

OPERATORS' GUIDE

REL-60 SERIES 60 TON HYDRAULIC CRIMPING TOOL



MODEL: _____

MAX. PRESSURE: _____

SERIAL NO.: _____ YEAR: _____

NOTICE

Sizes, weights and tool specifications listed in this manual are subject to change without notice.

Consult factory for information and updates.

WARNING



All information found in this guide must be read and understood before use or testing of this tool.

Failure to read and understand these warnings and safe handling instructions could result in severe personal injury and or death.



RELIABLE EQUIPMENT & SERVICE CO., INC.

REL-60 Series Manual 10-10

DISTRIBUTED BY

REGISTRATION

UPON RECEIPT OF THIS TOOL, COMPLETE THE REGISTRATION BELOW.

COMPANY _____

ADDRESS _____

PHONE _____ FAX _____

SERIAL NUMBER _____

DATE OF PURCHASE _____

DEALER NAME _____



CAU-

The information in this manual is intended to guide the user in the use and application of this tool. It is not intended as a substitute for proper training and experience in safe work practices for this type of equipment.

Consult your supervisor or safety personnel if you have any questions regarding the safe operation of this tool.

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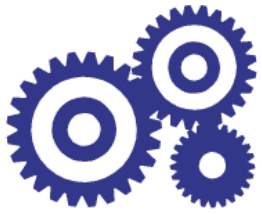
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If you have any questions regarding the information found in this manual please contact RELIABLE EQUIPMENT at 800-966-3530 or FAX 215-357-9193.



THIS SYMBOL INDICATES ITEMS OF EXTREME IMPORTANCE.

Safety of user and others may be in jeopardy if these instructions are not read and understood.



RELIABLE EQUIPMENT & SERVICE CO., INC.



REL-60SA



REL-60DA

REL-60 SERIES 60 TON HYDRAULIC COMPRESSION TOOL

The REL-60 Series 60 ton press is designed to compress sleeves and lugs on ACSR and ACAR transmission and distribution cables. Operable from any 10,000 psi pumping source, these tools are portable for easy positioning. Available in two models: The **REL-60SA** will be the perfect compliment to any single acting system. The **REL-60DA** features double acting convenience to eliminate the possibility of jamming or hanging up.

Accepts most shell type dies currently used with Alcoa, and Burndy 60 ton presses.



FEATURES:

- Lightweight
- Removable die cap for easy connector positioning.
- 3/8" Screw-type couplers
- Tool Stand & Steel Case included

Model	REL-60
Output	60 ton @ 10,000 psi
Weight	47 lbs.
Dimensions	5"W x 17"H
Ram Stroke	1.5" travel
Oil Capacity	303 cc



WARNING

BEFORE USING THIS TOOL, READ THE WARNINGS and the recommended practices described in this manual. Failure by the operator to read and fully understand these warnings will leave this person unqualified to use and operate this tool. Property damage, severe personal injury, and/or death could result by not following these warnings.

These warnings will appear in appropriate locations when they are pertinent to the particular subject being shown. Read each one carefully and follow them strictly.



WARNING

Eye Protection

Always wear eye protection to avoid

injury from flying debris or hydraulic oil leaks. Failure to do so can result in serious personal injury.



WARNING

Dust Mask

Always wear a dust mask. Failure to

observe this warning may result in serious health issues and/or breathing difficulty.



WARNING

Hard Hat

Always wear a hard

hat to avoid injury from falling debris. Failure to do so can result in serious personal injury.



WARNING

Foot Protection

Always wear foot protection. Failure to do so can result in serious personal injury.



WARNING

Hearing Protection

Always wear hearing

protection, to avoid hearing loss due to long term exposure to high noise levels.



WARNING

Protective Gloves

Always wear protective gloves. Failure to do so can result in serious personal injury.



WARNING

SAFE OPERATION & CARE

USE THIS TOOL FOR ITS INTENDED PURPOSE ONLY

Any other use can result in personal injury or property damage.

INSPECT TOOL BEFORE USE. Replace any worn, damaged or missing parts. A damaged or improperly assembled tool may malfunction, injuring operator and/or nearby personnel.

INSPECT HYDRAULIC HOSES AND COUPLINGS before each use. Repair or replace if any cracking, leakage, wear or damage is found. Worn or damaged hoses may fail resulting in personal injury or property damage.

CLEAR WORK AREA of all bystanders and unnecessary personnel before operating this tool.

KEEP ALL PARTS OF THE BODY AWAY FROM MOVING PARTS.

Failure to observe this warning could result in serious injury.



WARNING

HYDRAULIC POWER SUPPLY

DO NOT attempt to make any changes to any of the component parts or accessories when connected to the power source.

DO NOT adjust, inspect, or clean tool while the tool is connected to the power source. The tool could accidentally start up and cause serious injury.

DO NOT overpressure the Return (Top) Port on the REL-60DA. Pressure to this port is **NOT TO EXCEED 6,500 PSI**. Failure to comply will Damage the Tool, and Void your Warranty.

DO NOT adjust, inspect, or clean tool while the tool is connected to the power source. The tool could accidentally start up and cause serious injury.



