

**TECHNICAL MANUAL**

**OPERATOR'S, UNIT AND**

**DIRECT SUPPORT MAINTENANCE MANUAL**

**(INCLUDING REPAIR PARTS AND SPECIAL TOOLS LIST)**

**FOR**

**ATLAS COPCO RECIPROCATING**

**COMPRESSOR**

This technical manual is an authentication of the manufacturer's commercial literature and does not conform with the format and the content requirements normally associated with Army technical manuals. This technical manual does, however, contain all essential information required to operate and maintain the equipment.

Approved for public release; distribution is unlimited.

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## **SUPPLEMENTARY INTRODUCTORY MATERIAL**

### **1-1. Maintenance Forms and Records.**

Department of the Army forms and procedures used for equipment maintenance will be those described by DA Pam 738-750, The Army Maintenance Management System.

### **1-2. Reporting Errors and Recommending Improvements.**

You can help improve this manual. If you find any mistakes or if you know of a way to improve the procedures, please let us know. Mail your letters, DA Form 2028 (Recommended Changes to Publications and Blank Forms), or DA Form 2028-2 located in the back of this manual, directly to: Commander, U.S. Army Troop Support Command, ATTN: AMSTR-MCTS, 4300 Goodfellow Blvd., St. Louis, MO 63120-1798. A reply will be furnished to you.

### **1-3. Destruction of Army Material to Prevent Enemy Use.**

Refer to TM 750-244-3 for instructions covering the destruction of Army Material to prevent enemy use.

### **1-4. Administrative Storage of Equipment.**

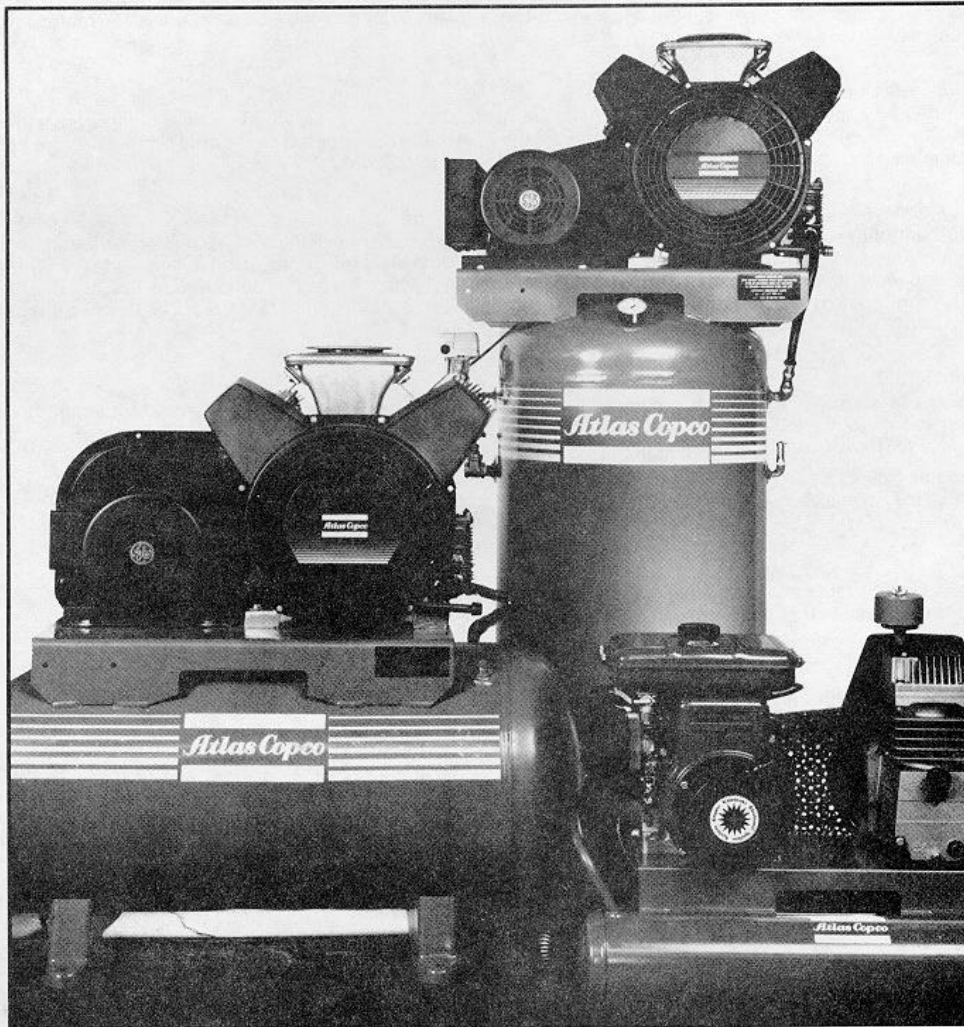
a. Placement of equipment in administrative storage should be for short periods of time when a shortage of maintenance effort exists. Items should be in mission readiness within 24 hours or within the time factors as determined by the directing authority. During the storage period appropriate maintenance records will be kept.

