

# OPERATOR'S MANUAL

# LM2260E-X

INCLUDING: SPECIFICATIONS, SERVICE KITS, GENERAL INFORMATION, PARTS, TROUBLESHOOTING  
INCLUDE MANUAL: S-633 GENERAL INFORMATION (PN 97999-625)

RELEASED: 11-1-96  
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(REV. H)

**2" AIR MOTOR**  
**60:1 RATIO**  
**0 - 7500 PSI RANGE**



## LM2260E-XX CHOP-CHECK GREASE PUMP



**READ THIS MANUAL CAREFULLY BEFORE INSTALLING,  
OPERATING OR SERVICING THIS EQUIPMENT.**

It is the responsibility of the employer to place this information in the hands of the operator. Keep for future reference.

### SERVICE KITS

- Use only genuine ARO® replacement parts to assure compatible pressure rating and longest service life.
- 637225 Pump Rebuild Kit.** Includes the necessary soft parts for normal service of the entire pump.

### SPECIFICATIONS

Model Series	LM2260E-XX
Type	Air Operated, Single Acting Chop-Check Grease Pump
Ratio	60:1
Air Motor Diameter	2" (5.08 cm)
Stroke	3" (7.62 cm)
Air Inlet	1/4" - 18 NPTF (f)
Material Outlet	
LM2260E-X1	3/8" - 18 NPT (f)
LM2260E-X2	Rc 3/8 (3/8" - 19 BSP taper) (f)
Pump Construction	Carbon Steel
Dimensional Data	See Chart
Weight	See Chart

### PERFORMANCE

Air Inlet Pressure Range	0 - 125 PSI (0 - 8.6 bar)
Fluid Pressure Range	0 - 7500 PSI (0 - 517 bar)
Max. Rec'd Cycles / Minute	125
Displacement In <sup>3</sup> Per Cycle	0.15
Volume / Cycle	0.083 oz. (2.46 ml)
Cycles Per Lb.	120
Maximum Delivery / Min.	2.5 lbs (1.13 kg)
Noise Level @ 100 Psi	80 db(A)*
Accessories Available:	61113 Wall Mount Bracket 66073-1 Air Line Connection Kit

\* The pump sound pressure level has been updated to an Equivalent Continuous Sound Level (L<sub>Aeq</sub>) to meet the intent of ANSI S1. 13-1971, CAGI-PNEUROP S5.1 using four microphone locations.

### PUMP DATA

#### MODEL LM2260E-XX

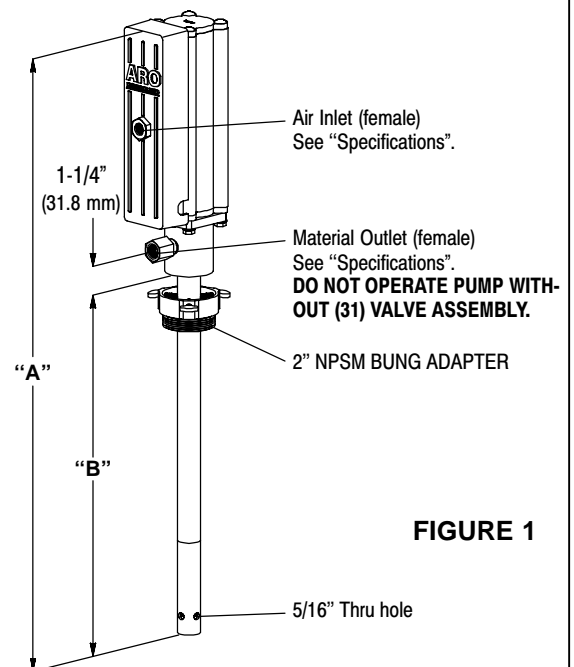


FIGURE 1

NOTE: Dimensions are shown in inches and (mm), supplied for reference only and are typically rounded up to the nearest 1/16 inch.

