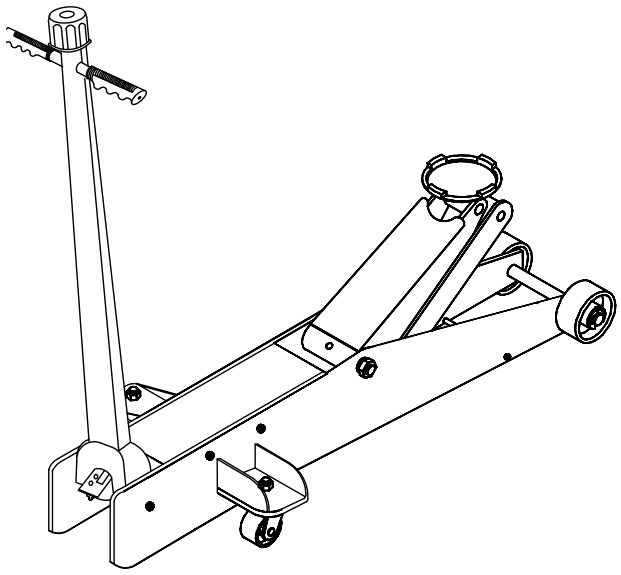
HEIN-WERNER AUTOMOTIVE®

# Service Jacks

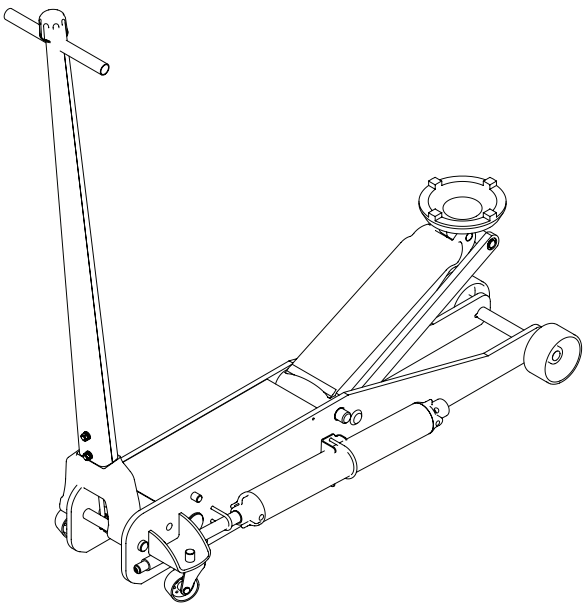
## Operating Instructions & Parts Manual

| Model Number | Capacity |
|---|---|
| HW93657 | 4 Ton |
| HW93667 (Air/Manual) | 4 Ton |
| HW93660 | 10 Ton |
| HW93662 (Air/Manual) | 10 Ton |

**Made in the U.S.A.**



Model No. HW93657 & HW93660



Model No. HW93667 & HW93662

*This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.*

SFA Companies
10939 N. Pomona Ave. Kansas City, MO 64153
customerservices@heinwerner-automotive.com

**Read this manual and follow all the Safety Rules and Operating Instructions before using this product.**

HW93657-M0_062012

## SAFETY AND GENERAL INFORMATION

**Save these instructions.** For your safety *read, understand, and follow* the information provided with and on this jack. The owner and operator of this equipment shall have an understanding of this jack and safe operating procedures before attempting to use. The owner and operator shall be aware that use and repair of this product may require special skills and knowledge. Instructions and safety information shall be conveyed in the operator's native language before use of this jack is authorized. If any doubt exists as to the safe and proper use of this jack, remove from service immediately.

**Inspect before each use.** Do not use if broken, bent, cracked, or damaged parts (including labels) are noted. Any jack that appears damaged in any way, operates abnormally or is missing parts, shall be removed from service immediately and the manufacturer notified. If you suspect that the jack was subjected to a shock load (a load dropped suddenly, unexpectedly upon it), immediately discontinue use until the jack has been checked by a factory authorized service center (contact distributor or manufacturer for list of Authorized Service Centers). It is recommended that an annual inspection be done by qualified personnel. Replace worn or damaged parts with Hein-Werner Authorized Replacement Parts only. Labels and owner's manuals are available from manufacturer.

## PRODUCT DESCRIPTION

Hein-Werner Hydraulic Service Jacks are designed to lift, not support, rated capacity loads consisting of one end of a vehicle. Immediately after lifting, the load must be supported by a pair of appropriately rated jack stands.

⚠ **WARNING:** *NEVER use a hydraulic jack as a stand-alone device. After lifting, immediately support the lifted vehicle with a pair of appropriately rated jack stands. NEVER place any portion of your body beneath the vehicle when lifting OR lowering.*

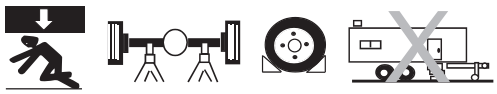
## SPECIFICATIONS

| Model | Capacity | Min. Height | Max. Height | Chassis Length | Wheel to Wheel Width | Min. Air Pressure for Rated Load | Gross Weight |
|---|---|---|---|---|---|---|---|
| HW93657 | 4 Ton | 5" | 25-3/4" | 49" | 15" | N/A | 219 lb. |
| HW93667 | | | | | | 140 psi | 233 lb. |
| HW93660 | 10 Ton | 6-3/4" | 25-1/2" | 53-1/2" | 20 1/2" | N/A | 420 lb. |
| HW93662 | | | | | | 140 psi | 435 lb. |

### ⚠ WARNING

- *Study, understand, and follow all instructions before operating this device.*
- *Do not exceed rated capacity.*
- *Use only on hard, level surface.*
- *Lifting device only. Immediately after lifting, support the vehicle with appropriate means.*
- *Do not move or dolly the vehicle while on the jack.*
- *Lift only on areas of the vehicle as specified by the vehicle manufacturer.*
- *No alterations shall be made to this product.*
- *Failure to heed these markings may result in personal injury and/or property damage.*

### ⚠ WARNING



*To avoid crushing and related injuries:*

- *Never work on, under or around a load supported only by hydraulic jack.*
- *Always use adequately rated jack stands.*
- *Chock each unlifted tire in both directions.*
- *Do not use this device to lift, level, lower, support nor move a house, mobile home, travel trailer, camper or any building structure.*
- *Be alert and sober when using this product. Do not operate under the influence of drugs or alcohol.*

# ASSEMBLY

Equipment required:
1. Needle nose locking pliers
2. Snap-ring pliers (Models HW93657 & HW93667 only)
3. 15 /16" wrench (Models HW93660 & HW93662 only)
4. Hammer
5. All necessary hardware is assembled loosely onto the jack.

**Instructions**

1. *Models HW93657 and HW93667:* (ref. figure 1) Remove the retaining rings and the handle pin from the jack base that connects through the handle fork.
   *Models HW93660 and HW93662:* (ref. figure 2) Remove the 5/8"-18 bolts and the handle pin from the jack base that connects through the handle fork.
2. Remove the #6-32 screw and nut from the universal receptacle.
3. Pull the universal assembly out a minimum of 1-3/4".
4. Clamp the needle nose locking pliers onto the rod so that the universal assembly will not retract back into the handle.
5. Slide the universal assembly into the handle socket so that it extends out the other side.
6. Insert the pivot pin that was removed in step 1 back through the handle and handle socket (may have to gently tap the pin with a hammer).
7. *Models HW93660 & HW93662:* align the pivot pin with the holes on the side plates that the pivot pin was removed from and tighten the 5/8"-18 bolts into the pivot pin until secure.
8. Connect the universal assembly to the universal receptacle rod using the #6-32 screw and nut (finger tighten only).
9. Remove the needle nose locking pliers.
10. Replace plug on hydraulic unit with vent screw from owners manual bag.
11. Jack is now operational and ready for use.

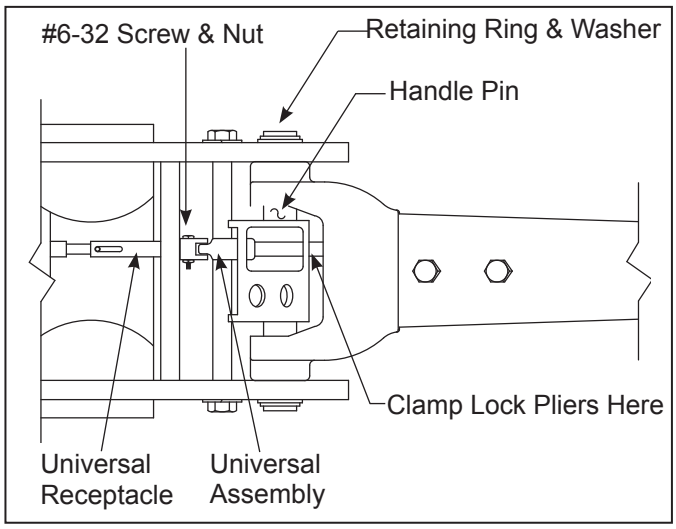



Figure 1- Assembly Illustration for HW93657 & HW93667

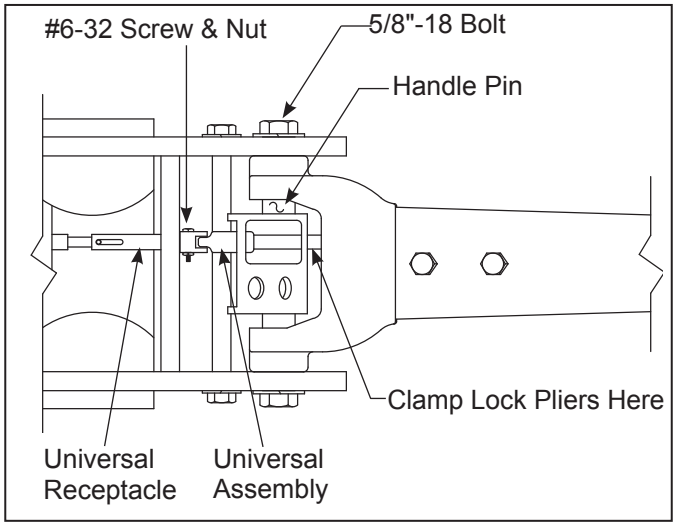



Figure 2- Assembly Illustration for HW93660 & HW93662

# PREPARATION (ref. Figures 3 & 4)

**Before Use**

1. Verify that the product and application are compatible, if in doubt contact Hein-Werner Technical Service.
2. Before use, read the operator's manual completely and familiarize yourself thoroughly with the product, its components and recognize the potential hazards associated with its use.
3. To familiarize yourself with the basic operation of these jacks, locate and turn the release valve knob:
   a. *Clockwise* until firm resistance is felt to further turning. This is the '**CLOSED**' release valve position used to raise the load.
   b. *Counter-clockwise*, but no more than 1/2 full turn from the closed position. This is the '**OPEN**' release valve position used to lower the load. The further the release valve knob is turned counter-clockwise, the faster the load will descend.
4. Reinstall the air vent screw.
5. Check that the jack rolls freely. Raise and lower the unloaded saddle throughout the lift range to ensure the pump and release valve operate smoothly.
6. Replace worn or damaged parts and assemblies with Hein-Werner Replacement Parts only. Lubricate as instructed in Maintenance Section.