b. Before placing, equipment in administrative storage, current preventive maintenance checks and services should be completed. Shortcomings and deficiencies should be corrected, and all modification work orders (MWO's) should be applied.

c. Storage site selection. Inside storage is preferred for items selected for administrative storage. If inside storage is not available, trucks, vans, conex containers and other containers may be used.

**Atlas Copco**

# Service Air



## INSTRUCTION BOOK AND PARTS LIST **LE/LT SERIES COMPRESSORS**

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Atlas Copco Industrial Compressors Inc.  
161 Lower Westfield Rd.  
Holyoke, MA 01041-0431

Call—(413) 536-0600  
Telefax No—(413) 536-0091  
Telex No—955325

Addendum to—2927 5785 01

## Installation and operating instructions

Read all instructions **carefully** before starting the compressor.

### General Information

L Series compressors are belt driven two-cylinder, air-cooled, single-acting piston machines. LE or LEN designates single-stage and LT two-stage. The LEN are oil-less compressors delivering oil-free air. The LE's are available 2 through 10 HP, the LT's 2 through 20 HP, the LEN's 5 and 712 HP.

The LE and LEN compressors are built for effective working pressures of up to 120 psig, LT for pressures of 175 psig. The compressors are available as base mounted units, which consist of the compressor block, base, drive, and motor, and as complete tank-mounted units.

### Operation - LE Series and LEN Series

Air is drawn through the intake filter, intake manifold and suction disks into the cylinders. The air is compressed, then discharged through the delivery disks to the temperature reducer, where the heat of the compressed air is partly removed. From the temperature reducer the compressed air is discharged through the check valve into the tank.

### Operation - LT Series

Air is drawn through the intake filter, intake manifold and into the low-pressure cylinder, where it is compressed, then discharged through the delivery valve to the intercooler, where the heat from the first stage of compression is removed. The air then enters the high-pressure cylinder through the pulsation damper and the suction disk, where it is further compressed. It is then discharged through the delivery disk to the cooling caps of the HP cylinder head and from there to the HP temperature reducer. It is then discharged through the check valve into the tank.

### Lubrication (not for LEN)

L Series compressors shipped from the factory contain a PAO synthetic lubricant. The compressors may be identified by a yellow label at the oil filler plug stating the unit contains "Airlet Fluid".

If not available, a good-quality motor oil (not multigrade) or diester synthetic lubricant may be used. See chart.

Use only reputable brands of oil and once a brand has been adopted, keep to it. Never mix oils of different brands or types. The crankcase oil capacity of the various units is given in section 7.

### NOTES:

The crankcase is connected to the air intake silencer or suction line through a breather valve. Faulty operation of this valve or clogging of the metered hole will result in too high a crankcase pressure and promote oil consumption.

Always securely tighten the oil filler plug after adding oil.

