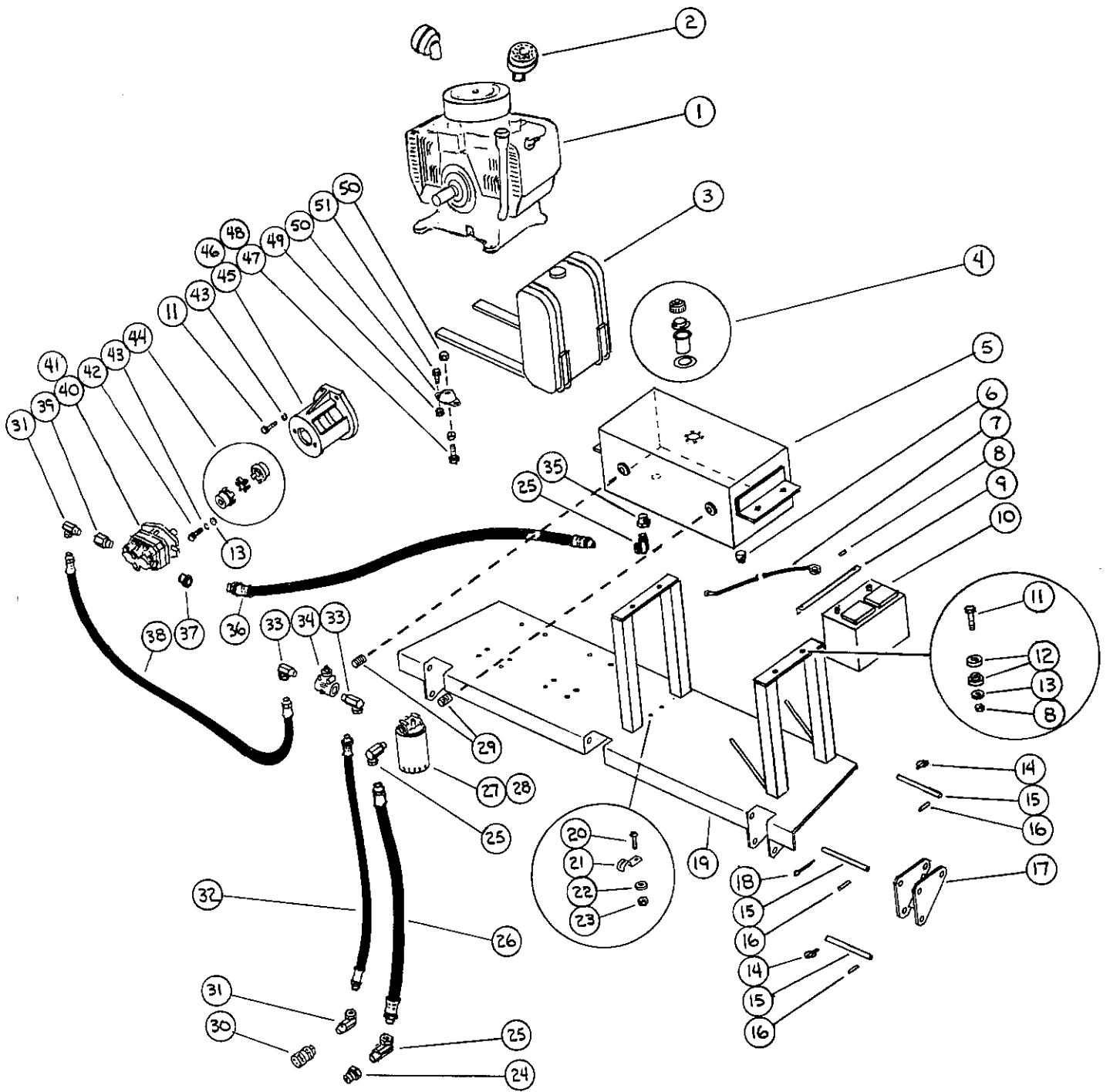
THREE SPOOL VALVE

Item	Part Number	Description	Quantity
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

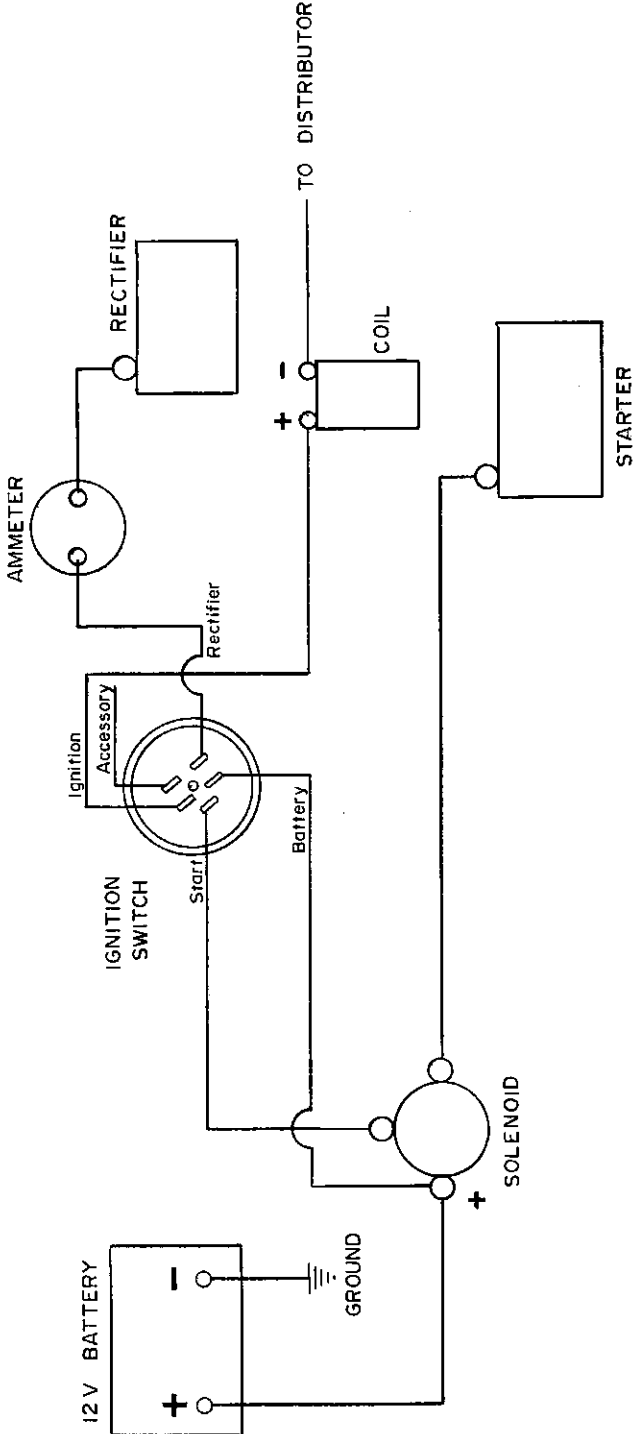
*Spools and valve body are matched at factory and may not be ordered as separate items.