WARNING

OIL INJECTION INJURY

Hydraulic oil or fluid under the skin is a serious injury. Oil under pressure can penetrate the skin and may cause dismemberment or loss of life. Seek medical assistance immediately if such an injury should occur.

Always wear safety gloves, eye protection and all required safety equipment when operating or handling this tool.

DO NOT use fingers or hands to attempt to locate a leak.

DO NOT handle hoses or couplers while system is pressurized.

NEVER open or service the system before depressurizing.



WARNING

HOSES AND FITTINGS

There exists the potential for shock in using anything other than certified nonconductive hoses and hydraulic oil with dielectric properties, when using system components near energized electrical lines. Failure to recognize these conditions could cause electrocution.

Hoses and fittings used with this tool must comply with S.A.E.

J1273 which covers recommended practice for selection, installation, and maintenance of hose and hose assemblies. The **correct hoses and fittings are available from your supplier.**

WARNING: Failure to comply with these warnings could result in severe bodily injury.



WARNING

UNIT/HOSE CONNECTIONS

~~ALWAYS DISCONNECT~~ ALWAYS DISCONNECT the pump or power source and components

ALWAYS DEPRESSURIZE hydraulic system, before slowly disconnecting this unit or any of the systems components.

ALWAYS TIGHTEN couplings completely. Loose or improperly tightened couplings will not allow fluid to pass through the hose creating a blockage in the supply or return line.

ALWAYS INSPECT HOSES AND CONNECTORS before connection to tool. Replace or repair if any leakage is evident. Leakage is a sign of deterioration in component parts. Worn or leaking parts must be repaired or replaced, or tool damage or severe injury could result.



CAUTION

HOSE INSTALLATION

ALWAYS ENSURE CONNECTORS ARE CLEAN

DOUBLE ACTING - Care must be taken to assure the correct connection of the hoses to the pressure and return (tank) ports. Connect the return hose to the return (tank) port on the power source, then to the return port on the tool.

Connect the pressure hose to the pressure port on the tool, then to the "P" pressure port on the power source.

Operation with hydraulic flow reversed can cause malfunction. Failure to fully comply can result in severe injury or death.



WARNING

Operation/Safety methods may vary in accordance with the working guidelines established by each utility or contractor.

For your own safety, ensure that you fully comply with all safe operation guidelines required by your employer.



WARNING

ELECTRICAL SHOCK HAZARD

Always wear and use the necessary clothing, equipment and safety practices to protect against electrical shock. Failure to follow these rules can result in serious personal injury or death.



GENERAL SAFETY



USE ALL APPROPRIATE AND APPLICABLE PERSONAL SAFETY EQUIPMENT as required by the operating company.

ALWAYS INSPECT TOOL for wear or deterioration every day.

Replace all parts that show signs of wear or damage.

INSPECT TOOL BEFORE USE. Replace any worn, damaged or missing parts. A damaged or improperly assembled tool may injure operator and/or nearby personnel.

KEEP ALL PARTS OF THE BODY AWAY from moving parts of the tool.

KEEP HANDS OUT FROM BETWEEN CRIMPING JAWS AT TOOL HEAD.

ALL BODY PARTS SHOULD BE OUTSIDE DANGER ZONE PRIOR TO CRIMPING.

MAKE SURE there is no person in close proximity to you or the tool who could be injured by any operation being performed, tool malfunction or flying debris.

DO NOT OVEREXTEND your position by overreaching or unbalancing the footing necessary to maintain physical control of your body and the tool.

ALWAYS MAINTAIN a firm grip on the tool to avoid loss of control during an operation, causing property damage, serious injury or death.

USE THIS TOOL FOR THE MANUFACTURERS' INTENDED PURPOSE ONLY.

OBSERVE CLOSELY ALL SAFETY RULES FOR A PARTICULAR JOB CLASS

**FAILURE TO HEED THESE WARNINGS COULD RESULT IN
PROPERTY DAMAGE, SERIOUS PERSONAL INJURY OR DEATH.**

DAILY MAINTENANCE

The life, reliability, and safety of the tool is dependent on proper maintenance.

Clean all surfaces including head, die seat, ram, and body.

Inspect for wear and damage. Worn or damaged parts may malfunction during operation.

All parts must be replaced with new parts if signs of wear or damage are evident.

Keep Label Set clean and legible. Replace decals when necessary.

OPERATION

Read entire manual prior to using this tool.

(Refer to all safety recommendations and warnings)

Observe all safety precautions and procedures required by the operating company. Also refer to SAFETY information found on pages 5 and 6)

Before crimping, ensure that crimp is within the capacity listed for the tool.

Ensure that you are using the proper die, as recommended by the connector manufacturer.

Insert proper die into die seat using die buttons.



NEVER OPERATE TOOL WITHOUT DIES
Serious damage or personal injury could occur.



Place tool over connector.

Align jaw as necessary to ensure proper crimp.

NOTE: Jaw may be released as needed at any point in the crimp cycle.

Continue pumping until desired pressure has been achieved.

Crimp is complete.