#### LUBRICATION LE/LT COMPRESSORS

LUBRICANT	AMBIENT TEMPERATURE	VISCOSITY GRADE	A.P.I. SERVICE	COMPRESSOR	CHANGE INTERVAL	(2) BRAND
MOTOR OIL MINERAL	5° F to 104° F	SAE 10W20	SE/CC/ SE/CD	LE/LT	2000 HRS (1)	
MOTOR OIL SYNTHETIC	5° F to 104° F	SAE 10W30	SF/CD	LE/LT	2000 HRS (1)	Mobil 1
PAO SYNTHESIZED HYDROCARBONS (POLYALPHAOLEFINE)	-15° F to 122° F	ISO VG 32	SF/CD	LE/LT	2000 HRS (1)	Nuodex Anderol 3032 Chevron/Gulf GSL-838A(3)
DIESERER SYNTHETIC	-15° F to 122° F	ISO VG 32	SF/CD	LE/LT	ANNUALLY	Nuodex Anderol 495 Mobil Rarus 824
	-15° F to 104° F	SAE 10W40	SF/CD	LE/LT	ANNUALLY	Nuodex Anderol 800

- NOTES:**
- (1) Change interval shown (hours) or annually, whichever occurs first.
  - (2) Atlas Copco does not recommend the use of specific lubricants. These lubricants appear to meet the specifications. There may be other quality lubricants which also meet these specifications.
  - (3) If the local supplier of either Chevron or Gulf industrial lubricants cannot supply this fluid, contact the Synthetic Fluids Business Group. Chevron Chemical Company at Houston, Texas. Telephone 800-231-0172.