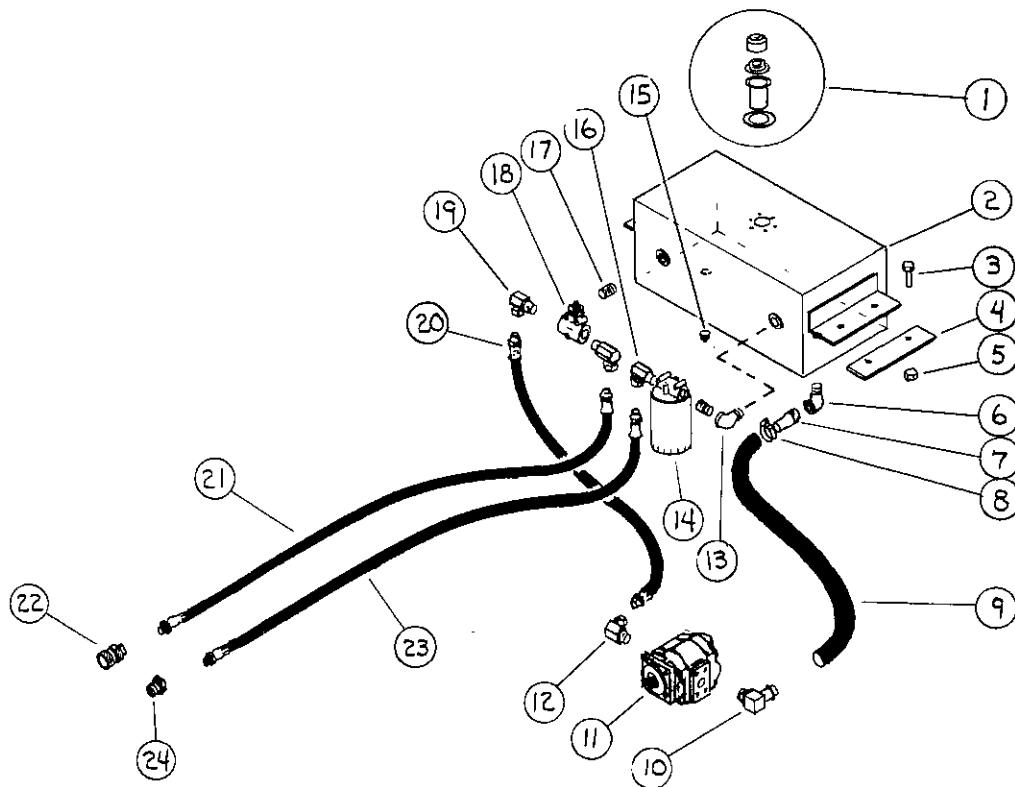
HYDRAULIC POWER CENTER

Item	Part Number	Description	Quantity
1	3-273-010003	25HP Onan Engine	1
	3-273-010002	20HP Onan Engine	1
	150-1716	Onan Instrument Panel 20HP & 25HP	1
2	542-7101	Onan Muffler Kit 25HP	1
	542-7205	Onan Muffler Kit 20HP	1
	154-1958	Flange Adapter Onan Muffler 20HP	1
3	159-0597	Onan Gas Tank	1
4	3-162-010001	Filler, Breather, Strainer Assy.	1
5	3-786-010005	Hydraulic Tank	1
6	1-1/4 PIPE PLUG	Sq. Head Pipe Plug	1
7	514-9045-30	Battery Cable Assy.	2
8	3/8-16HFLN	Hex Lock Nut	4
9	3-120-010124	Battery Clamp	1
10	2481X	Battery 12 Volt	1
11	3/8-16 x 1-3/4CS	Hex HD Cap Screw	8
12	805-2	Step Bushing	4
13	3/8FW	Flat Washer	6
14	7637	Lynch Pin	4
15	3-557-010052	Pin, Front Ext.	7
16	0600-250-01000	1/4 x 1 Roll Pin	7
17	3-276-010311	Support Assy. Front Ext.	2
18	3/16 x 1-1/4	Cotter Pin	3
19	3-311-011978	Hydraulic Power Center	1
20	3/16 x 3/4RHD	Round Head Stove Bolt	2
21	16-900	1/2 " Conduit Clamp	2
22	3/16FW	Flat Washer	2
23	3/16-24HFN	Hex Nut	2
24	S21F-6	3/4 " Male Coupler Half	1
25	2047-12-12S	Adapt 3/4M 3/4F 90 Swiv	3
26	1-397-010085	3/4 Hose Assy. 42 "	1
27	1-295-010001	Return Line Filter	1
28	1-295-010002	Filter Element	1
29	3/4 NIPPLE	All Thread Nipple	2
30	4000-4	1/2 " Female Coupler Half	1
31	2047-8-8S	Adapt 1/2M 1/2F 90 Swiv	2
32	2-397-010002	1/2 " Hose Assy. 36 "	1
33	2047-8-12S	Adapt 1/2F 3/4M 90 Swiv	2
34	125130	Pressure Relief Valve	1
35	1-1/4 x 3/4BUSH	Reducer Bushing	1
36	1-397-010086	3/4 " Hose Assy. 32 "	1
37	2216-12-16S	Adapt 1-3/16 O-Ring to 3/4P	1
38	2-397-010003	1/2 " Hose Assy. 44 "	1
39	2216-8-12S	Adapt 1-1/8 O-Ring to 1/2P	1
40	3-591-010003	Hydraulic Gear Pump 25HP	1
41	3-591-010002	Hydraulic Gear Pump 20HP	1
42	3/8-16 x 1-1/4CS	Hex Head Cap Screw	2
43	3/8SLW	Split Lock Washer	6
44	3-220-010003	Flexible Coupling Assy.	1
45	3-482-010002	Hydraulic Pump Mount 25HP	1
46	3-482-010003	Hydraulic Pump Mount 20HP	1
47	1/2-13 x 2HHCS	Hex Head Cap Screw 25HP	4
48	1/2-13 x 1-1/2CS	Hex Head Cap Screw 20HP	4
49	1/2-13HFLN	Hex Lock Nut	16
50	CA-1595	Machine Mount	4
51	1/2-13 x 1HHCS	Hex Head Cap Screw	8