**Bleeding/Venting Trapped Air** - With saddle fully lowered, remove cover plate then remove air vent screw. Pump the operating handle through 6 to 8 full strokes. Ensure the oil level is within ~3/16" from the inner cylinder as viewed from the air vent screw hole.

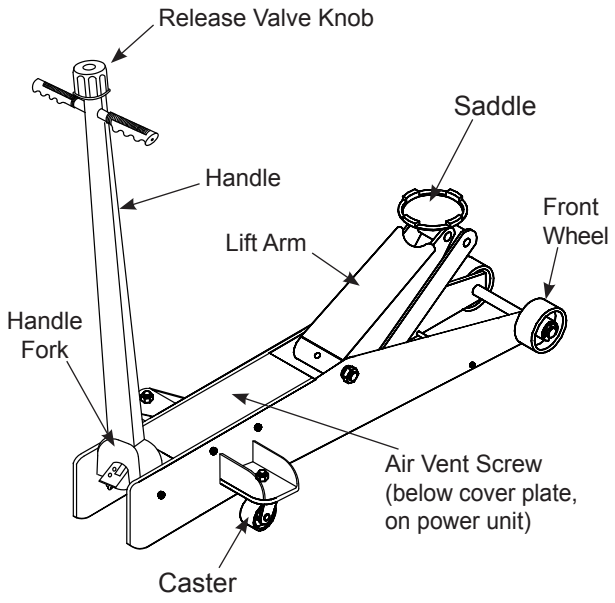



Figure 3 - Model HW93657 & HW93660 Nomenclature

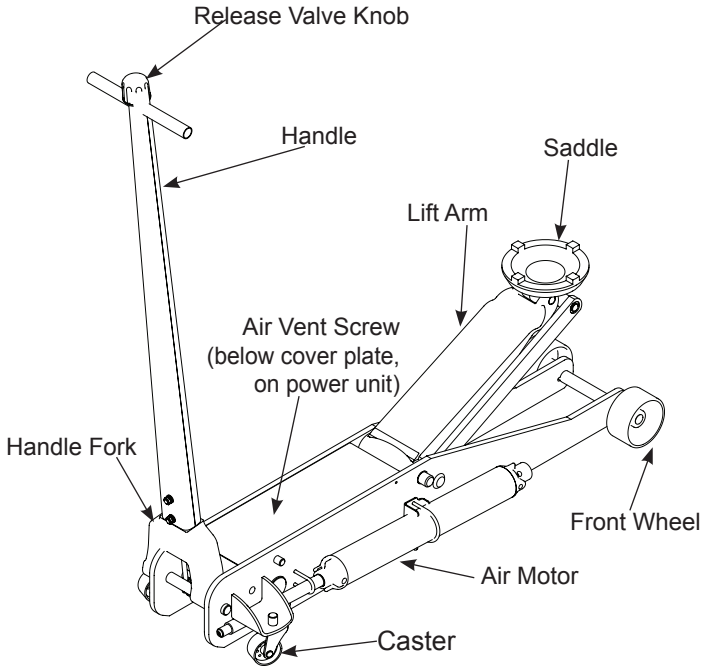



Figure 4 - Model HW93667 & HW93662 Nomenclature

# OPERATION

**Lifting**

⚠ **WARNING:** *Only attachments and/or adapters supplied by the manufacturer shall be used.*

1. Follow the vehicle manufacturer's recommended guidelines for lifting. Engage the emergency brake and chock each unlifted wheel in both directions to prevent inadvertent vehicle movement.
2. Locate and close the release valve by turning the release valve knob clockwise until firm resistance is felt.
3. Refer to the vehicle manufacturer owner's manual to locate approved lifting points on the vehicle. Center jack saddle under lift point.
4. Verify lift point then use handle  pump to contact lift point. To lift, pump handle or squeeze air control valve (model HW93667 & HW93662) until load reaches desired height.
5. Transfer the load to appropriately rated jack stands.

**Lowering**

⚠ **WARNING:** *Clear all tools and personnel before lowering load. Open release valve slowly.  The further you turn the release valve knob counter-clockwise, the faster the load will descend. Maintain control of the load at all times.*

1. Raise load high enough to clear the jack stands.
2. Remove jack stands.
3. Slowly turn the release valve knob counter-clockwise, but no more than 1/2 full turn. *If the load fails to lower:*
   a. Use another jack to raise the vehicle high enough to reinstall jack stands.
   b. Remove the malfunctioning jack and then the jack stands.
   c. Using the functioning jack, lower the load by turning the release valve knob counter-clockwise, but no more than 1/2 full turn.
4. After removing jack from under the load, push saddle down to reduce ram exposure to rust and contamination.

# MAINTENANCE

**NOTICE:** *Use only a good grade hydraulic jack oil. Avoid mixing different types of fluid and never use brake fluid, turbine oil, transmission fluid, motor oil or glycerin. Improper fluid can cause failure of the jack and the potential for sudden and immediate loss of load. Hein-Werner hydraulic jack oil HW93291 or equivalent is recommended.*

**Adding oil**
1. Lower saddle fully.
2. Set jack in its upright, level position.
3. Locate and remove air vent screw.
4. Follow the BLEEDING/VENTING Trapped Air procedure on page 3.
5. Reinstall the air vent screw.

**Changing oil**
For best performance and longest life, completely replace hydraulic fluid at least once a year.
1. Lower saddle fully.
2. Remove the air vent screw.
3. Lay the jack on its side and drain the fluid into a suitable container.

**NOTICE:** *Dispose of hydraulic fluid in accordance with local environmental regulations.*

4. Fill reservoir with oil and follow the BLEEDING/VENTING Trapped Air procedure on page 3.
5. Reinstall the air vent screw.

**Lubrication**
A periodic coating of light lubricating oil to pivot points, axles and hinges will help prevent rust and keep wheels, castors and pump assemblies moving freely.

**Cleaning**
Periodically check pump piston and ram for signs of rust or corrosion. Clean as needed and wipe with an oily cloth.

**NOTICE:** *Never use sandpaper or abrasive material on ram or pump piston.*

**Storage**
Lower the saddle to its lowest position when not in use.

# TROUBLESHOOTING

| Symptom | Possible Causes | Corrective Action |
|---|---|---|
| Jack will not lift load | • Release knob not tightly closed<br>• Overload condition | • Ensure release knob tightly closed<br>• Remedy overload condition |
| Jack bleeds off after lift | • Hydraulic unit malfunction | • Discontinue use, contact Hein-Werner Technical Service |
| Jack will not lower after unloading | • Reservoir overfilled<br>• Linkages binding<br>• Fluid level low | • Drain fluid to proper level<br>• Clean and lubricate moving parts<br>• Ensure proper fluid level |
| Will not lift to full extension | • Fluid level low | • Ensure proper fluid level |

# REPLACEMENT PARTS (ref. pgs. 6 thru 19)

Not all components of this jack are replacement items, but are illustrated as a convenient reference for location and position in the assembly sequence. When ordering parts, give model number, part number and parts description. Call or write for current pricing: Hein-Werner Customer Support, 10939 N. Pomona Ave. Kansas City, MO 64153. Phone: (816)891-6390;  E-mail: customerservices@heinwerner-automotive.com