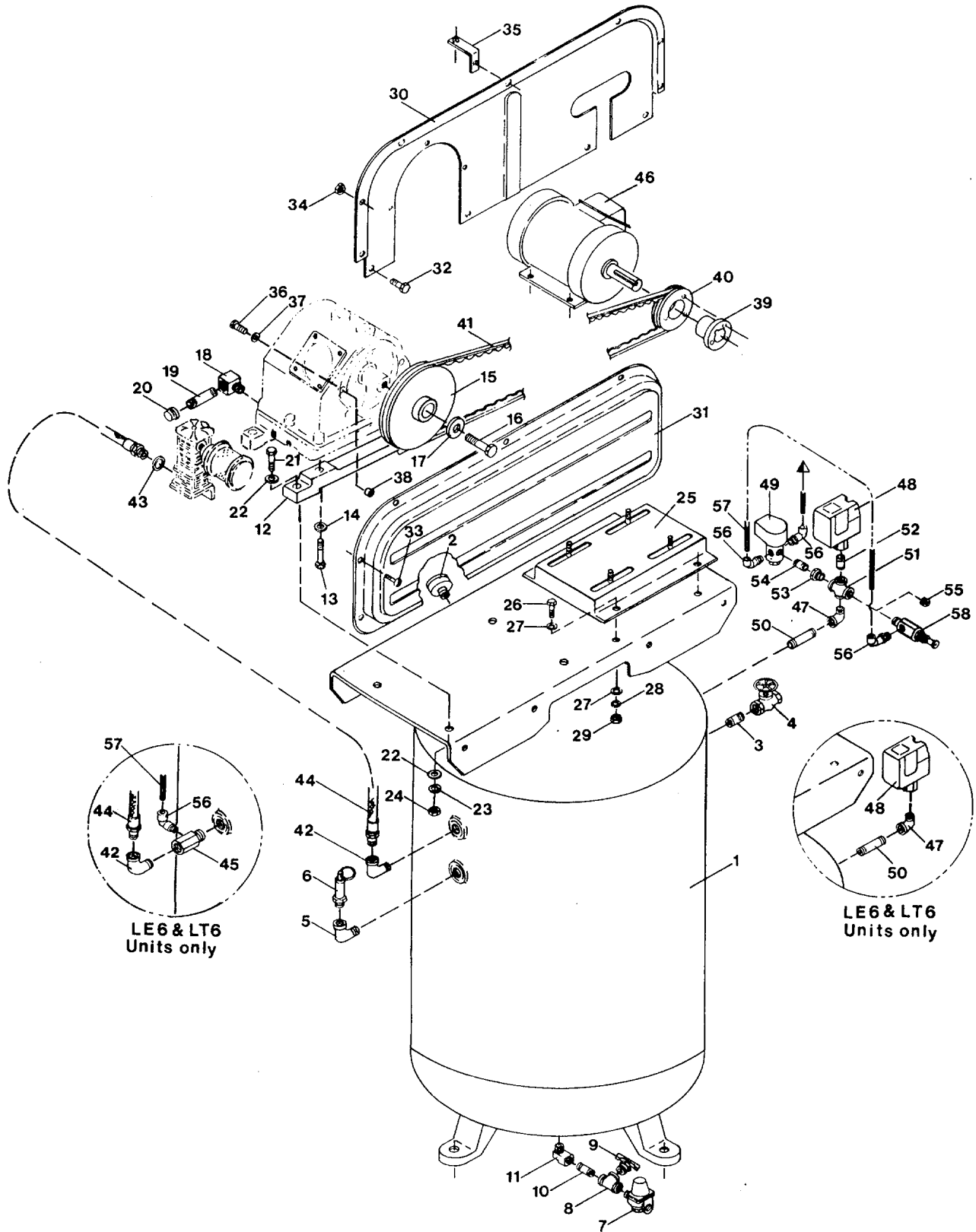


Figure 1

**Figure 1**

REF. NO.	PART NO.	PART NO.	PART NO.	QTY.	DESCRIPTION
	LE6, LT6 LE6A	LE7, LE8 LT7, LT8	LE9, LT9		
1	1310 0943-07 (1)			1	60 Gal. Vert. Tank
	1310 0943-13 (2)			1	60 Gal. Vert. Tank
		1310 0943-09		1	80 Gal. Vert. Tank
			1310 0943-12	1	80 Gal. Vert. Tank
2	9710 1003-00	9710 1003-00	9710 1003-00	1	Press. Gauge
3			9710 5630-02	1	Nipple 1/2 NPT
		9710 5630-03	9710 5630-03	1	Nipple 3/4 NPT
4			9710 5321-00	1	Gate Valve 1/2 NPT
		9710 5322-00	9710 5322-00	1	Gate Valve 3/4 NPT
5	9710 6011-49	9710 6011-49	9710 6011-49	1	Elbow 1/4 NPT
6	9710 5335-00	9710 5335-00	9710 5335-00	1	Safety Valve
7	9710 5273-00	9710 5273-00	9710 5273-00	1	Drain Trap
8	1310 0943-42	1310 0943-42	1310 0943-42	1	Tee 3/8 NPT
9	1310 0140-00	1310 0140-00	1310 0140-00	1	Drain Cock
10	9710 5630-11			1	Nipple 3/8 NPT x 6" Lg.
		1310 0943-39	1310 0943-39	1	Nipple 3/8 NPT x 7.5" Lg.
11	1310 0943-41	1310 0943-41	1310 0943-41	1	Elbow 3/8 NPT
12	1503 0104-00	1503 0058-00	1503 0026-00	1	Foot
13	0147 1326-03	0147 1326-03		2	Screw M8 x 30 mm Lg.
			0147 1366-03	2	Screw M10 x 45 mm Lg.
14	0301 2335-00	0301 2335-00		2	Washer M8
			0301 2344-00	2	Washer M10
15	1310 0943-32			1	Flywheel 1 Groove
		1310 0943-31		1	Flywheel 2 Groove
			1310 0943-30	1	Flywheel 3 Groove
16	0147 1367-03			1	Screw M10 x 50 mm Lg.
		0147 1485-03	0147 1485-03	1	Screw M16 x 80 mm Lg.
17	1503 0205-00			1	Washer
		1503 0206-00	1503 0206-00	1	Washer
18	9710 5666-00	9710 5666-00	9710 5666-00	1	Elbow
19	9710 5630-11	9710 5630-11	9710 5630-11	1	Nipple
20	9710 5686-01	9710 5686-01	9710 5686-01	1	Cap