Engine Wiring Diagram

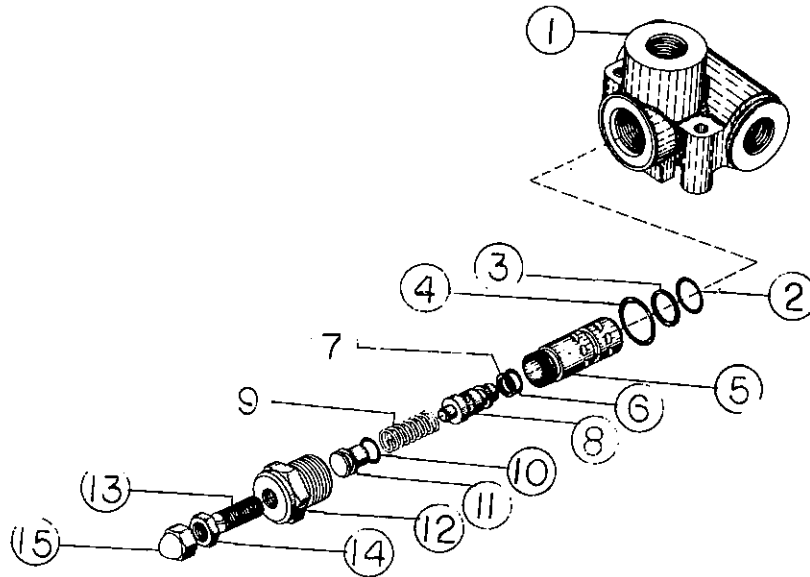




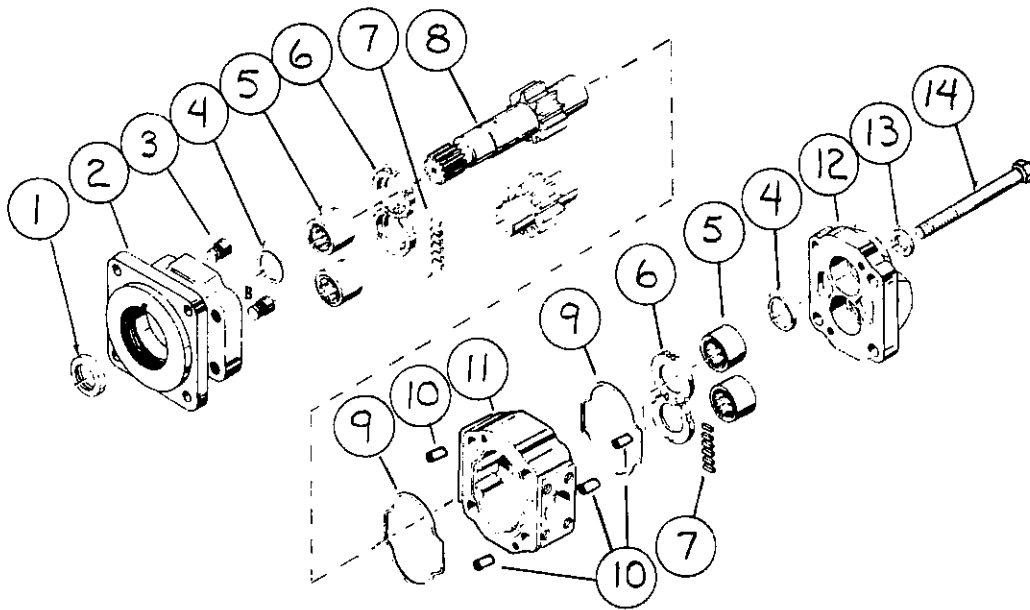
TRUCK WET KIT

Item	Part Number	Description	Quantity
1	3-162-010001	Filler, Breather, Strainer Assy.	1
2	3-786-010005	Hydraulic Tank	1
3	3/8-16 x 1-1/4 CS	Hex Head Cap Screw	4
4	3-120-010103	Clamp Hyd. Tank	2
5	3/8-16HFLN	Hex Lock Nut	4
6	1-1/4 ST EL	90° Street Elbow	1
7	1-561-010001	Hose Barb 1-1/4 NPT	1
8	6828	Hose Clamp	2
9	19B	1-1/4 " Hose	4 Ft.
10	1-007-010006	90° O-Ring Hose Connector	1
11	3-591-010001	Gear Pump, Commercial Shearing	1
12	1-007-010009	Adapt 1-3/16 O-Ring 1/2 F	1
13	3/4 ST EL	90° Street Elbow	1
14	1-295-010001	Return Line Filter	1
	1-295-010002	Filter Element	
15	1-1/4 PIPE PLUG	1-1/4 SQ Head	1
16	2047-12-12S	Adapt 3/4 M 3/4 F 90 Swiv	1
17	3/4 NIPPLE	All Thread Nipple	2
18	125130	Pressure Relief Valve	1
19	1-007-010013	Adapt 3/4 M 1/2 F 90 Swiv	2
20	6-397-010005	1/2 " Hose Assy. 74 "	1
21	3-397-010011	1/2 " Hose Assy. 152 "	1
22	4050-4	1/2 " Male Coupler Half	1
23	1-397-010075	3/4 " Hose Assy. 152 "	1
24	S21F-6	3/4 " Female Coupler Half	1