To release ram from connector, operate directional valve. (Double Acting Models)



DO NOT overpressure the Return (Top) Port on the REL-60DA.
Pressure to this port is NOT TO EXCEED 6,500 PSI.
Failure to comply will Damage the Tool, and Void your Warranty.



Ram will retract automatically when pressure is released. (Single Acting Models)

Repeat steps above as necessary.

Manufacturer recommends regular testing for proper pressure and operation.

Test at least every 6 months, test more often under heavy usage.

**IF YOU HAVE ANY QUESTIONS REGARDING THE PROPER USE
AND/OR OPERATION OF THIS TOOL, CONSULT YOUR AREA SUPERVISOR,
OR CONTACT RELIABLE EQUIPMENT AT 800-966-3530**

MAINTENANCE

Complete disassembly is not recommended. Return the unit to an authorized dealer for total disassembly and/or repair.

All maintenance or disassembly should take place on a flat, clean work surface covered with towels or wipers so as to have a clean space for the disassembled parts.

Inspect each part during disassembly for wear, scratches, and cuts. Discard the worn or damaged parts and replace with new factory authorized parts.

O-rings are sensitive to sharp edges. Inspect closely for cuts or damage. A small cut will cause a leak. When assembling or disassembling O-rings, use hydraulic fluid as a lubricant to help disassembly or installation.

IF YOU HAVE QUESTIONS REGARDING THE REPAIR AND MAINTENANCE OF THIS TOOL CONTACT RELIABLE EQUIPMENT AT 800-966-3530



BEFORE USING THIS PRODUCT READ THE SAFETY WARNINGS and recommended practices described in the manual. Failure by the operator to read and fully understand the warnings will leave this person unqualified to use and operate the tool.

Failure to observe all warnings and instructions could result in property damage, severe personal injury, and/or death.



WARNING
REL-60DA (ONLY)

**Pressure to the Return (top) port is
NOT TO EXCEED 6,500 PSI**

**Failure to comply will
DAMAGE THE TOOL AND
VOID YOUR WARRANTY**

Contact your RELIABLE representative, or
RELIABLE EQUIPMENT & SERVICE CO., INC.
if you require information or assistance
selecting a compatible power source.



CAUTION

Operation and safety methods may vary in accordance with the guidelines established by each utility. For your safety, ensure that you fully comply with all safe operation guidelines established by your respective power utility.

REL-SM



CAUTION

Do not operate without dies.



DANGER



The user should be properly trained in the correct procedures required for work on or around electrical lines.

NOTE: Keep Label Set clean and legible. Replace decals when necessary.