MODEL	"A" (mm)	"B" (mm)	WEIGHT (kg)
LM2260E-2X	27-1/8" (689)	16" (406.4)	11.3 (5.13)
LM2260E-3X	38-15/16" (989)	27-13/16" (706.4)	13 (5.90)
LM2260E-6X	30-1/8" (765)	19" (483)	11.7 (5.31)

### IMPORTANT

**This is one of two documents which support the pump.  
Replacement copies of these forms are available upon request.**

- ☒ LM2260E-X MODEL OPERATOR'S MANUAL
- ☐ S-633 GENERAL INFORMATION LUBRICATION PISTON PUMPS

## PARTS LIST / LM2260E-XX

Item	Description (Size in inches)	(Qty)	Part No.
1	Carriage Bolt (1/4" - 20 x 9" long)	(4)	94333
2	Upper Cap	(1)	94307
✓3	Gasket	(2)	94311
4	Sleeve	(2)	94316
✓5	"O" Ring (1/16" x 11/16" o.d.)	(4)	Y325-15
✓6	"O" Ring (1/8" x 3/4" o.d.)	(4)	Y325-206
7	Spool	(2)	94310
✓8	"U" Cup (1/8" x 3/4" o.d.)	(2)	Y240-7
✓9	"O" Ring (.106" x .587" o.d.)	(2)	15066-PM
10	Cylinder	(1)	94249
11	Adapter	(1)	94447
✓12	"O" Ring (1/16" x 3/4" o.d.)	(1)	Y325-16
✓13	"O" Ring (1/16" x 7/16" o.d.)	(1)	Y325-11
14	Muffler Housing	(1)	94443
15	Foam Liner	(2)	94402
16	Retaining Ring	(1)	94406
17	Washer	(1)	94515
✓18	"U" Cup (3/16" x 2" o.d.)	(2)	Y240-23
19	Piston	(1)	94780
20	Lower Cap	(1)	94308
21	Piston Adapter	(1)	94376
✓22	"O" Ring (3/32" x 1" o.d.)	(1)	Y325-117
✓23	Dowel Pin (1/4" o.d. x 7/8" long)	(1)	Y148-37
✓24	"O" Ring (1/8" x 1-3/8" o.d.)	(1)	Y325-216
✓25	"U" Cup (1/8" x 11/16" o.d.)	(1)	Y186-46
26	Bushing	(1)	94521

Item	Description (Size in inches)	(Qty)	Part No.
✓27	Packing	(1)	94426
28	Base	(1)	94375
29	Nut (1/4" - 20)	(4)	93828
30	Ground Screw (#10 - 32 x 1/4")	(1)	93005
31	Valve Assembly - LM2260E-X1	(1)	67083
	- LM2260E-X2	(1)	67083-1
✓32	"O" Ring (1/16" x 15/16" o.d.)	(1)	Y325-19
33	Grease Tube - LM2260E-2X	(1)	94519-1
	- LM2260E-3X	(1)	94519-2
	- LM2260E-6X	(1)	94519-6
✓34	Packing	(1)	94442
35	Foot Body	(1)	94382
✓36	"O" Ring (1/16" x 13/16" o.d.)	(1)	Y325-17
37	Primer Tube	(1)	94383
38	Piston Rod	(1)	94377
✓39	Dowel Pin (1/16" o.d. x 7/16" long)	(2)	Y178-214
40	Connector - LM2260E-2X	(1)	94379-1
	- LM2260E-3X	(1)	94379-2
	- LM2260E-6X	(1)	94379-6
41	Primer Rod	(1)	94380
✓42	Cotter Pin (1/16" x 1/2" long)	(1)	Y15-21
43	Primer	(1)	94381
44	Bung Assembly (includes items 45)	(1)	67145-1
45	Thumb Screw (1/4" - 20 x 1")	(3)	Y66-59-C
✓	Darina "EP" 2 Grease Packet	(1)	94833
✓	Parts in Repair Kit		637225

## GENERAL DESCRIPTION

Model LM2260E-X Series chop-check grease pump is intended to be used primarily for grease delivery systems. It uses carbon steel and other materials which make it compatible with most petroleum based lubrication products. This single acting pump's primary delivery is on the up stroke.

NOTE: If this pump was purchased separately (not part of a system), consult your sales representative for compatible dispensing accessories which will best match the application. All accessories must be able to withstand the maximum pressure developed by the pump.

imum operating pressure of 7500 psi (517 bar) at 125 psi (8.6 bar) inlet air pressure. Do not run pump without using a regulator to limit air supply pressure to the pump.

$$\frac{\text{PUMP RATIO} \times \text{INLET PRESSURE TO PUMP MOTOR}}{\text{MAXIMUM PUMP FLUID PRESSURE}} =$$

Pump ratio is an expression of the relationship between the pump motor area and the lower pump end area. EXAMPLE: When 125 p.s.i. (8.6 bar) inlet pressure is supplied to the motor of a 60:1 ratio pump it will develop a maximum of 7500 p.s.i. (517 bar) fluid pressure (at no flow) - as the fluid control is opened, the flow rate will increase as the motor cycle rate increases to keep up with the demand.