**125130
PRESSURE RELIEF VALVE**



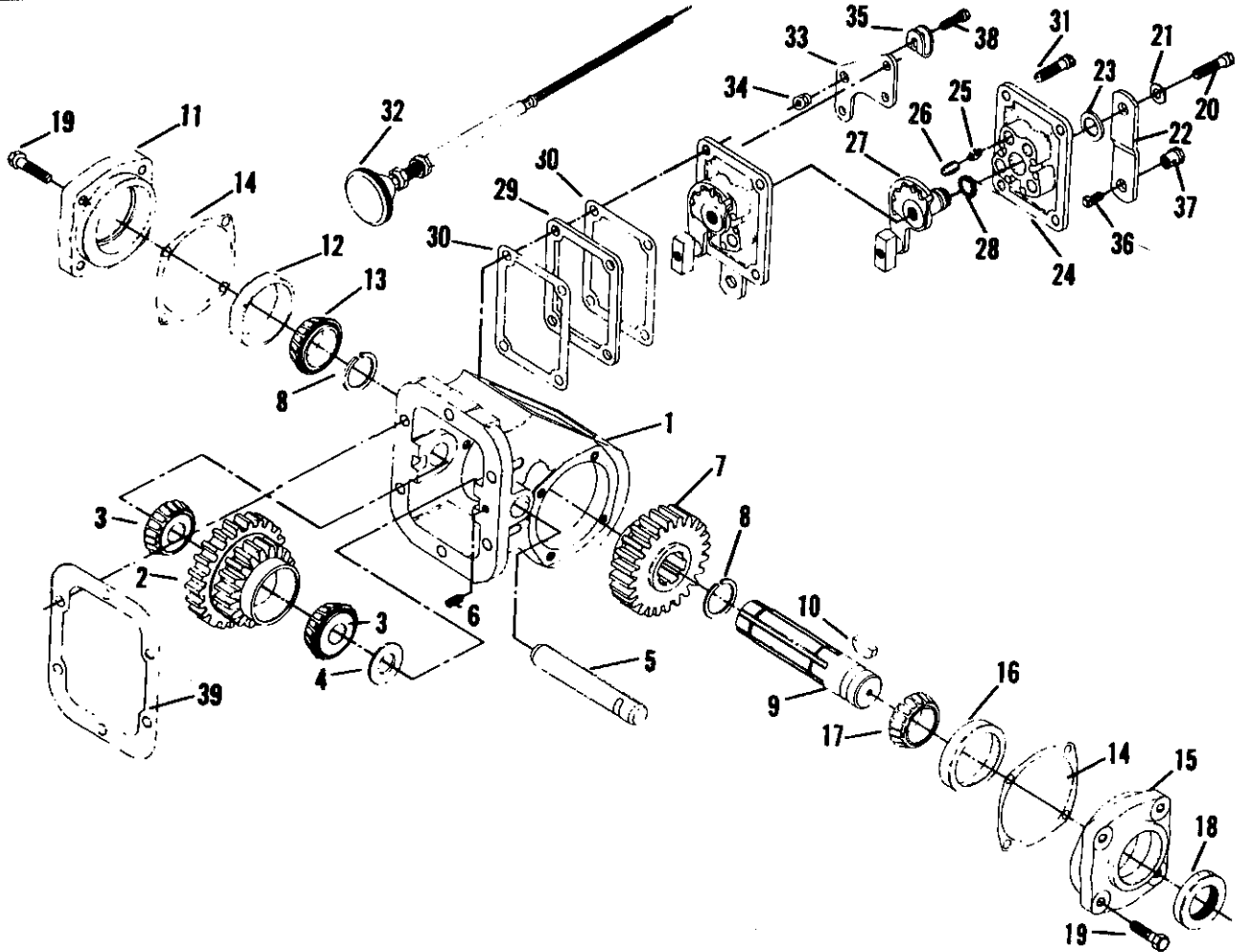
Item	Part No.	Des.	Qty.
1	1R0024	Housing	1
2	2A0283-7015	O-Ring, Lower Body	1
3	2A0010-015	Back Up Seal, Lower Body	1
4	2A0283-9910	O-Ring, Plug	1
5	1R0019	Relief Lower Body	1
6	2A0283-7011	O-Ring, Poppet	1
7	2A0007-011	Back Up Seal, Poppet	1
8	1R0020	Relief Poppet	1
9	2A9048-7	Spring (1500-300 PSI)	1
10	1A0171	Piston O-Ring	1
11	1R0013	Relief Piston	1
12	1R0018	Relief Upper Body	1
13	1R0015	Adjustment Screw	1
14	1A0569	Lock Nut	1
15	1A0570	Acorn Nut	1



3-591-010001

COMMERCIAL SHEARING P31A342BEAF1725

Item	Part Number	Description	Quantity
1	391 2883 058	Seal	1
2	312 5037 201	Shaft End Cover	1
3	391 3681 001	Check Assemblies	2
4	391 2585 006	Ring Seals	2
5	391 0381 068	Roller Bearings	4
6	391 2185 013	Thrust Plates	2
7	391 2882 086	Pocket Seals	12
8	312 2917 130	Integral Drive Shaft & Gear Set	1
9	391 2884 050	Gasket Seals	2
10	391 2082 032	Dowel Pins	4
11	312 8217 327	Gear Housing	1
12	312 3120 100	Port End Cover	1
13	391 3784 028	Washers	4
14	391 1401 025	Cap Screw	4



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— ¼"-20x½"	
	378452-3	SET SCREW—For Deep Mount— ¼"-20x¼"	1
7	2-P-291	GEAR, output sliding—24 Teeth	1
8	378391	RING, output shaft snap	2
9	3-P-352	SHAFT, std. p.t.o. output 1-¼" Round—5/16" Keyway	1
10	500007-29	KEY, woodruff—Shipped Loose—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

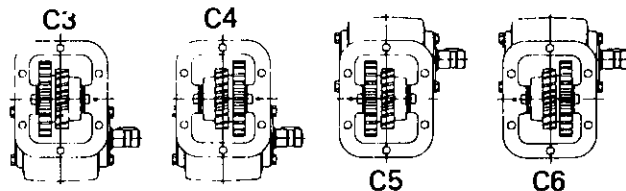
(148) - From SPACER KIT, select SPACER of proper thickness to provide end play of gear.