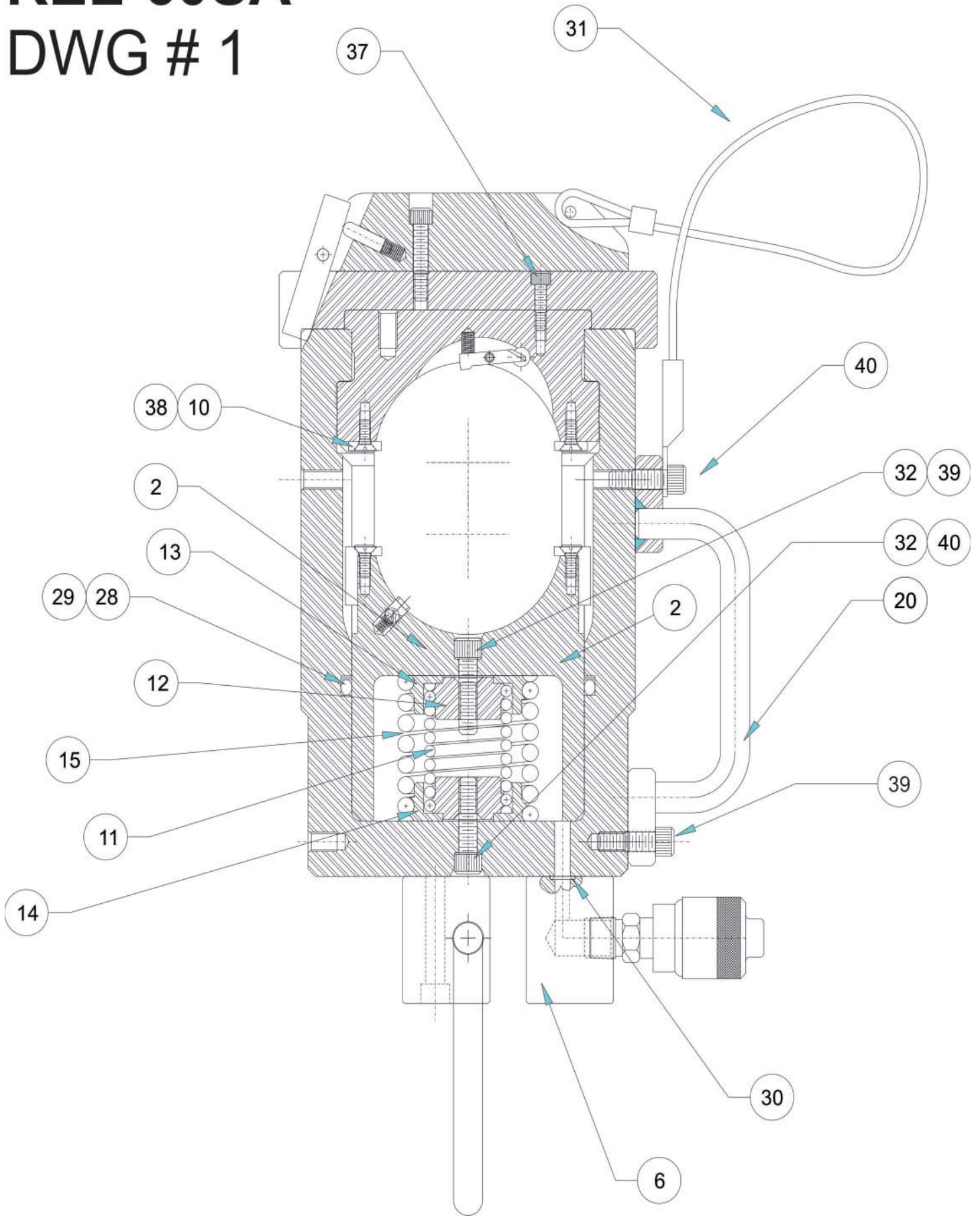
REL-60SA

SINGLE ACTING 60 TON PRESS

ITEM	DESCRIPTION	QTY	PART#
1	HOUSING	1	R24501
2	RAM	1	R24502
3	RELEASE PIN	1	R24503
4	LATCH	1	R24504
5	MOUNTING BLOCK, HOIST RING	2	R24505
6	COUPLER ADAPTER	1	R24506
7	CRADLE	1	R24507
8	COVER	1	R24508
9	"L" KEY	2	R24509
10	STRAIGHT KEY	2	R24510
11	# INNER SPRING	1	#
12	# RETAINER, INNER SPRING	2	#
13	# RETAINER, OUTER SPRING, FRONT	1	#
14	# RETAINER, OUTER SPRING, BACK	1	#
15	# OUTER SPRING	1	#
16	COVER HANDLE	1	R24516
17	PUSH PIN	1	R24517
18	LOCKING KEY	1	R24518
19	CONTAINER ASSEMBLY (R-60TN-BK)	1	R-60TN-BX
20	HANDLE	1	R24520
21	HOIST RING	1	R24521
22	RAM BUTTON	1	R24522
23	DIE RETAINER	1	R24523
24	STAND	1	R24524
25	SPRING, LOCKING KEY (LEE #LC-026BC-8-S	1	R24525
26	SPRING, CRADLE LATCH (LEE #LC-020B-5)	1	R24526
27	SPRING, RAM LATCH (LEE #LC-024B-4)	1	R24527
28	* O-RING	1	*
29	* BACK UP RING	1	*
30	* O-RING	1	*
31	LANYARD	1	R24531
32	WASHER, COPPER SEALING	2	R24532
33	COUPLER, HIGH PRESSURE	1	R24533
34	STOP WASHER	2	R24534
35	HEX HEAD CAP SCREW	2	R24535
36	SOCKET HEAD CAP SCREW	2	R24536
37	SOCKET HEAD CAP SCREW	4	R24537
38	FLAT HEAD SLOTTED MACHINE SC	4	R24538
39	SOCKET HEAD CAP SCREW	2	R24539
40	SOCKET HEAD CAP SCREW	2	R24540
41	SOCKET HEAD CAP SCREW	4	R24541
42	GROVE PIN (#GP24-187-1250-14H)	2	R24542
43	GROVE PIN (#GP24-093-1250-14H)	1	R24543
44	SPRING PIN	1	R24544
NS	STAND	1	R24570
*	SEAL KIT [* Items Included In Kit]	1	R24550
#	RETURN SPRING ASSEMBLY	1	R24551