## OPERATING AND SAFETY PRECAUTIONS

**⚠ WARNING** READ THE GENERAL INFORMATION MANUAL INCLUDED FOR ADDITIONAL OPERATING AND SAFETY PRECAUTIONS AND OTHER IMPORTANT INFORMATION.

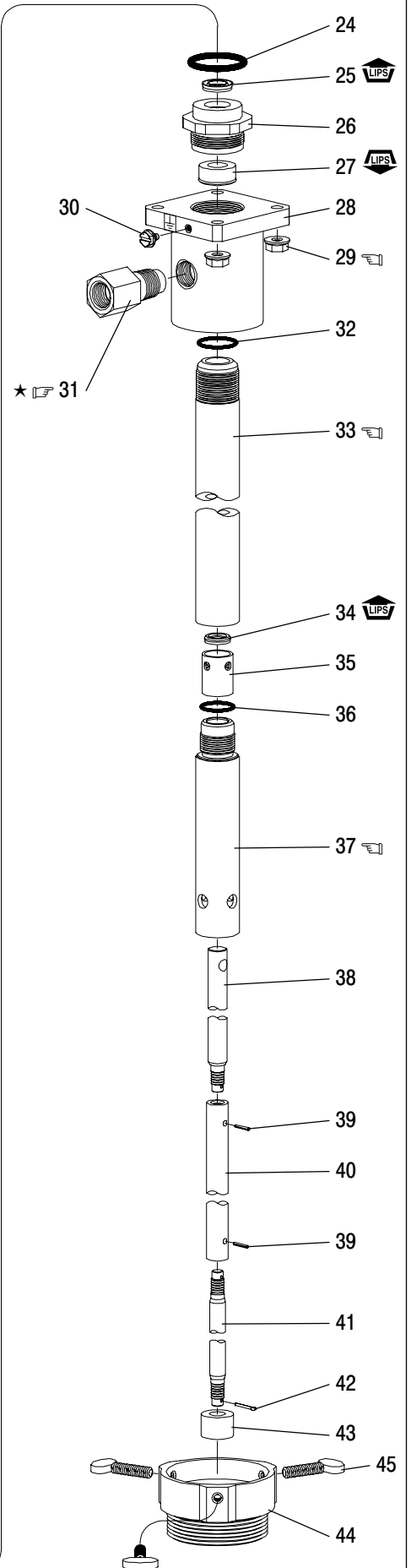
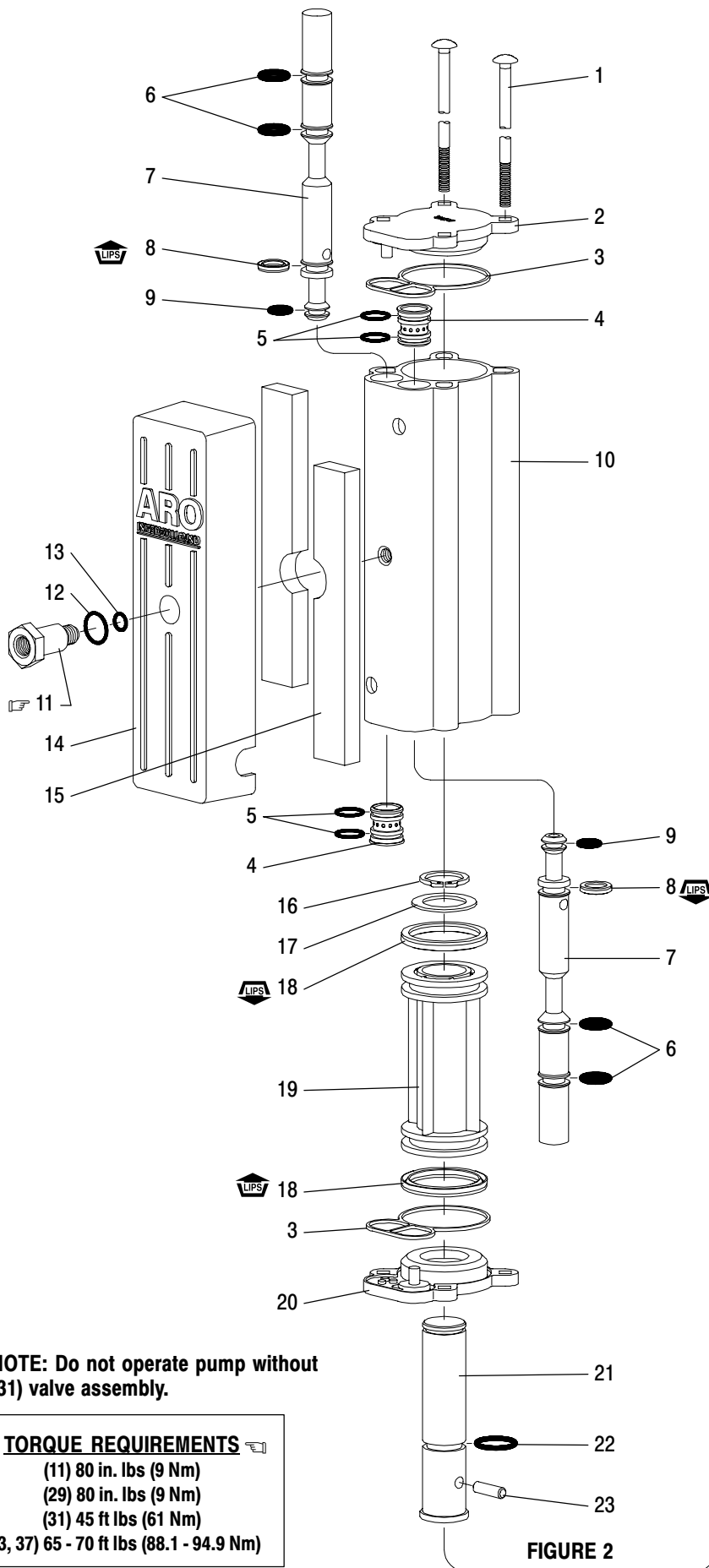
**⚠ WARNING** STATIC SPARK. Can cause explosion resulting in severe injury or death. Ground the pump and pumping system.