**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 capscrew—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"-10x 1/2"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

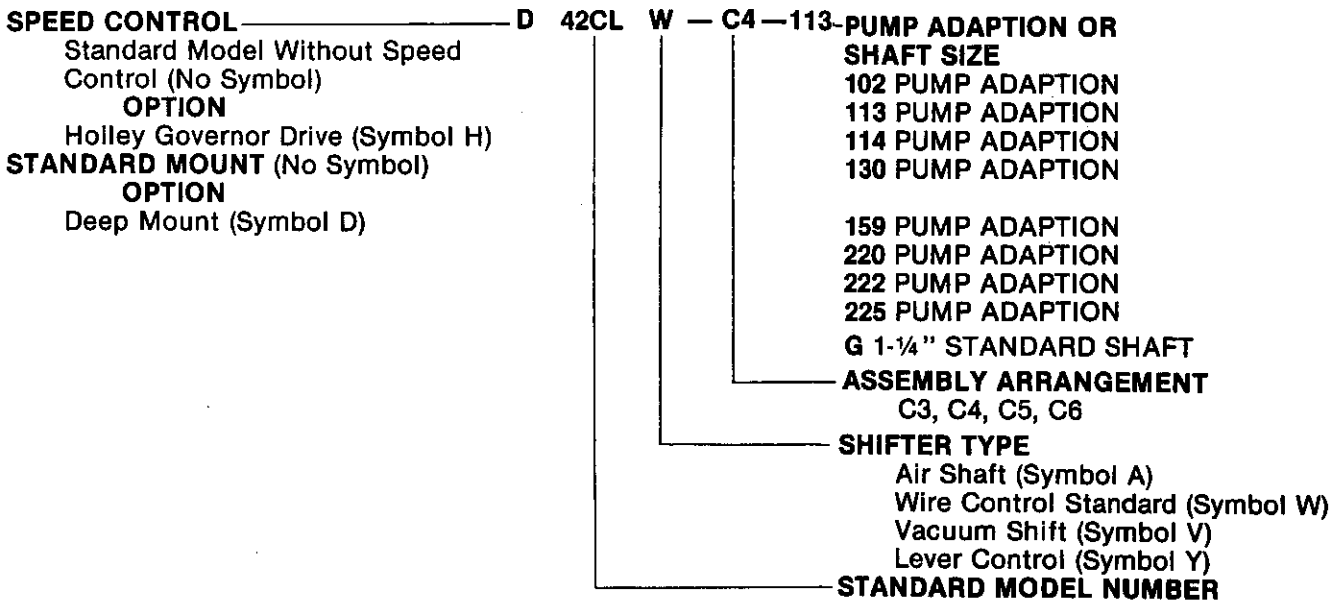


42 SERIES PITCH MODELS & GEAR DATA

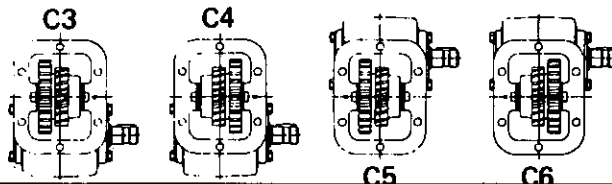
P.T.O. Model	Input Gear Item No. 2	Teeth	Transmission Application	Pitch & Pressure Angle
42ARL	5-P-432	25-19	New Process 4 Speed 435L Series & Others	8.1160NP-20° L.H.
42CFL	5-P-426	26-19	Warner T98-A (Left Hand Helix)	8.0829NP-20° L.H.
42CL	5-P-428	19-19	General—All 5 or 5/7	5 or 5/7-20°
42D17L	5-P-427	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.

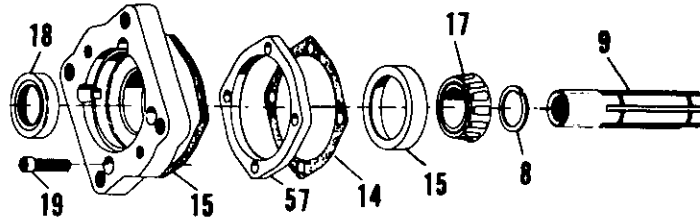
CHELSEA MODEL NUMBER CONSTRUCTION

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.

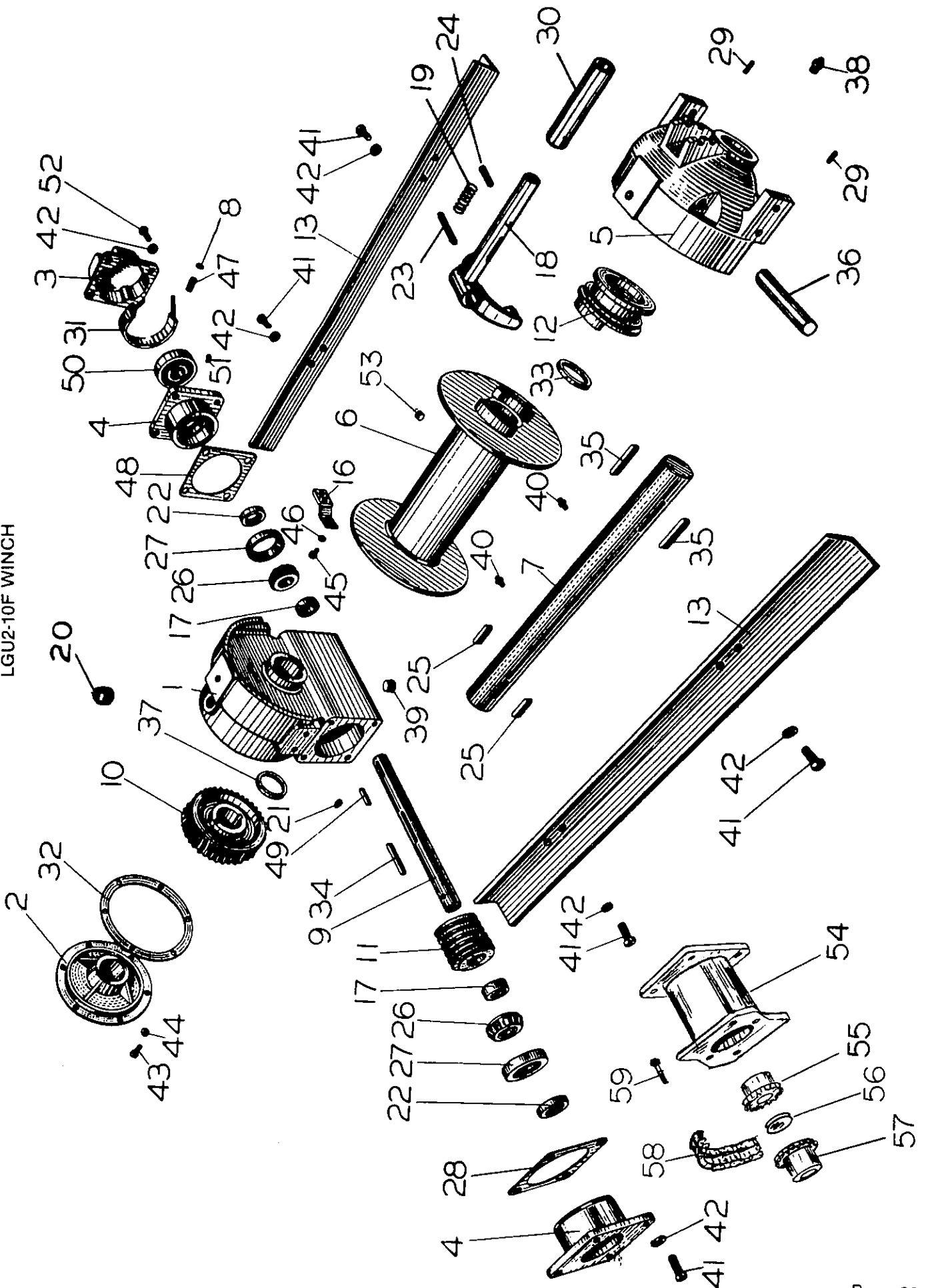
All Flange Assemblies consist of Pump Flange and Bearing Cup 550221.