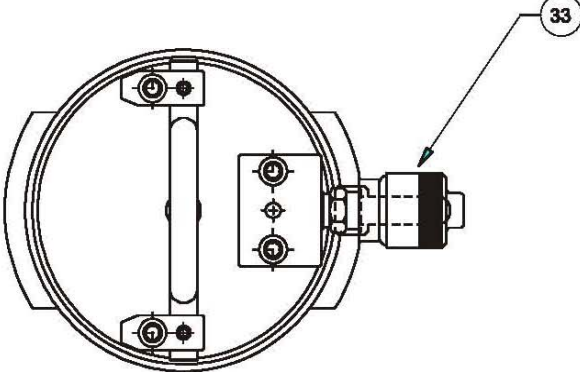
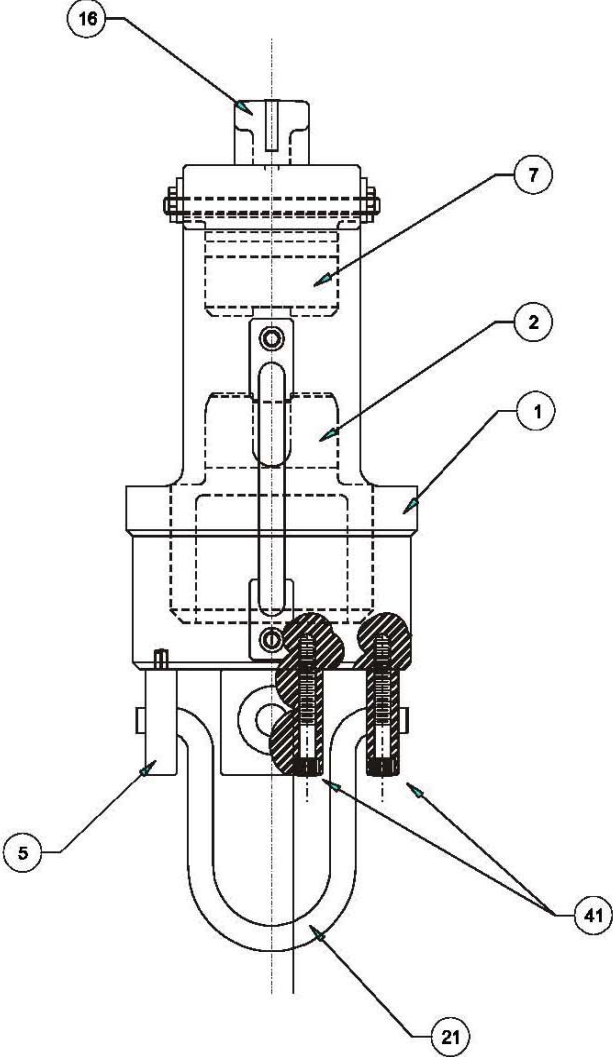
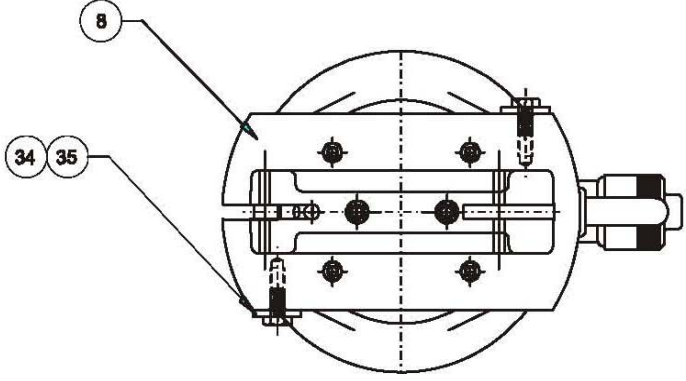
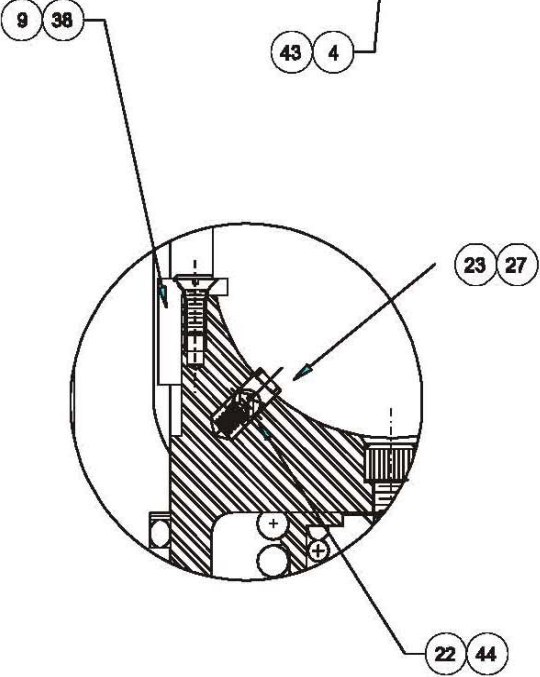
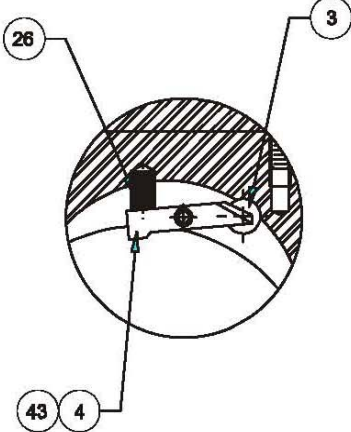
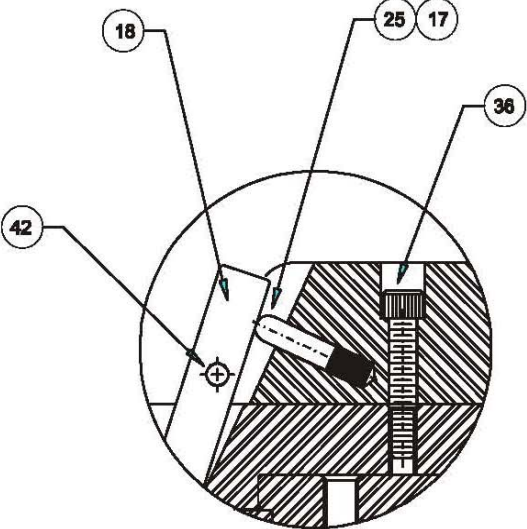
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DWG # 1