**Model HW93657 Replacement Parts Illustration Part I** (ref. parts list on pg. 8)

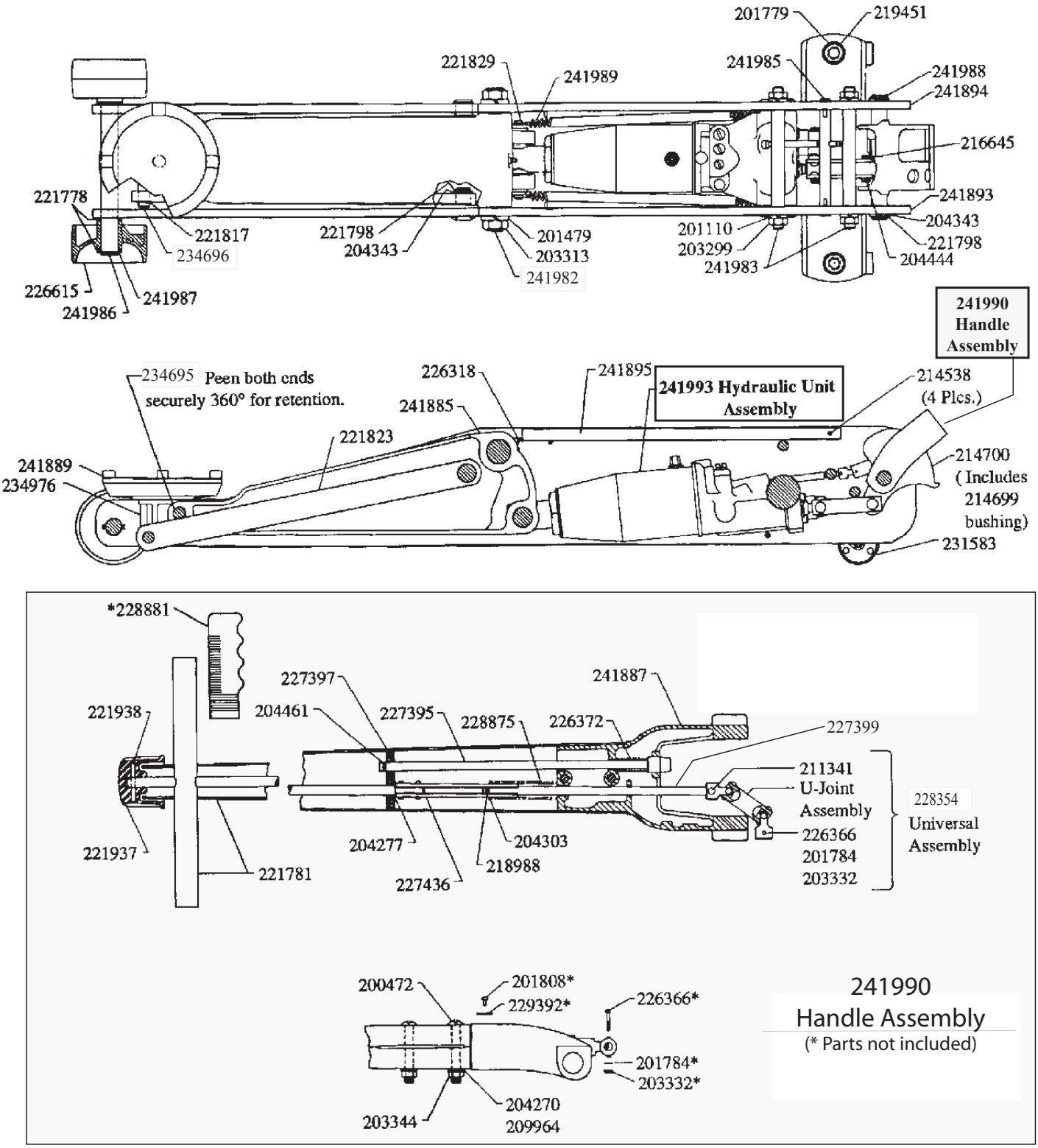



Figure 5 - Parts Illustration for Model HW93657

**Model HW93657 Replacement Parts Illustration Part II - Hydraulic Unit** (ref. parts list on pg. 8)

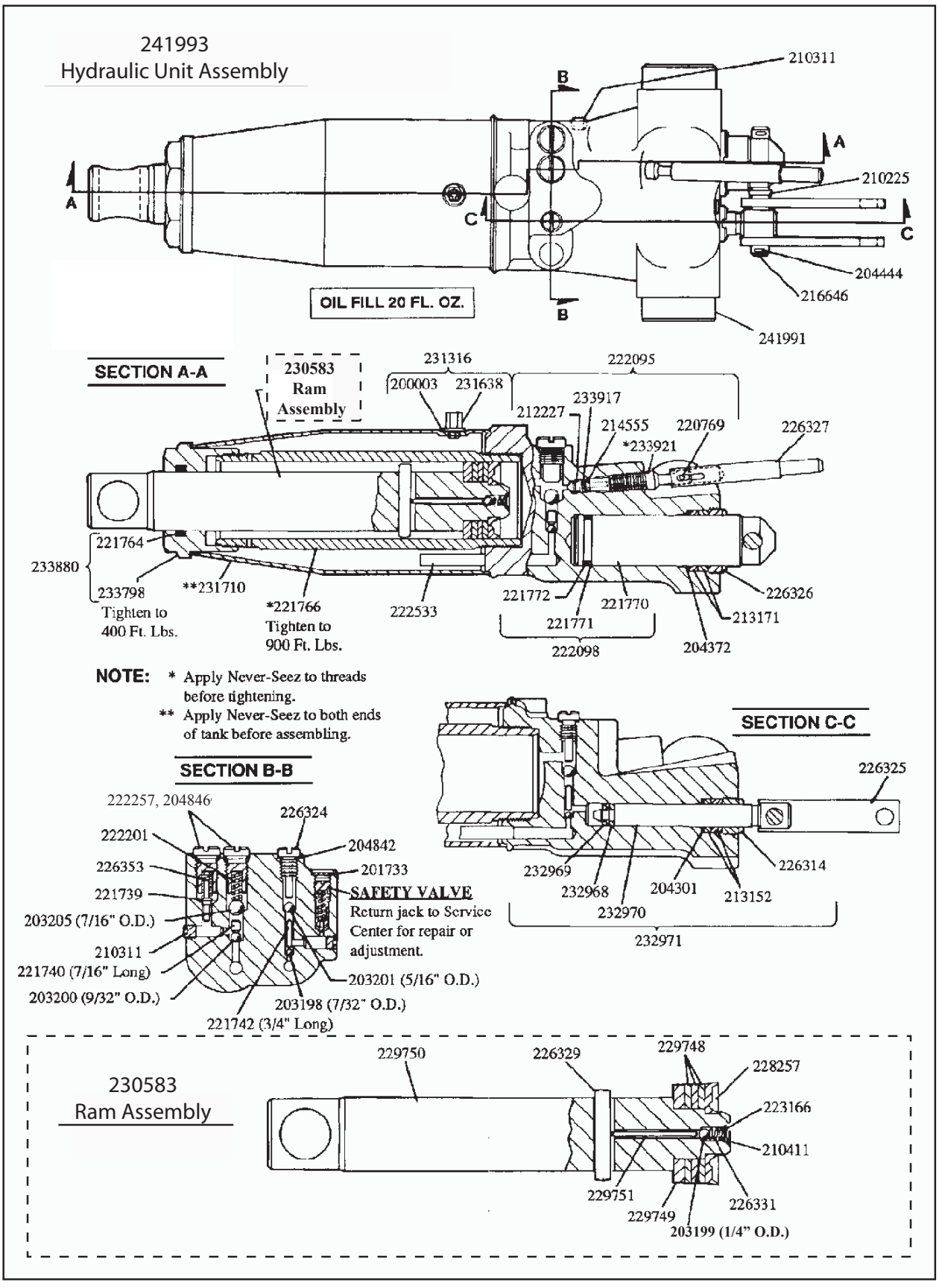



Figure 6 - Parts Illustration for Model HW93657 (Hydraulic Unit)

## Model HW93657 Replacement Parts List (ref. to illustrations on pg. 6 & 7)

| Part# | Description | Qty |
|---|---|---|
| 200003* | Gasket | 1 |
| 200472 | Screw | 2 |
| 201110 | Lockwasher | 4 |
| 201479 | Lockwasher | 2 |
| 201733 | Plug | 1 |
| 201779 | Lockwasher | 2 |
| 201784 | Lockwasher | 1 |
| N/A | Rivet | 2 |
| 203198* | Ball (7/32") | 1 |
| 203199* | Ball (1/4") | 1 |
| 203200* | Ball (9/32") | 1 |
| 203201* | Ball (5/16") | 1 |
| 203205* | Ball (7/16") | 1 |
| 203299 | Jam Nut | 4 |
| 203313 | Jam Nut | 2 |
| 203332 | Nut | 1 |
| 203344 | Jam Nut | 2 |
| 204270 | Washer | 2 |
| 204277 | Washer | 1 |
| 204301 | Washer | 1 |
| 204303 | Washer | 1 |
| 204343 | Washer | 4 |
| 204372 | Washer | 1 |
| 204444 | Cotter Pin | 3 |
| 204461 | Cotter Pin | 1 |
| 204842* | Copper Gasket | 1 |
| 204846 | Gasket Ring | 2 |
| 209964 | Lockwasher | 2 |
| 210225 | Spacer | 1 |
| 210311 | Pipe Plug | 3 |
| 210411* | Washer | 1 |
| 211341 | Rivet | 1 |
| 212227 | Release Valve | 1 |
| 213152* | Packing Ring | 2 |
| 213171* | Packing Ring | 2 |
| 214538 | Groove Pin | 4 |
| 214555* | O-ring | 1 |
| 214699 | Bushing | 1 |
| 214700 | Handle Segment Assy | 1 |
| 216645 | Pin | 1 |
| 216646 | Pump Pin | 1 |
| 218988 | Roll Pin | 1 |
| 219451 | Hex Nut | 2 |
| 220769 | Cross Pin | 1 |
| 221739* | Poppet | 1 |
| 221740 | Ball Stop Plug (7/16") | 1 |
| 221742 | Ball Stop Plug (3/4") | 1 |
| 221764* | Ram Quad Ring | 1 |
| 221766 | Cylinder | 1 |
| 221770 | Low Pressure Pump | 1 |
| 221771* | Washer | 1 |
| 221772* | Quad ring | 1 |
| 221778 | Washer | 4 |
| 221781 | Handle and Cross Bar | 1 |
| 221798 | Retainer Ring | 4 |
| 221817 | Retainer Ring | 2 |
| N/A | Parallel Link | 2 |
| 221829 | Pin | 1 |
| 221937 | Turning Knob | 1 |
| 221938 | Roll Pin | 1 |
| 222095 | Release Stem Kit | 1 |
| 222098 | Speed Pump Assy | 1 |
| 222201* | Spring | 1 |
| 222257 | Plug Poppet Valve | 2 |
| 222533* | Screen | 2 |
| 223166* | Ram Screen | 1 |
| 226314 | Gland Nut | 1 |
| 226318 | Grease Fitting | 1 |
| 226324 | Pressure Plug | 1 |
| 226325 | Pump Link | 2 |
| 226326 | Nut | 1 |
| 226327 | Slotted Tube | 1 |
| 226329 | Pin | 1 |
| 226331* | Spring | 1 |
| 226353* | Spring | 1 |
| 226366 | Hex Head Bolt | 1 |
| 226372 | Spring | 1 |
| 226615 | Front Wheel | 2 |
| 227395 | Plunger Assy | 1 |
| 227397 | Release Link | 1 |
| 227399 | Extension Rod | 1 |
| 227436 | Turning Rod Assy | 1 |
| 228257* | U-cup | 1 |
| 228354 | Universal Assy | 1 |
| 228875 | Spring | 1 |
| 228881 | Grip | 2 |
| N/A | Serial Plate | 1 |
| 229748* | Heel Plate | 3 |
| 229749 | Washer | 1 |
| 229750 | Ram | 1 |
| 229751 | Pin | 1 |
| 230583 | Ram Assy | 1 |
| 231316 | Vent Valve Assy | 1 |
| 231583 | Rear Caster | 2 |
| 231638 | Filler Screw | 1 |
| 231710 | Oil Tank | 1 |
| 232968* | Back-up Washer | 1 |
| 232969* | U-cup | 1 |
| 232970 | Pressure Pump | 1 |
| 232971 | Pressure Pump Kit | 1 |
| 233798 | Tank Nut | 1 |
| N/A | Tank Nut/Quad Ring | 1 |
| 233917* | Plastic Spring | 1 |
| 233921 | Release Stem | 1 |
| 234695 | Bellcrank Pin | 1 |
| 234696 | Parallel Link Pin | 1 |
| 234976 | Cap Housing | 1 |
| N/A | Bellcrank | 1 |
| 241887 | Handle Socket | 1 |
| 241889 | Lift cap | 1 |
| N/A | Sideplate Assy | 1 |
| N/A | Sideplate Assy | 1 |
| 241895 | Hydraulic Unit Cover | 1 |
| 241907 | Repair Kit (Hyd. Unit) | - |
| 241982 | Fulcrum Pin | 1 |
| 241983 | Sideplate Tie Rod | 2 |
| 241985 | Support Rod | 1 |
| 241986 | Front Axle | 1 |
| 241987 | Retainer Ring | 2 |
| 241988 | Handle Pivot Pin | 1 |
| 241989 | Extension Spring | 2 |
| 241990 | Handle Assy | 1 |
| N/A | Hydraulic Unit Casting | 1 |
| 241993 | Hydraulic Unit Assy | 1 |