BRADEN 12000#

LGU2-10F WINCH

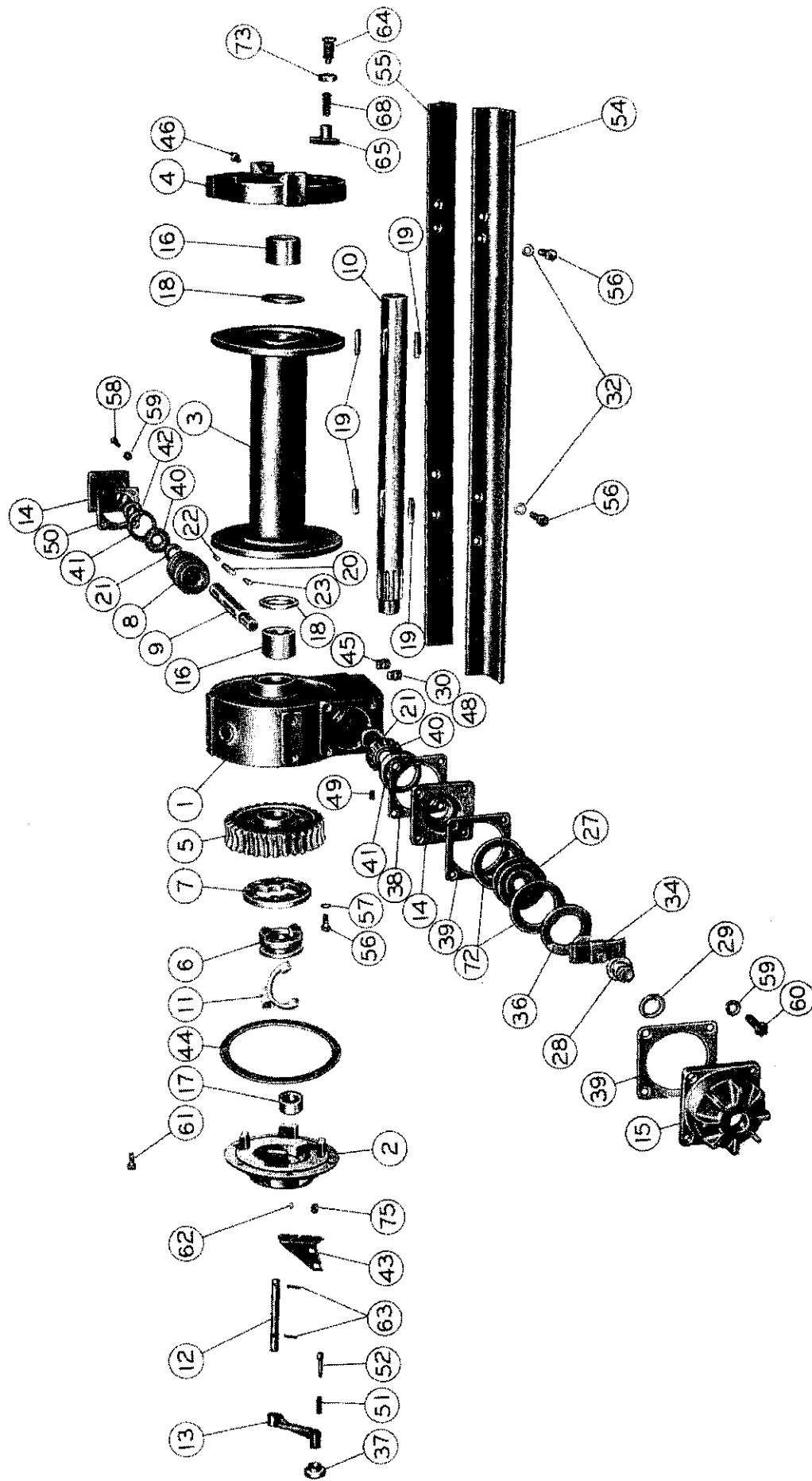
Item	Part No.	Des.	Quantity
1	81006	LU2-1340-0 Worm Housing Assy.	1
2	81009	LU2-144-0 Worm Housing Cover	1
3	18032	MU-248 Safety Brake Housing	1
4	23303	Bearing Container	2
5	81530	Bearing Leg Assy.	1
6	11128	LU2-135 Cable Drum	1
7	11129	LU2-136 Cable Drum Shaft	1
8	13468	BO25J Jam Nut	4
9	23470	Worm Shaft	1
10	11144	LU2-201L Worm Gear	1
11	11142	LU2-200L Worm	1
12	18039	M2-141 Clutch	1
13	22752	ALU-2-146 Base Angle	2
16	81025	LU4-131-0 Drag Brake	1
17	11308	MU-1025 Worm Spacer	2
18	13839	LU2-143 Shifter Fork	1
19	18002	A-143S Spring	1
20	22775	E100TD Pipe Plug	1
21	18009	E012T Pipe Plug	1
22	18026	MU-149A Grease Seal	2
23	13028	R25-175 Roll Pin	1
24	18056	R25-075 Roll Pin	1
25	11117	LU2-101A Worm Gear Key	2
26	18015	MU-103A Bearing Cone	2
27	18016	MU-103B Bearing Cup	2
28	18027	MU-149G Gasket	3
29	11837	R12-062 Roll Pin	2
30	12817	LU2-143-3 Shifter Handle	1
31	21925	MU-152-0 Brake Band	1
32	11133	LU2-144G Gasket	3
33	18019	MU-139 Retainer Pin	1
34	18030	MU-200A Worm Key	1
35	18020	MU-141A Clutch Key	2
36	11130	LU2-143A Shifter Fork	1
37	11240	MS3-139 Thrust Ring	1
38	18047	Z525 Grease Fitting	1
39	19045	E05OW Pipe Plug	1
40	11799	Z1652 Grease Fitting	2
41	21961	S037-10PH5 Capscrew	8
42	18003	A037 Lock Washer	16
43	11767	S031-10PH5 Capscrew	6
44	11011	AK031 Lock Washer	6
45	13005	S025-06PH5 Capscrew	2
46	12780	AK025 Lock Washer	2
47	18029	MU-156 Spring	1
48	18024	MU-148G Gasket	3
49	18044	M5-151A Key	2
50	18028	MU-151 Brake Drum	1
51	12075	S025-03STK Set Screw	1
52	22694	S037-15PH5 Capscrew	4
53	24032	S050-055AK Set Screw	1
54	23079	Motor Adapter	1
55	23081	Coupler Half-Winch	1
56	23078	Spacer-Constant	1
57	23083	Coupling Half-Motor	1
58	13424	701180 Chain	1
59	13413	S050-15PH5 Capscrew	2