**⚠ WARNING** EXCESSIVE INLET PRESSURE. Can cause explosion resulting in severe injury or death. Do not exceed max-

**⚠ WARNING** EXCESSIVE MATERIAL PRESSURE. Can cause equipment failure resulting in severe injury or property damage. Do not exceed the maximum material pressure of any component in the system.

NOTICE: Thermal expansion can occur when the fluid in the material lines is exposed to elevated temperatures. Example: Material lines located in a non-insulated roof area can warm due to sunlight. Install a pressure relief valve in the pumping system.

Replacement warning label is available upon request, PN \ 94520.



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## PLACING INTO SERVICE

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### AIR AND LUBRICATION REQUIREMENTS

Filtered air will help extend the life of the pump, allowing the pump to operate more efficiently and yield longer service life to moving parts and mechanisms.

- Install an air line filter to provide good quality clean and dry air. Install it up stream from the regulator.
- Use an air regulator on the air supply to control the pump cycle rate. Install the regulator as close as possible to the pump.
- In most installations, lubrication is not required. If the pump needs to have lubrication, install an air line lubricator and supply it with a good grade of non-detergent oil or other lubricant compatible with Nitrile seals and set at a rate not to exceed one drop per minute.

### INSTALLATION

- Mount and secure the pump as required for the application.
- Attach a ground wire from the pump ground screw to a suitable ground.
- Connect a fluid hose to the pump outlet. In most cases a pipe sealant should be used on thread connection. Tighten all fittings. Use

caution not to damage threads.

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## OPERATION

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### START-UP

1. Turn the air regulator to "0" pressure setting.
2. Immerse the lower pump end into the material.
3. Open the dispensing device.
4. Start the pump cycling slowly by raising the pressure to 20 - 30 psi (1.38 - 2.07 bar).
5. Close the dispensing device. Allow the pump to stall and build line pressure. Check for any leaks and tighten fittings as needed. Adjust pressure as required for the application.

### SHUTDOWN

- Disconnect the air supply from the pump if it is to be inactive for a few hours. Open the dispensing device to relieve line pressure.

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## SERVICE

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### PUMP DISASSEMBLY / REASSEMBLY

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**DISASSEMBLY** – All threads are right hand. Refer to Figure 2 (page 3). These procedures are for the installation of repair kit parts. **Disconnect air supply and relieve all system pressure prior to servicing.** Carefully remove the parts, inspect parts for damage, nicks or excessive wear and determine if any parts will need replacement.