REL-60SA

DWG # 2



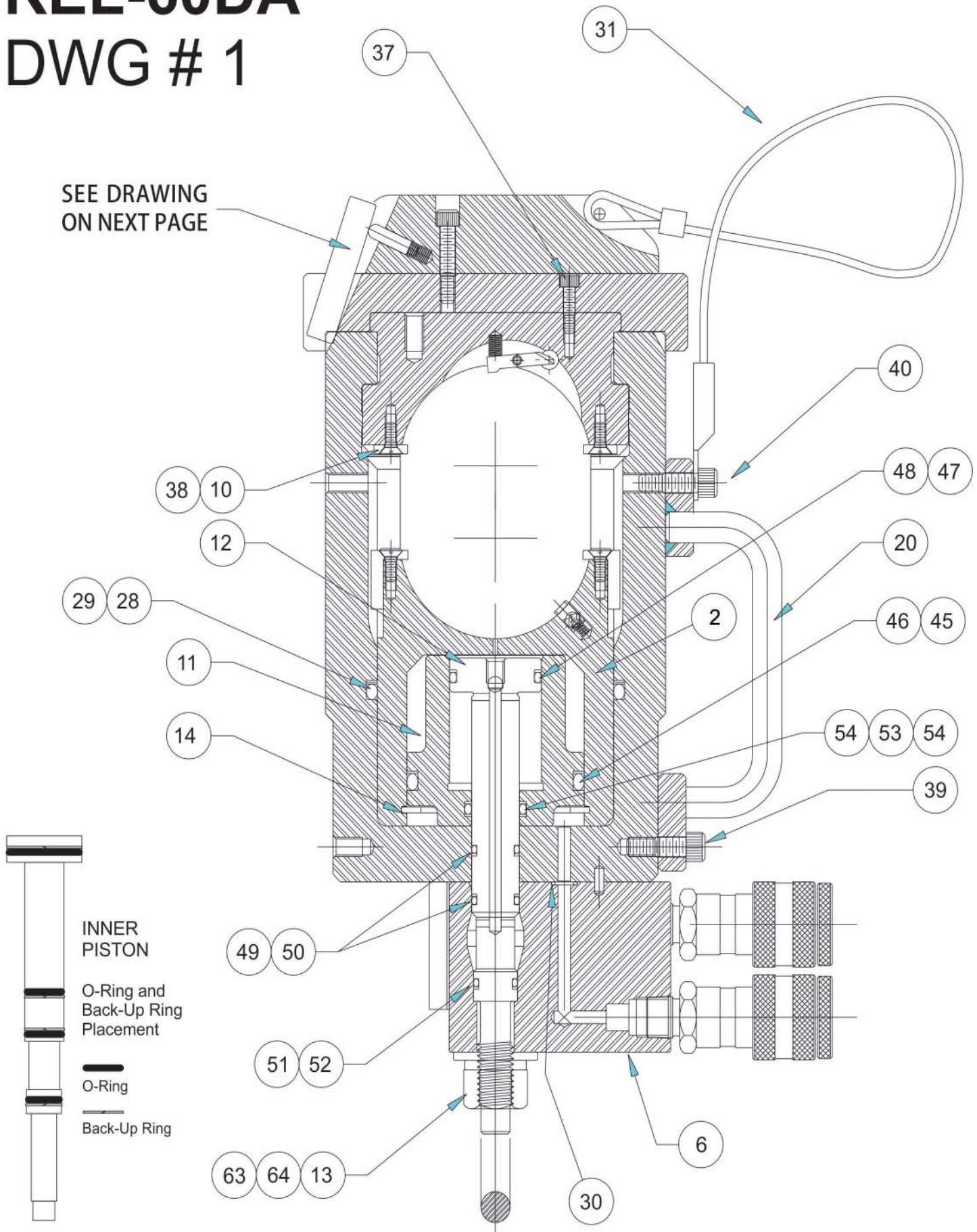
REL-60DA

DOUBLE ACTING 60 TON PRESS

ITEM	DESCRIPTION	QTY	PART#
1	HOUSING	1	R24501
2	RAM	1	R24502
3	RELEASE PIN	1	R24503
4	LATCH	1	R24504
5	MOUNTING BLOCK, HOIST RING	2	R24505
6	COUPLER ADAPTER	1	R24506
7	CRADLE	1	R24507
8	COVER	1	R24508
9	"L" KEY	2	R24509
10	STRAIGHT KEY	2	R24510
11	# INNER SPRING	1	R24511
12	# RETAINER, INNER SPRING	2	R24512
13	# RETAINER, OUTER SPRING, FRONT	1	R24513
14	# RETAINER, OUTER SPRING, BACK	1	R24514
15	# OUTER SPRING	1	R24515
16	COVER HANDLE	1	R24516
17	PUSH PIN	1	R24517
18	LOCKING KEY	1	R24518
19	CONTAINER ASSEMBLY (R-60TN-BK)	1	R-60TN-BX
20	HANDLE	1	R24520
21	HOIST RING	1	R24521
22	RAM BUTTON	1	R24522
23	DIE RETAINER	1	R24523
24	STAND	1	R24524
25	SPRING, LOCKING KEY (LEE #LC-026BC-8-S	1	R24525
26	SPRING, CRADLE LATCH (LEE #LC-020B-5)	1	R24526
27	SPRING, RAM LATCH (LEE #LC-024B-4)	1	R24527
28	* O-RING	1	*
29	* BACK UP RING	1	*
30	* O-RING	1	*
31	LANYARD	1	R24531
32	NOT USED		
33	COUPLER, HIGH PRESSURE	1	R24533
34	STOP WASHER	2	R24534
35	HEX HEAD CAP SCREW	2	R24535
36	SOCKET HEAD CAP SCREW	2	R24536
37	SOCKET HEAD CAP SCREW	4	R24537
38	FLAT HEAD SLOTTED MACHINE SC	4	R24538
39	SOCKET HEAD CAP SCREW	1	R24539
40	SOCKET HEAD CAP SCREW	2	R24540
41	SOCKET HEAD CAP SCREW	4	R24541
42	GROVE PIN (#GP24-187-1250-14H)	2	R24542
43	GROVE PIN (#GP24-093-1250-14H)	1	R24543
44	SPRING PIN	1	R24544
45	O-RING, INNER CYLINDER	1	*
46	BACK UP RING, INNER CYLINDER	1	*
47	O-RING, INNER PISTON	1	*
48	BACK-UP RING, INNER PISTON	1	*
49	O-RING	2	*
50	BACK UP RING	2	*
51	O-RING	1	*
52	BACK UP RING	1	*
53	O-RING	1	*
54	BACK UP RING, VALVE BLOCK	2	*
63	FLAT WASHER	1	R24063
64	FLATWASHER	1	R24064
*	SEAL KIT [* Items Included In Kit]	1	R24100
NS	STAND	1	R24570