LGU2-10F WINCH

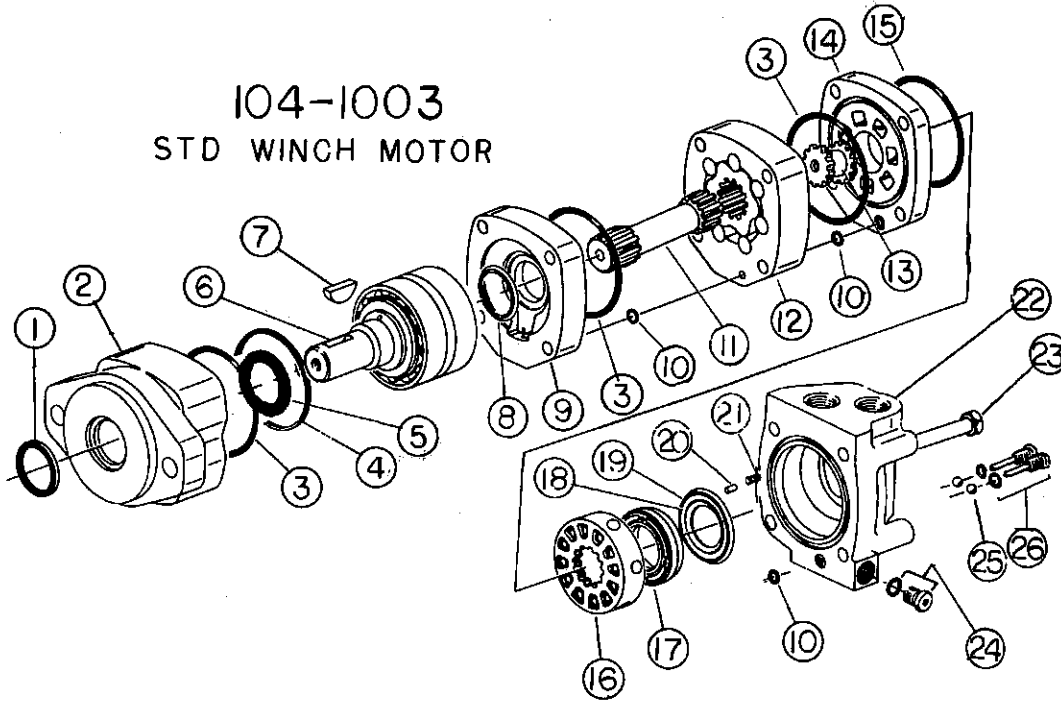


**BRADEN 20000#
AMU7-16F WINCH**

Item	Description	Part Number	Quantity
1	Worm Housing Assy.	81078	1
3	Cable Drum	11449	1
4	Bearing Leg Assy.	81077	1
5	Worm Gear, Right	11434	1
	Worm Gear, Left	11433	1
6	Sliding Clutch	11421	1
7	Clutch Drive	11419	1
8	Worm, Right	11404	1
	Worm, Left	11403	1
9	Worm Shaft	11405	1
10	Cable Drum Shaft	11414	1
14	Bearing Container	11427	2
15	Worm Brake Cover	11445	1
16	Bushing	18035	2
17	Bushing	11425	1
18	Retaining Ring	11420	2
19	Cable Drum Kit	11641	4
20	Worm Key	11402	1
21	Worm Spacer	11407	2
22	Sprocket Key	11586	1
23	Rotor Key	18044	1
27	Brake Rotor Assy.	81080	1
28	Worm Brake Adjusting Nut	11599	1
29	O-Ring	12465	1
30	Filler Plug	19014	1
32	Lockwasher	11026	10
34	Safety Brake Spring Assy.	81081	1
36	Pressure Plate	11431	1
38	Gasket	11429	4
39	Gasket	11446	2
40	Bearing Cone	18033	2
41	Bearing Cup	18034	2
42	Grease Seal	12073	1
44	Housing Cover Gasket	11411	1
45	Drain Plug	19045	1
46	Grease Fitting	18047	1
48	Vent Plug	18053	1
49	Level Plug	18009	1
50	Gasket	11430	4
51	Shifter Knob Spring	11310	1
52	Shifter Knob Stem	11309	1
56	Capscrew	13938	16
57	Lockwasher	12781	8
58	Capscrew	21044	4
59	Lockwasher	11025	3
60	Capscrew	22695	4
61	Capscrew	22047	6
64	Adjusting Screw	11398	1
65	Drag Brake Shoe Assy.	88005	1
68	Drag Brake Shoe Assy.	18002	1
72	Friction Disc	11426	2
73	Jam Nut	11791	1
76	Capscrew (Not Shown)	22729	2
Item	Description	Part Number	Quantity
2	Worm Housing Cover Assy.	81213	1
11	Shifter Fork	11422	1
12	Shifter Shaft	11423	1
13	Shifter Handle	11496	1
37	Shifter Knob		
43	Shifter Bracket		
54	Base Angle-Front	12921	1
55	Base Angle-Rear	12922	1
62	Expansion Plug		
63	Rollpin		
75	Expansion Plug		