HW93657-K0 Label Kit (not shown)
HW93657-M0 Manual

(*) Items included in Repair Kit 241907

**Model HW93660 Replacement Parts Illustration Part I** (ref. parts list on pg. 11)

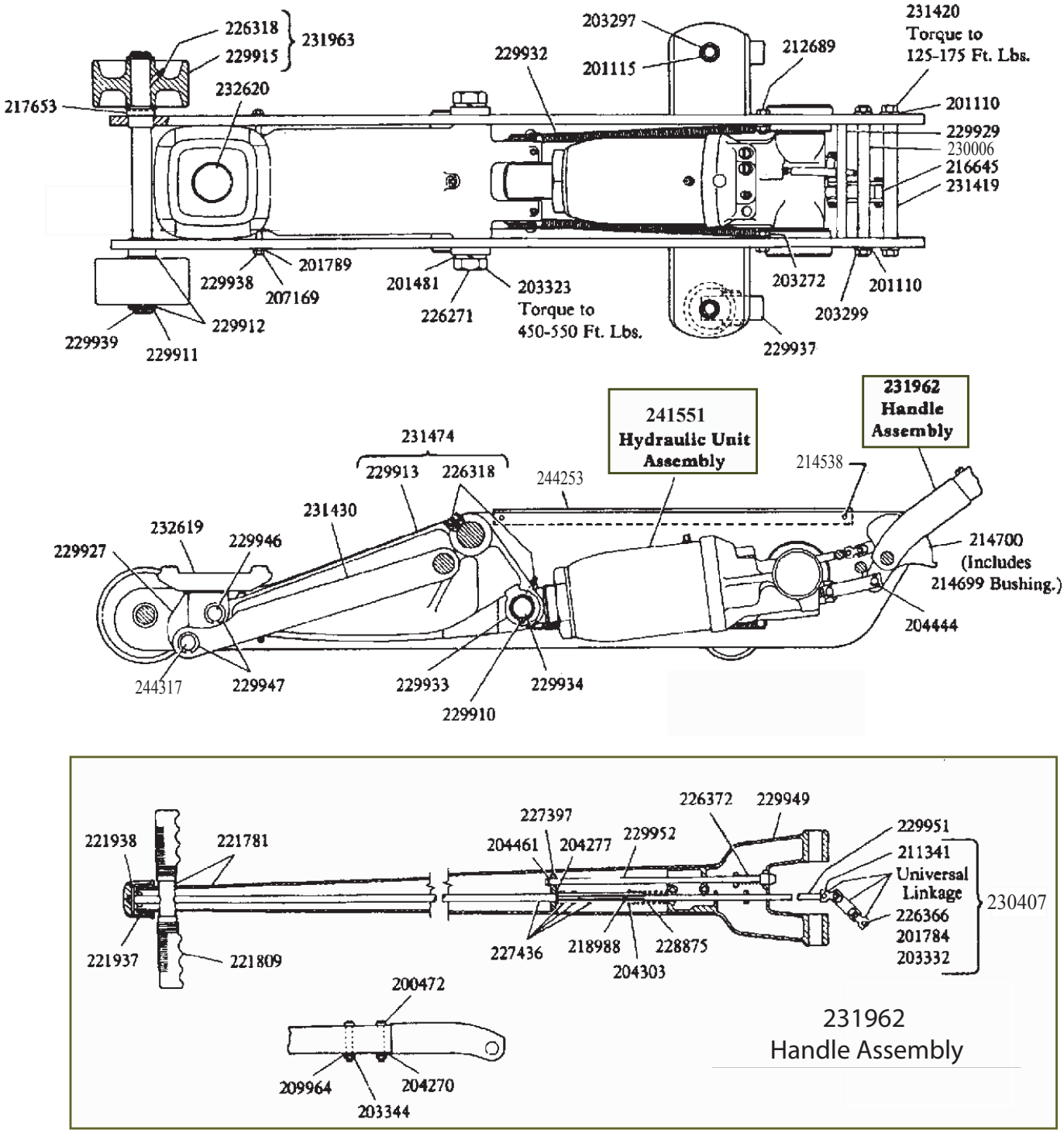



Figure 7 - Parts Illustration for Model HW93660

## Model HW93660 Replacement Parts Illustration Part II - Hydraulic Unit (ref.parts list on pg. 11)

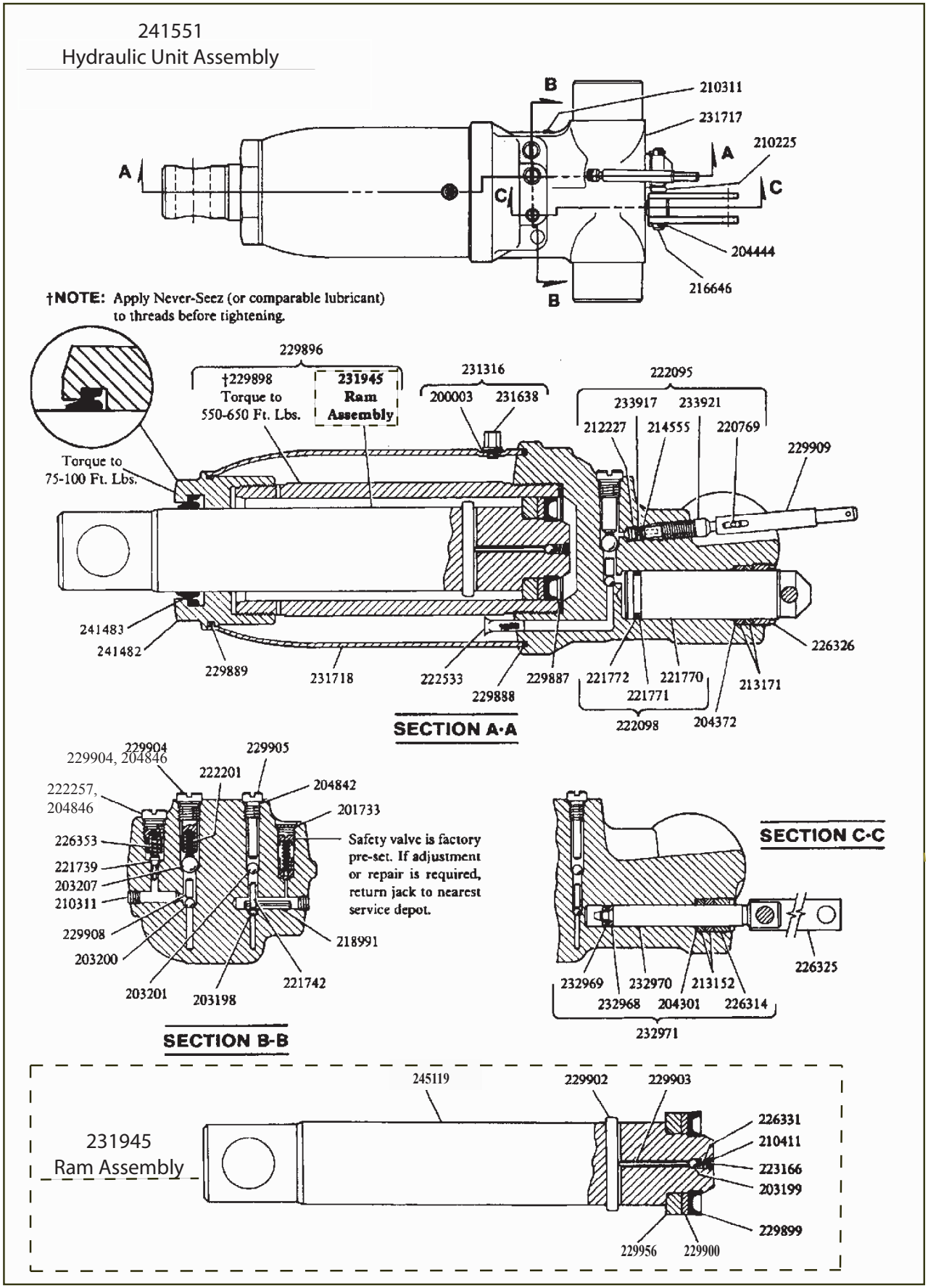



Figure 8 - Parts Illustration for Model HW93660 (Hydraulic Unit)