1. Using a 7/8" wrench, unthread and remove (11) adapter, containing (12 and 13) "O" rings, releasing (14) muffler housing.
2. Using a 7/16" wrench, remove (29) nuts.
3. Remove four (1) bolts, (2) upper cap and (3) gasket.
4. Remove (10) cylinder, containing (4) sleeves and (7) spools.
5. Using (1) bolt, push (7) spools and (4) sleeves out "sleeve" end of (10) cylinder.
6. Remove (16) retaining ring, (17) washer and (19) piston.
7. Remove (23) dowel pin, releasing (21) piston adapter.
8. Remove (20) lower cap and (24) "O" ring.
9. Using a 1-1/2" wrench, unthread and remove (26) bushing.
10. Push down on (38) piston rod, exposing (43) primer. Remove (42) cotter pin and unthread and remove (43) primer.
11. Place (28) base horizontally in a vise, clamping on flats of (28) base. Using a pipe wrench on (33) grease tube, unthread and remove (33) grease tube and (37) primer tube.
12. Remove (27) packing and (32) "O" ring from (28) base.
13. Pull (38) piston rod, (40) connector and (41) primer rod from (33) grease tube. Do not disassemble (38, 40 and 41) further unless damage is evident. To disassemble, remove (39) dowel pins.
14. Clamp (33) grease tube horizontally in a vise. Using a pipe wrench on (37) primer tube, unthread and remove primer tube. Check top edge of primer tube for nicks.
15. Remove (36) "O" ring from (37) primer tube.
16. Remove (35) foot body and (34) packing from (33) grease tube.

**REASSEMBLY** – Thoroughly clean and lubricate all seals. Replace all soft parts with new ones included in the repair kit.

Note: Refer to the illustration (figure 2, page 3) for "U" cup lip seal direction.

1. Clamp (33) grease tube horizontally in a vise.
2. Place the (38, 40 and 41) rod assembly into (33) grease tube.
3. Replace the (34) packing into (35) foot body. NOTE: (34) packing "snaps" into place.
4. Assemble (35) foot body over (41) primer rod and into (33) grease tube.
5. Install (36) "O" ring onto (37) primer tube. Thread (37) primer tube into (33) grease tube and tighten to 65 - 70 ft lbs (88.1 - 94.9 Nm).

6. Thread (43) primer onto (41) primer rod (counterbore in primer onto rod first) and secure with (42) cotter pin.
7. Install (32) "O" ring into (28) base.
8. Clamp (28) base in a vise, clamping on flats. Thread (33) grease tube and components into (28) base and tighten to 65 - 70 ft lbs (88.1 - 94.9 Nm).
9. Carefully replace (27) packing over the end of (38) piston rod and into (28) base.
10. Replace (25) "U" cup into (26) bushing and thread bushing into (28) base, forcing (27) packing into place.
11. Replace (24) "O" ring onto (26) bushing.
12. Replace (3) gasket onto (20) lower cap and assemble lower cap onto (28) base, with (20) lower cap oriented as desired.
13. Replace (22) "O" ring onto (21) piston adapter.
14. Assemble (21) piston adapter onto (38) piston rod and secure with (23) dowel pin.
15. Replace (18) "U" cups onto (19) piston and assemble (19) piston onto (21) piston adapter, securing with (17) washer and (16) retaining ring.
16. Replace (5) "O" rings on (4) sleeves and assemble (4) sleeves into (10) cylinder. NOTE: Assemble each sleeve into the end of the cylinder nearest the exhaust hole.
17. Replace (6 and 9) "O" rings and (8) "U" cups onto (7) spools and assemble spools into (10) cylinder from the opposite end as the (4) sleeve went in.
18. Assemble (10) cylinder onto the pump, being careful when sliding over the lips of (18) "U" cups.
19. Replace (3) gasket onto (2) upper cap and assemble (2) upper cap to (10) cylinder.
20. Assemble (1) bolts to pump, securing with (29) nuts. NOTE: Torque (29) nuts to 80 in. lbs (9 Nm).
21. Replace (12 and 13) "O" rings on (11) adapter.
22. Assemble (14) muffler housing to (10) cylinder, securing with (11) adapter. NOTE: Torque (11) adapter to 30 ft lbs (40.7 Nm).

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## TROUBLE SHOOTING

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**If the pump will not cycle or will not deliver material.**

- Be certain to check for non-pump problems including kinked, restrictive or plugged inlet / outlet hose or dispensing device. Depressurize the pump system and clean out any obstructions in the inlet/outlet material lines.
- Check all seals, including track gaskets.
- Check direction of "U" cup lips.