104-1003
STD WINCH MOTOR



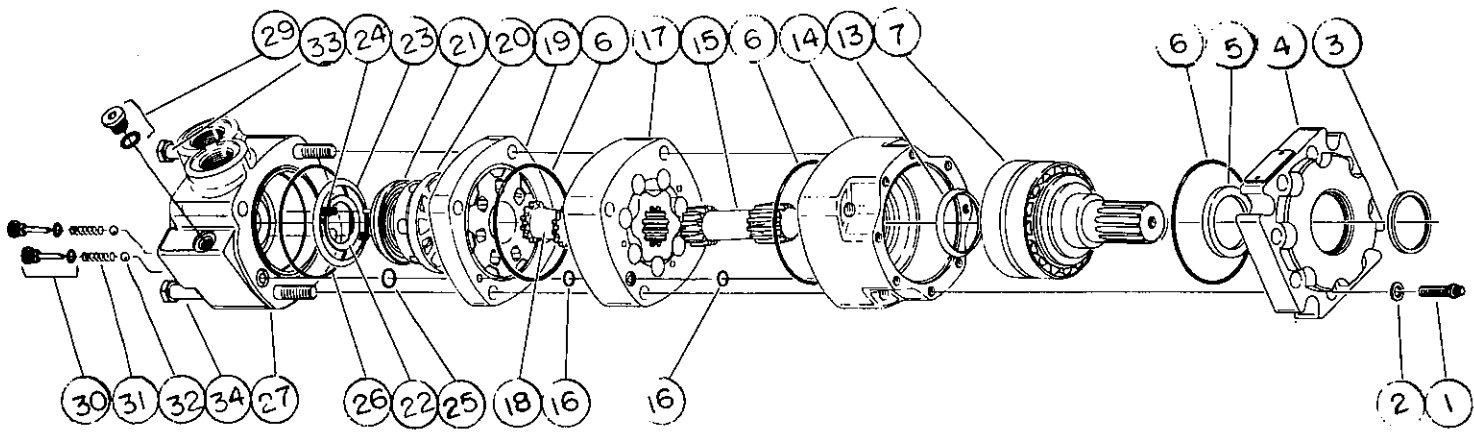
104-1003 WINCH MOTOR

Item	Part No.	Des.	Quantity
1	9044-1	O Seal, Dust	1
2	7385	* Housing, Bearing	1
3	9022-6	Seal, O-Ring	3
4	61023	XO Spacer Bearing Kit	1
5	9075-1	O Seal Shaft	1
6	61204	Shaft & Bearing Kit	1
7	14193	Key	1
8	9050	O Seal, Shaft Face	1
9	7390	* Plate, Wear	1
10	9022-12	X Seal, O-Ring	3
11	8434-3	Drive	1
12	7403-3	Geroler	1
13	8433	Drive, Valve	1
14	8 4 3 2	Plate, Valve	1
15	9022-2	X Seal	1
16	8435	Valve	1
17	7379	Balance Plate	1
18	9049-1	X Seal, Face, Inner	1
19	9048-1	X Seal, Face, Outer	1
20	14351	Pin	2
21	7383	Spring	2
22	8356-1	Housing, Valve	1
23	14300	Bolt	4
24	9072-3	Plug Assembly	1
	9071-3	Plug	1
	250003-904	X O-Ring	1
25	18026	Ball, Steel	2
26	8350	Check Plug Assembly	2
	8349	Plug	2
	250003-903	O-Ring	2

X 61200 Seal kit, motor rear, contains parts indicated by X

O 61201 Seal kit, shaft, contains parts indicated by O

* Order 61203 bearing spacer kit whenever you replace the bearing housing, shaft and bearing kit or wear plate.



109-1117 MOTOR FOR AMU7 WINCH

Ref. No.	Part Number	Description	Quantity
	1	Screw, Cap	8
+2	6049	Washer	8
+3	9031-1	Seal, Dust	1
4	8559	Retainer, Front	1
+5	9068-2	Seal, Shaft	1
x+6	9022-8	Seal, 3-1/2" ID	3
7	8709-1	Shaft (Straight) & Bearing Kit	1
8	8709-2	Shaft (Tapered) & Bearing Kit	1
9	8709-3	Shaft (Splined) & Bearing Kit	1
		(above shaft & bearing kit includes the following parts)	1
	NSS	Shaft	1
	NSS	Cone, Bearing	2
	NSS	Cup, Bearing	2
	NSS	Spacer, Bearing	1
	NSS	Retainer, Ring	1
10	14392-11	Key, (for straight shaft)	1
11	14230	Nut, Hex	1
12	14232	Key, (for tapered shaft)	1
+13	9070-1	Seal, Shaft Face	1
14	8487	Housing, Bearing	1
15	8487-4	Drive	1
x16	9022-3	Seal, 1/4" ID	2
17	8464-4	Geroler 7/8 Width	1
18	8510	Drive, Valve	1
19	8504	Plate, Valve	1
20	8500	Valve	1
21	6942	Plate, Balance Assembly	1
x22	6961	Seal, Face, Inner	1
x23	6962	Seal, Face, Outer	1
24	6203	Spring	2
x25	15006	Seal, 5/16" ID	1
x26	9022-7	Seal, 3-1/4" ID	1
27	8501-3	Housing, Valve, 1 1/16" Str. Thd — O-Ring Ports	1
29	9072-3	Plug Assembly	1
	NSS	Plug	1
x	250003-904	O-Ring	1
30	8350	Check Plug Assembly	2
	NSS	Plug	2
x	250003-903	O-Ring	2
31	6464	Spring	2
32	18026	Ball, Steel	2
33	14386-9	Bolt 5 1/4"	2
34	14386-7	Bolt 4 1/4"	2
x	61234	Seal Kit, Motor, Rear Contains Parts Ind. By X	
+	61236	Seal Kit, Shaft, Contains Parts Indicated By +	

NSS—Not Sold Separately

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

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LIMITED WARRANTY

ALL LANDOLL PRODUCTS ARE WARRANTED FOR ONE YEAR AGAINST DEFECTS IN MATERIALS AND WORKMANSHIP AND TO PERFORM ACCORDING TO SPECIFICATIONS FURNISHED, WHEN SUCH PRODUCTS ARE PROPERLY ASSEMBLED, INSTALLED, USED AND MAINTAINED.

Should any part prove defective within one year from date of purchase, the part will be replaced f.o.b. our factory without charge, provided the part is returned to us, transportation charges prepaid. No allowance will be made for labor, transportation or other charges incurred in the replacement of the defective part. Landoll will not be responsible for labor charges, loss or damage caused by a defective part. Component parts, equipment, accessories and items not manufactured by Landoll are warranted only to the extent of the original manufacturer's warranty. Consequential damages, if any, are specifically excluded from this warranty.