## Model HW93660 Replacement Parts List (ref. illustrations on pg. 9 & 10)

| Part# | Description | Qty | Part# | Description | Qty | Part# | Description | Qty |
|---|---|---|---|---|---|---|---|---|
| 200003 | Gasket | 1 | 220769 | Cross Pin | 1 | 229927 | Cap Housing | 1 |
| 200472 | Bolt | 2 | 221739 | Poppet | 1 | 229929 | Bearing | 1 |
| 201110 | Lockwasher | 4 | 221742 | Ball Stop Plug | 1 | 229932 | Spring | 2 |
| 201115 | Lockwasher | 2 | 221770 | Speed Pump | 1 | 229933 | Plate | 2 |
| 201481 | Lockwasher | 2 | 221771* | Back-up Washer | 1 | 229934 | Pin | 1 |
| 201733 | Expansion Plug | 1 | 221772 | Quad Ring | 1 | 229937 | Caster | 2 |
| 201784 | Lockwasher | 1 | 221781 | Handle & Cross Bar | 1 | 229938 | Pin | 1 |
| 201789 | Lockwasher | 2 | 221809 | Handle Grip | 2 | 229939 | Front Axle | 1 |
| 203198* | Ball | 1 | 221937 | Release Knob | 1 | 229946 | Pin | 1 |
| 203199* | Ball | 1 | 221938 | Roll Pin | 1 | 229947 | Retaining Ring | 4 |
| 203200* | Ball | 1 | 222095 | Release Stem Assy. | 1 | N/A | Handle Socket | 1 |
| 203201* | Ball | 1 | 222098 | Speed Pump Assy. | 1 | 229951 | Extension Rod | 1 |
| 203207* | Ball | 1 | 222201* | Spring | 1 | 229952 | Plunger Assy | 1 |
| 203272 | Nut | 2 | 222257 | Plug | 1 | 229956 | Heel Plate | 1 |
| 203297 | Nut | 2 | 222533* | Screen | 2 | 230006 | Bumper Pin | 1 |
| 203299 | Nut | 2 | 223166* | Screen | 1 | 230407 | Universal Assy | 1 |
| 203323 | Nut | 2 | 224253 | Cover | 1 | 231316 | Filler Plug/Gasket Assy | 1 |
| 203332 | Nut | 1 | N/A | Fulcrum Pin | 1 | 231419 | Fulcrum Pin | 1 |
| 203344 | Nut | 2 | 226314 | Gland Nut | 1 | 231420 | Bolt | 2 |
| 204270 | Washer | 2 | 226318 | Grease Fitting | 5 | N/A | Parallel Link | 2 |
| 204277 | Washer | 1 | 226325 | Pump Link | 2 | N/A | Bell Crank & Fittings | 1 |
| 204301 | Washer | 1 | 226326 | Gland Nut | 1 | 231638 | Filler Plug & Vent Valve | 1 |
| 204303 | Washer | 1 | 226331 | Spring | 1 | 231717 | Base | 1 |
| 204372 | Washer | 1 | 226353* | Spring | 1 | 231718 | Oil Tank | 1 |
| 204444 | Cotter Pin | 4 | 226366 | Bolt | 1 | 231945 | Ram Assy | 1 |
| 204461 | Cotter Pin | 1 | 226372 | Plunger Spring | 1 | 231962 | Handle Assy | 1 |
| 204842* | Gasket | 1 | 227397 | Link | 1 | 231963 | Front Wheel Assy | 2 |
| 204846 | Gasket Ring | 2 | 227436 | Turning Rod Assy. | 1 | 232619 | Lifting Cap | 1 |
| 207169 | Nut | 2 | 228875 | Spring | 1 | 232620 | Swivel Pin | 1 |
| 209964 | Lockwasher | 2 | 229887* | O-ring | 1 | 232968* | Back-up Washer | 1 |
| 210225 | Spacer | 1 | | | | | | |
| | | | 229888* | O-ring | 1 | 232969* | U-cup Packing | 1 |
| 210311 | Pipe Plug | 3 | 229889* | O-ring | 1 | 232970 | Pressure Pump | 1 |
| 210411* | Washer | 1 | N/A | Ram & Cylinder Assy. | 1 | 232971 | Pressure Pump & | 1 |
| 211341 | Rivet | 1 | 229898 | Cylinder | 1 | | Gland Packing Assy. | |
| 212227 | Release Valve | 1 | 229899* | U-cup Packing | 1 | 233917 | Plastic Spring | 1 |
| 212689 | Bolt | 2 | 229900* | Back-up Washer | 1 | 233921 | Release Stem | 1 |
| 213152* | Packing Ring | 2 | 229902 | Cross Pin | 1 | 240616 | Repair Kit (Hyd. Unit) | - |
| 213171* | Packing Ring | 2 | 229903 | Pin | 1 | 241482 | Tank Nut | 1 |
| 214538 | Groove Pin | 4 | 229904 | Plug | 1 | 241483* | Seal | 1 |
| 214555* | O-ring | 1 | 229905 | Plug | 1 | 241551 | Hydraulic Unit Assy | 1 |
| 214699 | Bushing | 1 | | | | | | |
| | | | 229908 | Spacer | 1 | 244317 | Pin | 1 |
| 214700 | Handle Segment | 1 | 229909 | Slotted Tube | 1 | 245119 | Ram | 1 |
| | & Bushing | | 229910 | Retaining Ring | 2 | | | |
| 216645 | Pin | 1 | 229911 | Retaining Ring | 2 | HW93660-K0 Label Kit (not shown) | | |
| 216646 | Pin | 1 | 229912 | Washer | 4 | HW93657-M0 Manual | | |
| 217653 | Roll Pin | 2 | N/A | Bell Crank | 1 | | | |
| 218988 | Roll Pin | 1 | 231963 | Front Wheel | 2 | (*) Items included in Repair Kit | | |
| 218991 | Roll Pin | 1 | | | | 240616 | | |