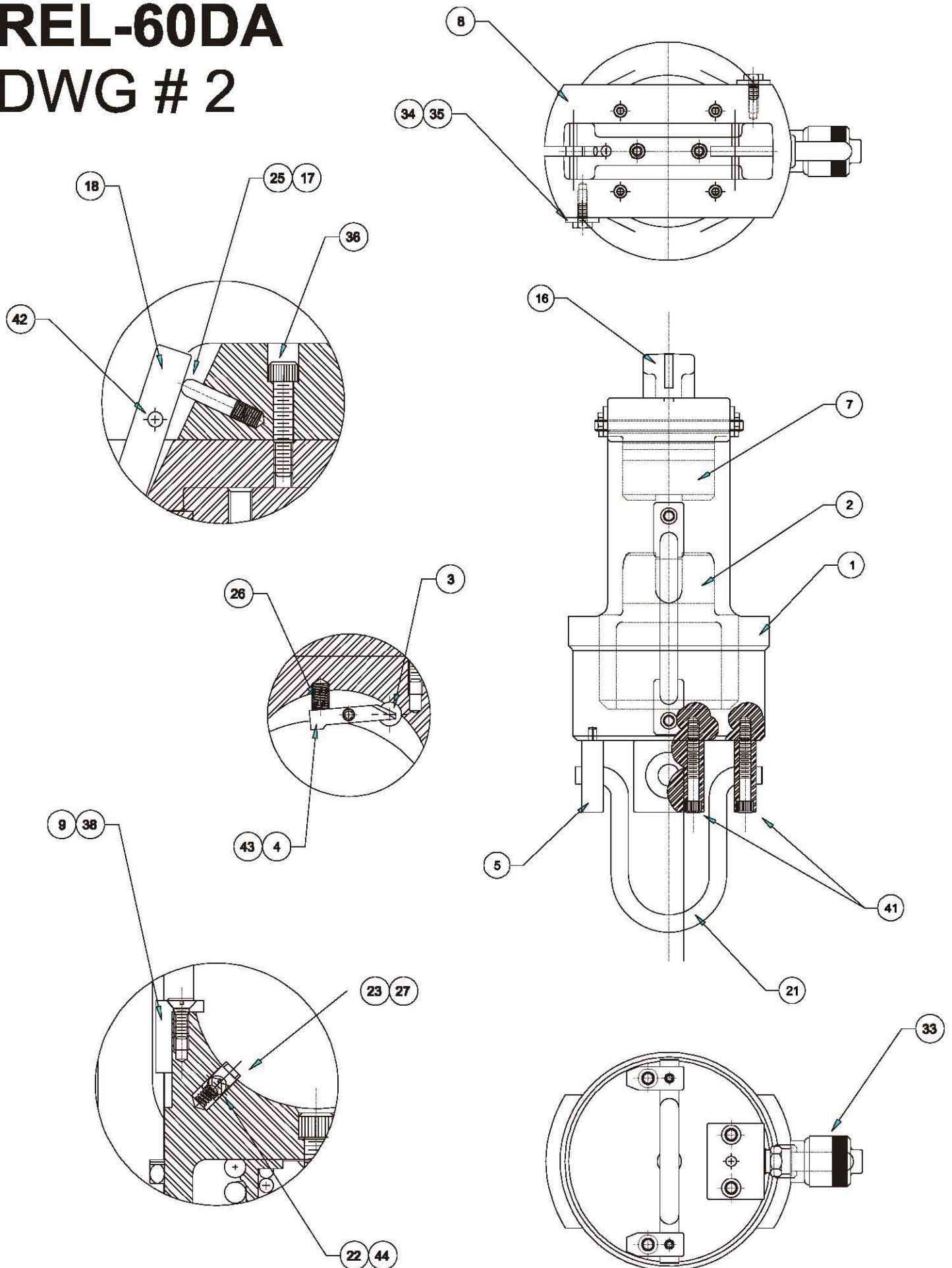
REL-60DA

DWG # 1

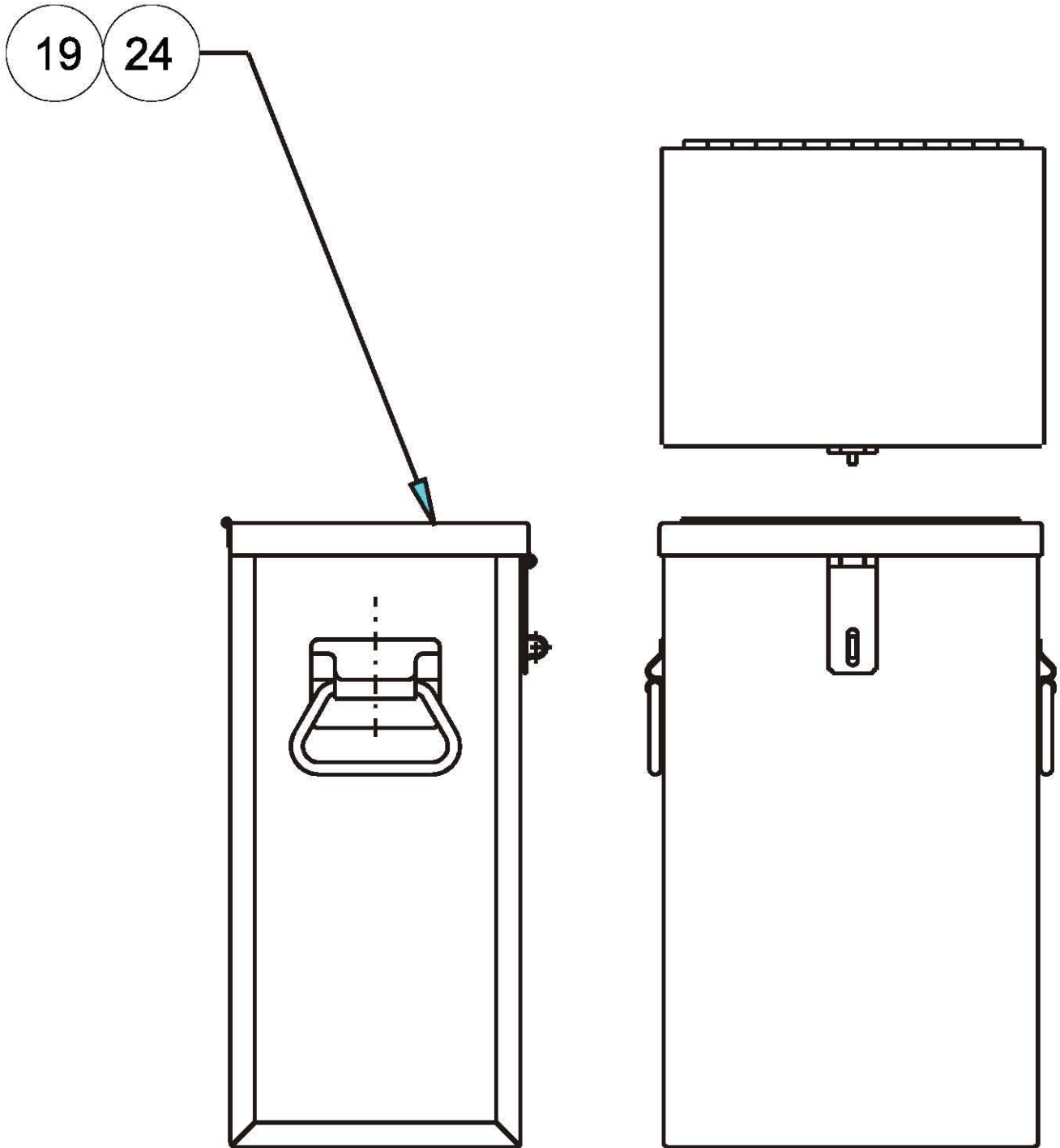


REL-60DA

DWG # 2



REL-60 SERIES STEEL CARRY CASE



Maintenance Records

Date	Parts or Service Required

If you have any questions regarding the information found in this manual please contact RELIABLE EQUIPMENT at the address, phone or fax numbers shown below.



RELIABLE EQUIPMENT & SERVICE CO., INC.

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Phone: 800-966-3530 • Fax: 215-357-9193

Visit us on the web at www.Reliable-Equip.com