**Model HW93662 Replacement Parts Illustration Part I** (ref. parts list on pg. 14)

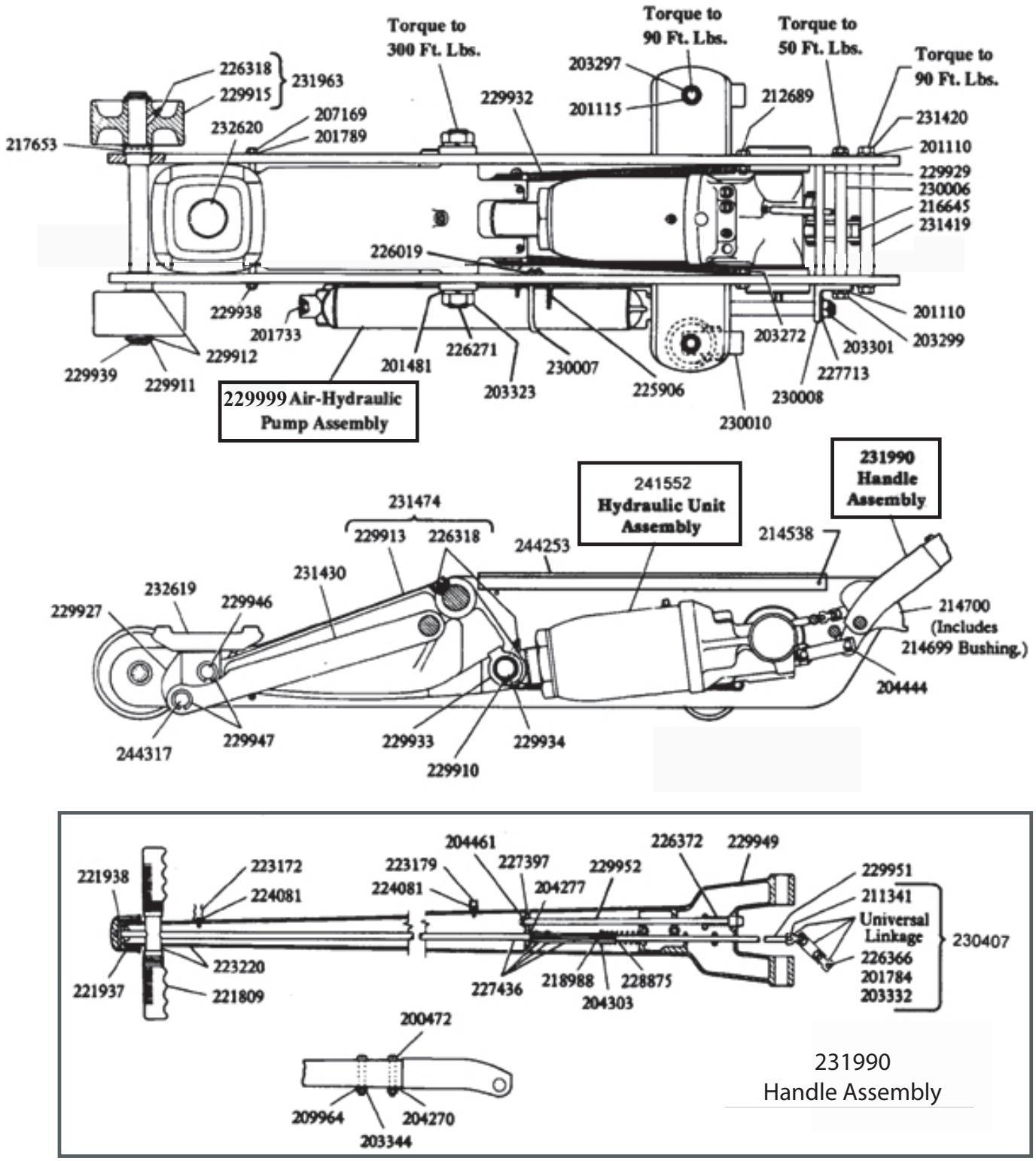



Figure 9 - Parts Illustration for Model HW93662

## Model HW93662 Replacement Parts Illustration Part II - Hyd Unit (ref. parts list on pg. 14)

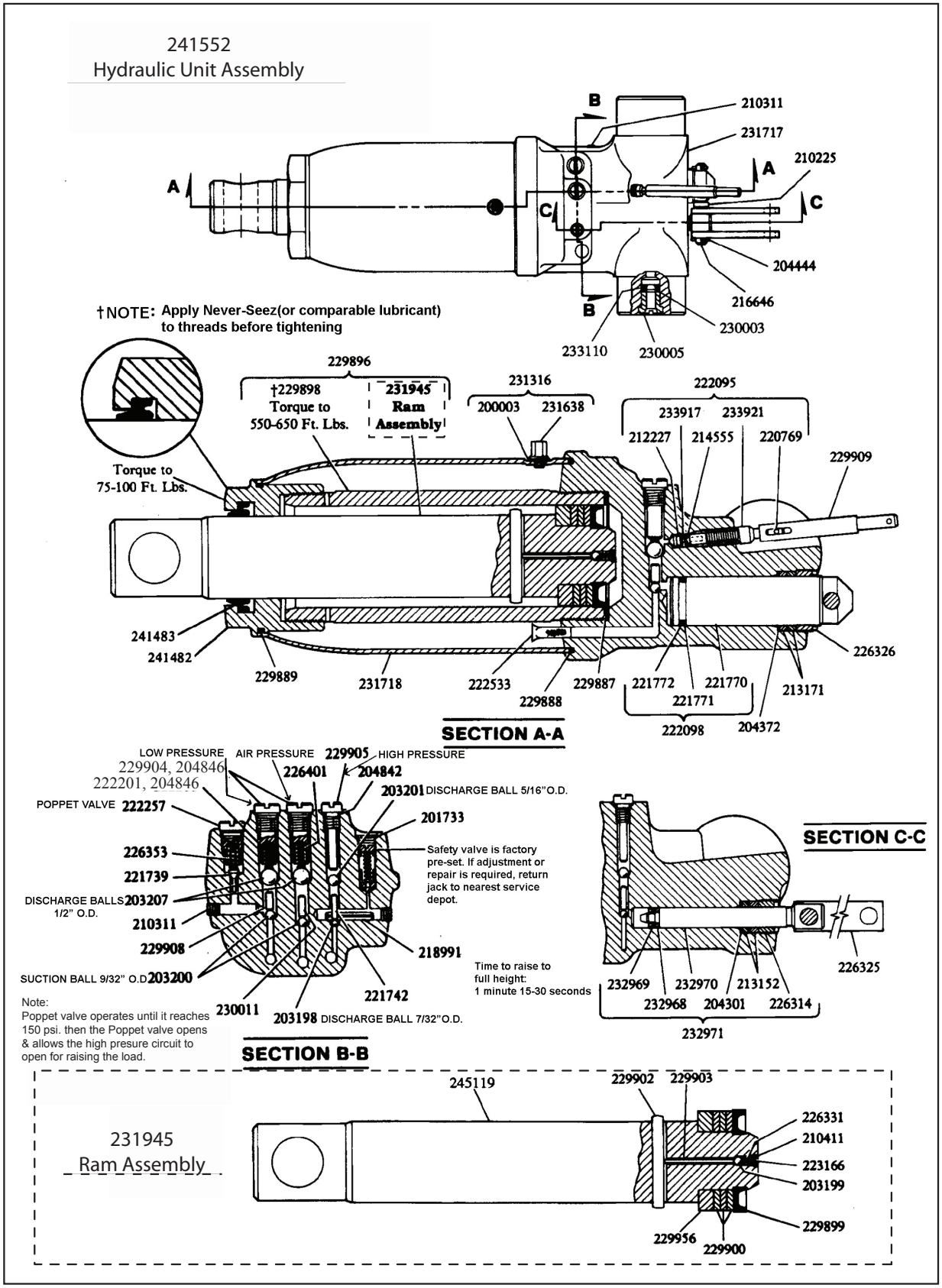
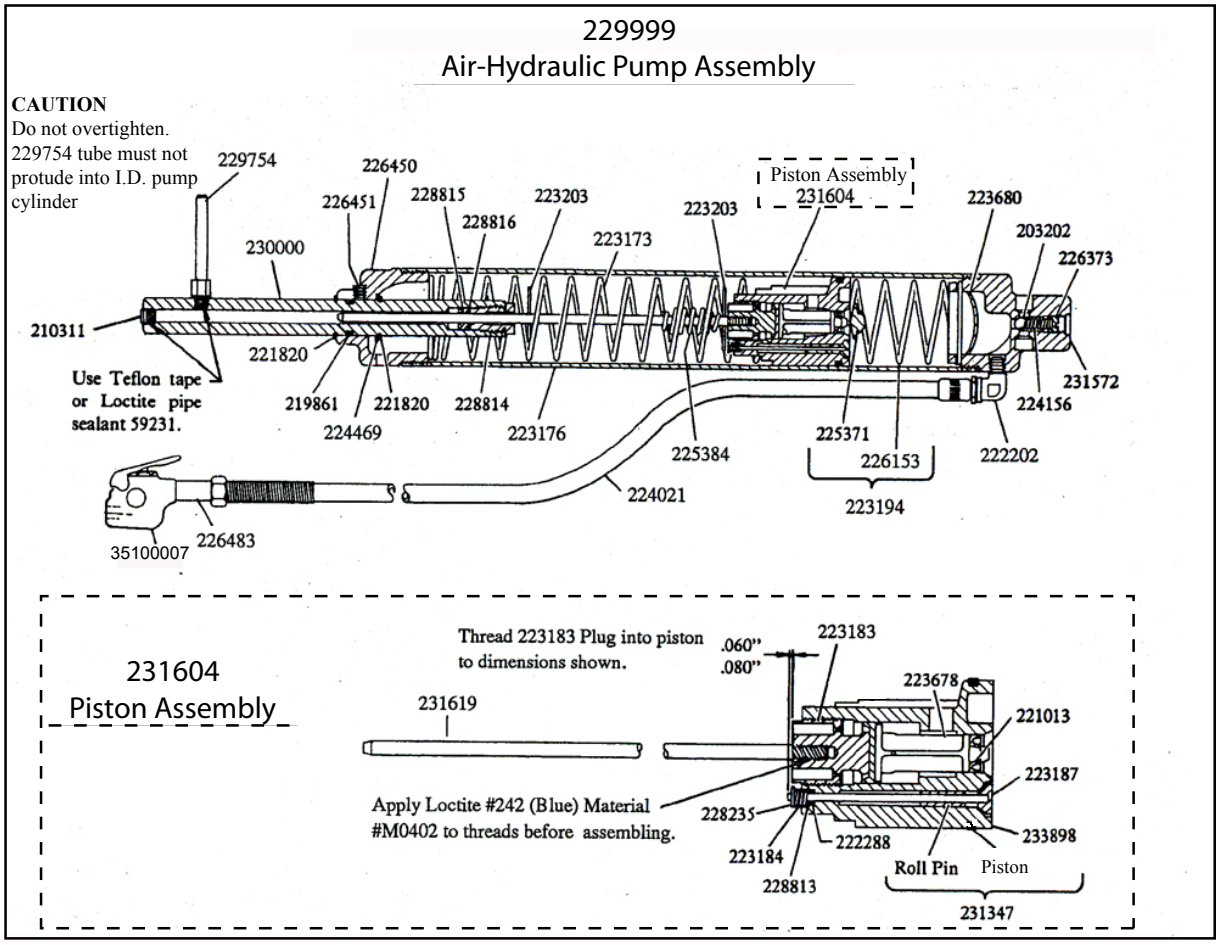



Figure 10 - Parts Illustration for Model HW93662 (Hydraulic Unit)

## Model HW93662 Replacement Parts Illustration Part III - Air Hyd. Pump




## Model HW93662 Replacement Parts List (ref. illustrations on pgs. 12, 13 & 14)

| Part# | Description | Qty | Part# | Description | Qty | Part# | Description | Qty |
|---|---|---|---|---|---|---|---|---|
| 200003 | Gasket | 1 | 204270 | Washer | 2 | 214555* | O-ring | 1 |
| 200472 | Bolt | 2 | 204277 | Washer | 1 | 214699 | Bushing | 1 |
| 201110 | Lockwasher | 4 | 204301 | Washer | 1 | 214700 | Handle Segment & | 1 |
| 201115 | Lockwasher | 2 | 204303 | Washer | 1 | | Bushing | |
| 201481 | Lockwasher | 2 | | | | 216645 | Pin | 1 |
| | | | 204372 | Washer | 1 | | | |
| 201733 | Expansion Plug | 1 | 204444 | Cotter Pin | 4 | 216646 | Pin | 1 |
| 201784 | Lockwasher | 1 | 204461 | Cotter Pin | 1 | 217653 | Roll Pin | 2 |
| 201789 | Lockwasher | 2 | 204842* | Gasket | 1 | 218988 | Roll Pin | 1 |
| 203198* | Ball (7/32") | 1 | 204846 | Gasket Ring | 3 | 218991 | Roll Pin | 1 |
| 203199* | Ball (1/4") | 1 | 207169 | Nut | 2 | 219861 | O-ring | 1 |
| 203200* | Ball (9/32") | 1 | 209964 | Lockwasher | 2 | 220769 | Cross Pin | 1 |
| 203201* | Ball (5/16") | 1 | 210225 | Spacer | 1 | 221013# | U-cup Packing | 1 |
| 203202 | Ball (11/32") | 1 | 210311 | Pipe Plug | 3 | 221739 | Poppet | 1 |
| 203207* | Ball | 1 | 210411* | Washer | 1 | 221742 | Ball Stop Plug | 1 |
| 203272 | Nut | 2 | 211341 | Rivet | 1 | 221770 | Speed Pump | 1 |
| 203297 | Nut | 2 | 212227 | Release Valve | 1 | 221771* | Back-up Washer | 1 |
| 203299 | Nut | 2 | 212689 | Bolt | 2 | 221772 | Quad Ring | 1 |
| 203301 | Jam Nut | 1 | 213152* | Packing Ring | 2 | 221809 | Handle Grip | 2 |
| 203323 | Nut | 2 | 213171* | Packing Ring | 2 | 221820 | Retaining Ring | 2 |
| 203332 | Nut | 1 | 214538 | Groove Pin | 4 | 221937 | Release Knob | 1 |
| 203344 | Nut | 2 | | | | | | |

## Model HW93662 Replacement Parts List (cont.)

| Part# | Description | Qty |
|---|---|---|
| 221938 | Roll Pin | 1 |
| 222095 | Release Stem Assy. | 1 |
| 222098 | Speed Pump Assy. | 1 |
| 222201* | Spring | 1 |
| BJ479096 | Elbow | 1 |
| 222257 | Plug | 1 |
| 222288# | O-ring | 1 |
| 222533* | Screen | 2 |
| 223166* | Screen | 1 |
| 223172 | Hose Clip | 1 |
| 223173 | Return Spring | 1 |
| 223176 | Cylinder, Air | 1 |
| 223179 | Hose Clip | 2 |
| 223183 | Plug | 1 |
| 223184 | Spring | 1 |
| 223187# | Valve & Plunger | 1 |
| 223194 | Spring & Cushion | 1 |
| 223203 | Trip Washer | 2 |
| 223220 | Handle & Cross Bar | 1 |
| 223678 | Packing & Piston | 1 |
| 223680 | Screen | 1 |
| 224021 | Hose, Air | 1 |
| 224081 | Screw | 2 |
| 224156 | Spring | 1 |
| 224469 | Washer | 1 |
| 225371 | Rubber Cushion | 1 |
| 225384 | Trip Spring | 1 |
| 225906 | Bracket, Speed pak | 1 |
| 226153 | Spring | 1 |
| 226271 | Fulcrum Pin | 1 |
| 226314 | Gland Nut | 1 |
| 226318 | Grease Fitting | 5 |
| 226325 | Pump Link | 2 |
| 226326 | Gland Nut | 1 |
| 226331 | Spring | 1 |
| 226353* | Spring | 1 |
| 226366 | Bolt | 1 |
| 226372 | Plunger Spring | 1 |
| 226373 | Adjusting Screw | 1 |
| 226401 | Spring | 1 |
| 226450 | End Block | 1 |
| 226451 | Set Screw | 2 |
| 226483 | Pipe Nipple | 1 |
| 227397 | Link | 1 |
| 227436 | Turning Rod Assy. | 1 |
| 227713 | Lockwasher | 1 |
| 228235 | Cotter Pin | 1 |
| 228813 | Washer | 1 |
| 228814# | Gland Nut | 1 |
| 228815# | U-cup Packing | 1 |
| 228816# | Washer | 1 |
| 228875 | Spring | 1 |
| 229754 | Pin | 1 |
| 229887* | O-ring | 1 |
| 229888* | O-ring | 1 |
| 229889* | O-ring | 1 |
| N/A | Ram/Cylinder Assy | 1 |
| 229898 | Cylinder | 1 |
| 229899* | U-cup Packing | 1 |
| 229900* | Back-up Washer | 1 |
| 229902 | Cross Pin | 1 |
| 229903 | Pin | 1 |
| 229904 | Plug | 1 |
| 229905 | Plug | 1 |
| 229908 | Spacer | 1 |
| 229909 | Slotted Tube | 1 |
| 229910 | Retaining Ring | 2 |
| 229911 | Retaining Ring | 2 |
| 229912 | Washer | 4 |
| N/A | Bell Crank | 1 |
| 231963 | Front Wheel | 2 |
| 229927 | Cap Housing | 1 |
| 229929 | Bearing | 1 |
| 229932 | Spring | 2 |
| 229933 | Plate | 2 |
| 229934 | Pin | 1 |
| 229938 | Pin | 1 |
| 229939 | Front Axle | 1 |
| 229946 | Pin | 1 |
| 229947 | Retaining Ring | 4 |
| N/A | Handle Socket | 1 |
| 229951 | Extension Rod | 1 |
| 229952 | Plunger Assy. | 1 |
| 229956 | Heel Plate | 1 |
| 229999 | Air Hyd. Pump Assy. | 1 |
| 230000 | Pump Cylinder | 1 |
| 230003 | Back-up Washer | 1 |
| 230005 | Gland Nut | 1 |
| 230006 | Bumper Pin | 1 |
| 230007 | U-bolt | 1 |
| 230008 | Bracket | 1 |
| 230010 | Caster | 2 |
| 230011 | Spacer | 1 |
| 230407 | Universal Assy. | 1 |
| 231316 | Filler Plug & Gasket Assy. | 1 |
| 231347 | Piston & Roll Pin | 1 |
| 231419 | Fulcrum Pin | 1 |
| 231420 | Bolt | 2 |
| N/A | Parallel Link | 2 |
| N/A | Bell Crank/Fittings | 1 |
| 231572 | Cylinder Cap | 1 |
| 231604 | Piston Assy. | 1 |
| 231619 | Rod, Pump | 1 |
| 231638 | Filler plug/Vent Valve | 1 |
| 231733 | Base | 1 |
| 231718 | Oil Tank | 1 |
| 231945 | Ram Assy. | 1 |
| 231963 | Front Wheel Assy. | 2 |
| 231990 | Handle Assy. | 1 |
| 232619 | Lifting Cap | 1 |
| 232620 | Swivel Pin | 1 |
| 232968* | Back-up Washer | 1 |
| 232969* | U-cup Packing | 1 |
| 232970 | Pressure Pump | 1 |
| 232971 | Pressure Pump & Gland Packing Assy. | 1 |
| 233110 | Pump U-cup | 1 |
| 233622 | Screw | 4 |
| 233897 | Ring, Sealing | 1 |
| 233917 | Plastic Spring | 1 |
| 233921 | Release Stem | 1 |
| 240564 | Repair Kit (Air Pump) | - |
| 240616 | Repair Kit (Hyd. Unit) | - |
| 241482 | Tank Nut | 1 |
| 241483* | Seal | 1 |
| 241552 | Hydraulic Unit Assy. | 1 |
| 244253 | Cover | 1 |
| 244317 | Pin | 1 |
| 245119 | Ram | 1 |
| 35100007 | Air Valve | 1 |

HW93662-K0 Label Kit (not shown)
HW93657-M0 Manual

(*) Items included in Repair Kit 240616

***(#)*** Items included in Repair Kit 240564

**Model HW93667 Replacement Parts Illustration Part I** (ref. parts list on pg. 18)

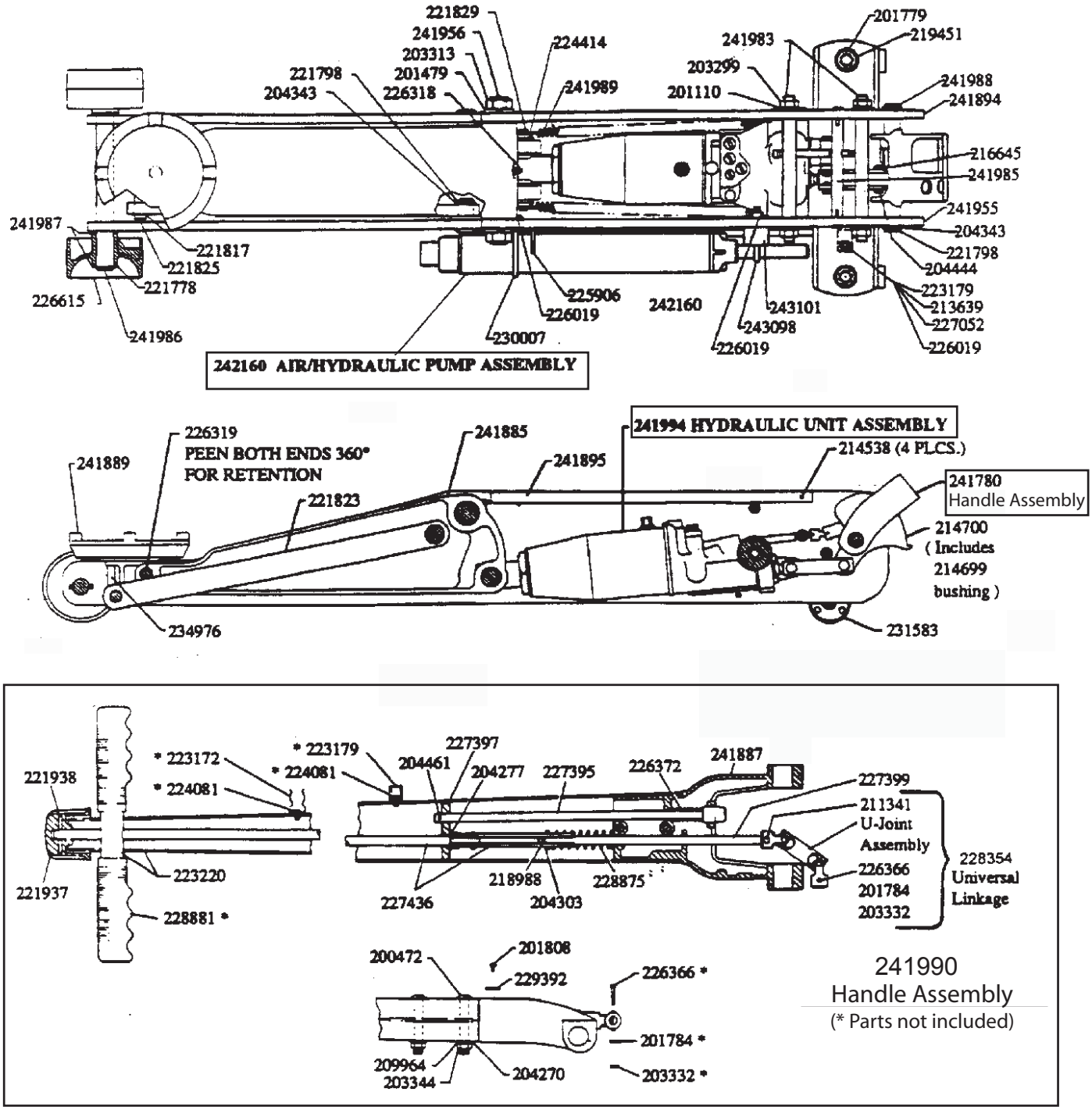



Figure 12 - Parts Illustration for Model HW93667

## Model HW93667 Replacement Parts Illustration Part II - Hyd Unit (ref. parts list on pg. 18)

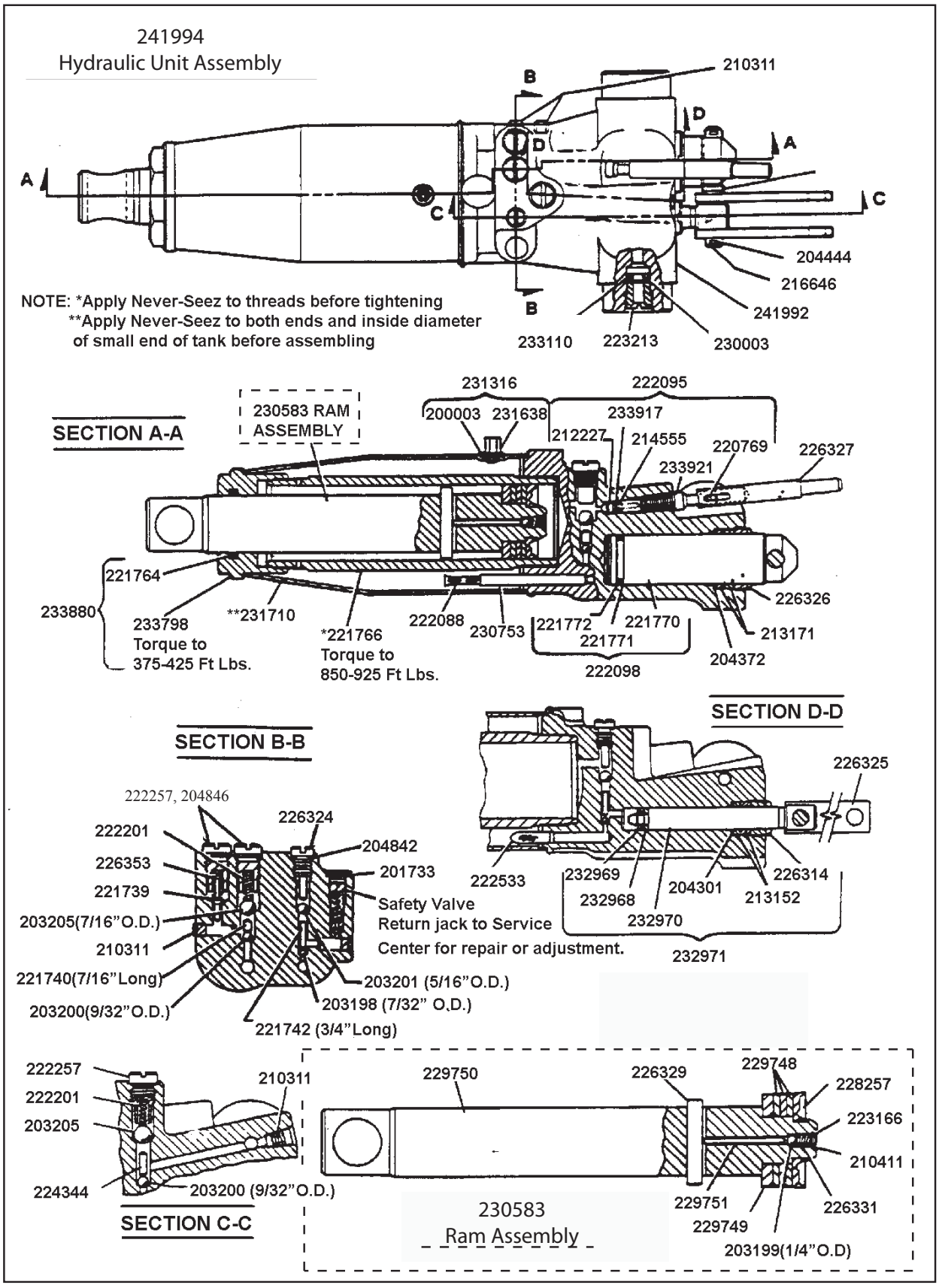



Figure 13 - Parts Illustration for Model HW93667 (Hyd. Unit)

## Model HW93667 Replacement Parts Illustration Part III - Air Hyd. Pump

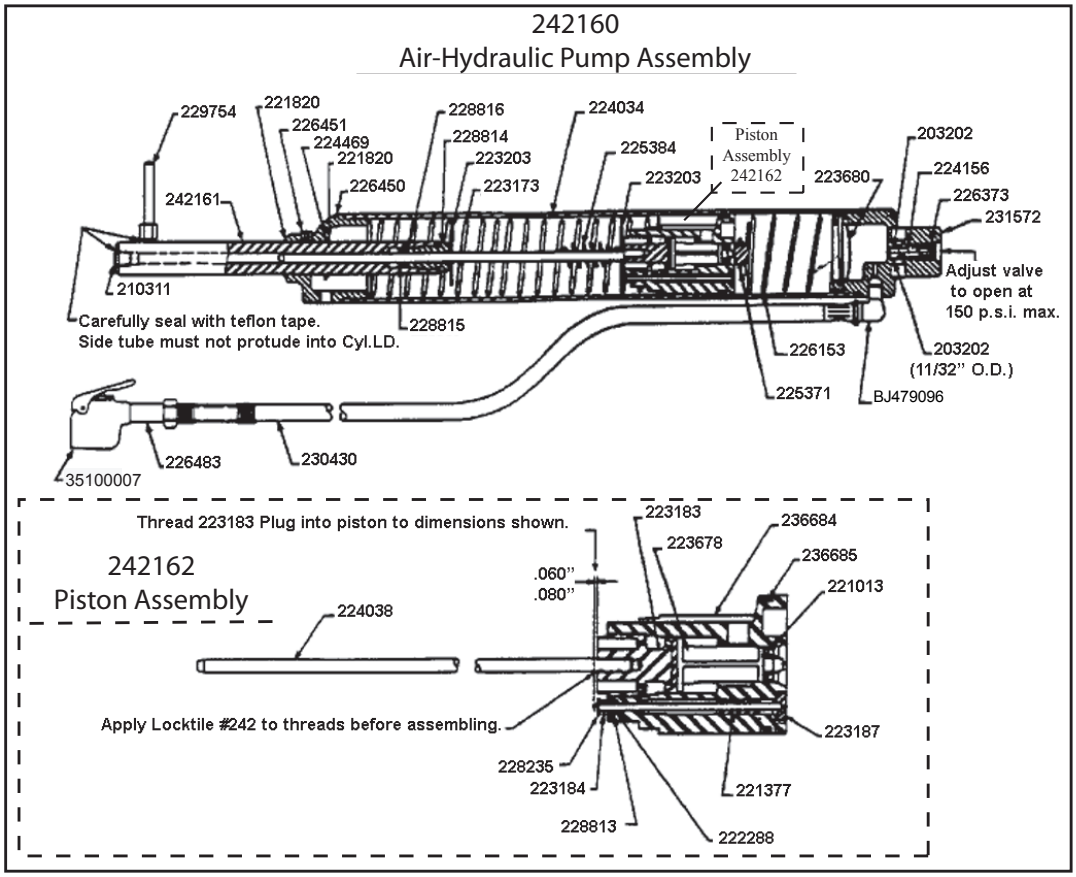



Figure 14 - Parts Illustration for Model HW93667 (Air Hyd. Pump)

## Model HW93667 Replacement Parts List (ref. illustrations on pgs. 16, 17 & 18)

| Part# | Description | Qty | Part# | Description | Qty | Part# | Description | Qty |
|---|---|---|---|---|---|---|---|---|
| 200003* | Gasket | 1 | 204301 | Washer | 1 | 216645 | Pin | 1 |
| 200472 | Screw | 2 | 204303 | Washer | 1 | 216646 | Pump Pin | 1 |
| 201110 | Lockwasher | 4 | 204343 | Washer | 4 | 218988 | Roll Pin | 1 |
| 201479 | Lockwasher | 2 | 204372 | Washer | 1 | 219451 | Hex Nut | 2 |
| 201733 | Plug | 1 | 204444 | Cotter Pin | 3 | 220769 | Cross Pin | 1 |
| 201779 | Lockwasher | 2 | 204461 | Cotter Pin | 1 | 221013# | U-cup Packing | 1 |
| 201784 | Lockwasher | 1 | 204842* | Copper Gasket | 1 | 221377 | Roll Pin | 1 |
| N/A | Rivet | 2 | 204846 | Gasket Ring | 2 | 221739* | Poppet | 1 |
| 203198* | Ball (7/32") | 1 | 209964 | Lockwasher | 2 | 221740 | Ball Stop Plug (7/16") | 1 |
| 203199* | Ball (1/4") | 1 | 210225 | Spacer | 1 | 221742 | Ball Stop Plug (3/4") | 1 |
| | | | 210311 | Pipe Plug | 4 | | | |
| 203200* | Ball (9/32") | 1 | | | | 221764* | Ram Quad Ring | 1 |
| 203201* | Ball (5/16") | 1 | 210411* | Washer | 1 | N/A | Cylinder | 1 |
| 203202 | Ball (11/32") | 1 | 211341 | Rivet | 1 | 221770 | Low Pressure Pump | 1 |
| 203205* | Ball (7/16") | 1 | 212227 | Release Valve | 1 | 221771* | Washer | 1 |
| 203299 | Jam Nut | 4 | 213152* | Packing Ring | 2 | 221772* | Quad ring | 1 |
| | | | 213171* | Packing Ring | 2 | | | |
| 203313 | Jam Nut | 2 | | | | 221778 | Washer | 2 |
| 203332 | Nut | 1 | 213639 | Bolt | 1 | 221798 | Retainer Ring | 4 |
| 203344 | Jam Nut | 2 | 214538 | Groove Pin | 4 | 221817 | Retainer Ring | 2 |
| 204270 | Washer | 2 | 214555* | O-ring | 1 | 221820 | Retaining Ring | 1 |
| 204277 | Washer | 1 | 214699 | Bushing | 1 | N/A | Parallel Link | 2 |
| | | | 214700 | Handle Segment Assy | 1 | | | |

## Model HW93667 Replacement Parts List (cont.)

| Part# | Description | Qty |
|---|---|---|
| 234696 | Parallel Link Pin | 1 |
| 221829 | Pin | 1 |
| 221937 | Turning Knob | 1 |
| 221938 | Roll Pin | 1 |
| 222088 | Screen Assembly | 1 |
| 222095 | Release Stem Kit | 1 |
| 222098 | Speed Pump Assy | 1 |
| 222201* | Spring | 1 |
| BJ479096 | Elbow | 1 |
| 222257 | Plug Poppet Valve | 2 |
| 222288# | O-ring | 1 |
| 222533* | Screen | 2 |
| 223166* | Ram Screen | 1 |
| 223172 | Hose Clip | 1 |
| 223173 | Return Spring | 1 |
| 223179 | Hose Clip | 2 |
| 223183 | Plug | 1 |
| 223184 | Spring | 1 |
| 223187# | Valve & Plunger | 1 |
| 223203 | Trip Washer | 2 |
| 223213 | Gland Nut | 1 |
| 223220 | Handle & Cross Bar | 1 |
| 223678 | Packing & Piston | 1 |
| 223680 | Screen | 1 |
| 224034 | Air Cylinder | 1 |
| 224038 | Pump Rod | 1 |
| 224081 | Screw | 3 |
| 224156 | Spring | 1 |
| 224344 | Ball Stop Plug | 1 |
| 224414 | Retaining Ring | 1 |
| 224469 | Washer | 1 |
| 225371 | Rubber Cushion | 1 |
| 225384 | Trip Spring | 1 |
| 225906 | Bracket, Speed Pak | 1 |
| 226019 | Lock Nut | 4 |
| 226153 | Spring | 1 |
| 226314 | Gland Nut | 1 |
| 226318 | Grease Fitting | 1 |
| N/A | Bellcrank Pin | 1 |
| 226324 | Pressure Plug | 1 |
| 226325 | Pump Link | 2 |
| 226326 | Nut | 1 |
| 226327 | Slotted Tube | 1 |
| 226329 | Pin | 1 |
| 226331* | Spring | 1 |
| 226353* | Spring | 1 |
| 226366 | Hex Head Bolt | 1 |
| 226372 | Spring | 1 |
| 226373 | Adjusting Screw | 1 |
| N/A | End block | 1 |
| 226451 | Set Screw | 2 |
| 226483 | Pipe Nipple | 1 |
| 226615 | Front Wheel | 2 |
| 227052 | Washer | 1 |
| 227395 | Plunger Assy | 1 |
| 227397 | Release Link | 1 |
| 227399 | Extension Rod | 1 |
| 227436 | Turning Rod Assy | 1 |
| 228235 | Cotter Pin | 1 |
| 228257* | U-cup | 1 |
| 228354 | Universal Linkage | 1 |
| 228813 | Washer | 1 |
| 228814# | Gland Nut | 1 |
| 228815# | U-cup Packing | 1 |
| 228816# | Washer | 1 |
| 228875 | Spring | 1 |
| 228881 | Grip | 2 |
| N/A | Serial plate | 1 |
| 229748* | Heel Plate | 3 |
| 229749 | Washer | 1 |
| 229750 | Ram | 1 |
| 229751 | Pin | 1 |
| 229754 | Extension Tube | 1 |
| 230003* | Back-up Washer | 1 |
| 230007 | U-bolt | 1 |
| 230430 | Air Hose Assy | 1 |
| 230583 | Ram Assy | 1 |
| 230753 | Suction Tube | 1 |
| 231316 | Vent Valve Assy | 1 |
| N/A | Cylinder Cap | 1 |
| 231583 | Rear Caster | 2 |
| 231638 | Filler Screw | 1 |
| 231710 | Oil Tank | 1 |
| 232968* | Back-up Washer | 1 |
| 232969* | U-cup | 1 |
| 232970 | Pressure Pump | 1 |
| 232971 | Pressure Pump Kit | 1 |
| 233110 | Pump U-cup | 1 |
| 233798 | Tank Nut | 1 |
| N/A | Tank Nut & Quad Ring | 1 |
| 233917* | Plastic Spring | 1 |
| 233921 | Release Stem | 1 |
| 234976 | Cap Housing | 1 |
| 236684 | Piston | 1 |
| 236685 | Sealing Ring | 1 |
| 240564 | Repair Kit (Hyd. Pump) | 1 |
| 241990 | Handle | 1 |
| N/A | Bellcrank | 1 |
| 241887 | Handle Socket | 1 |
| 241889 | Lift Cap | 1 |
| N/A | Sideplate Assy | 1 |
| 241895 | Hydraulic Unit Cover | 1 |
| 241907 | Repair Kit (Hyd. Unit) | - |
| N/A | Sideplate Assy | 1 |
| 241982 | Fulcrum Pin | 1 |
| 241983 | Sideplate Tie Rod | 2 |
| 241985 | Support Rod | 1 |
| 241986 | Front Axle | 1 |
| 241987 | Retainer Ring | 4 |
| 241988 | Handle Pivot Pin | 1 |
| 241989 | Extension spring | 2 |
| 241992 | Hydraulic Unit Casting | 1 |
| 241994 | Hydraulic Unit Assy | 1 |
| 242160 | Air Hyd. Pump Assy | 1 |
| 242161 | Pump Cylinder | 1 |
| 242162 | Piston Assembly | 1 |
| 243098 | U-bolt | 1 |
| 243101 | Sleeve | 1 |
| 35100007 | Air Valve | 1 |

HW93667-K0 Label Kit (not shown)
HW93657-M0 Manual

(*) Items included in Repair Kit 241907
**#** Items included in Repair Kit 240564

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