**Figure 1**

REF. NO.	PART NO.	PART NO.	PART NO.	QTY.	DESCRIPTION
	LE6, LT6 LE6A	LE7, LE8 LT7, LT8	LE9, LT9		
21	0144 3256-03	0144 3256-03		4	Screw 5/16-18 x 2 1/2" Lg.
			0144 3297-03	4	Screw 3/8-16 x 3" Lg.
22	0301 2335-00	0301 2335-00		8	Flat Washer
			0301 2343-00	8	Flat Washer
23	0333 2225-00	0333 2225-00		4	Lock Washer
			0333 2229-00	4	Lock Washer
24	0268 3205-00	0268 3205-00		4	Nut 5/16 Hex
			0268 3206-00	4	Nut 3/8 Hex
25	1310 2994-17 (1)			1	Slide Base FRM145T
	1310 2994-18 (2)			1	Slide Base FRM182T
		1310 2994-19		1	Slide Base FRM184T
			1310 2994-20	1	Slide Base FRM213T
26	0144 3249-03 (1)			4	Screw 5/16-18 x 1 1/4" Lg.
	0144 3288-03 (2)	0144 3288-03	0144 3288-03	4	Screw 3/8-16 x 1 1/4" Lg.
27	0301 2335-00 (1)			8	Flat Washer
	0301 2343-00 (2)	0301 2343-00	0301 2343-00	8	Flat Washer
28	0333 2225-00 (1)			4	Lock Washer
	0333 2229-00 (2)	0333 2229-00	0333 2229-00	4	Lock Washer
29	0268 3205-00 (1)			4	Nut 5/16 Hex
	0268 3206-00 (2)	0268 3206-00	0268 3206-00	4	Nut 3/8 Hex
30	1310 0943-16	1310 0943-20	1310 0943-18	1	Belt Guard - Inner
31	1310 0943-17	1310 0943-15	1310 0943-19	1	Belt Guard - Outer
32	9710 5906-00	9710 5906-00	9710 5906-00	3	Self Screw 1/4-20 x 3/4 Tapping
33	9710 5909-00	9710 5909-00	9710 5909-00	7	Screw # 10-32 x 1/2" Lg.
34	9710 5909-10	9710 5909-10	9710 5909-10	7	Nut # 10-32 Hex
35	1310 0943-49	1310 0943-48	1310 0943-47	1	Bracket
36	0147 1320-03			2	Screw M8 x 12 mm Lg.
		0147 1246-00	0147 1246-00	2	Screw M6 x 16 mm Lg.
37	0301 2335-00			2	Flat Washer M8
38		1503 0685-00	1503 0673-00	2	Insert M6
39	9710 5168-01 (1)			1	Bushing
	9710 5167-01 (2)	1310 0350-17	1310 0350-18	1	Bushing

Figure 1

REF. NO.	PART NO.	PART NO.	PART NO.	QTY.	DESCRIPTION
	LE6, LT6 LE6A	LE7, LE8 LT7, LT8	LE9, LT9		
40	1310 0444-25			1	Sheave 5.30 O.D. 1GR
	1310 0444-26			1	Sheave 6.00 O.D. 1GR
		1310 0444-28		1	Sheave 6.90 O.D. 2GR
		1310 0444-29		1	Sheave 8.00 O.D. 2GR
			1310 0444-32	1	Sheave 9.30 O.D. 3GR
			1310 0444-33	1	Sheave 10.60 O.D. 3GR
41	9710 5181-00			1	Belt 3V 450
	9710 5179-04			1	Belt 3V x 475
		9710 5181-03		2	Belt 3V x 560
		9710 5181-04		2	Belt 3V x 600
			9710 5181-05	3	Belt 3V x 710
42	9710 5691-00	9710 5691-00	9710 5691-00	1	Elbow 1/2 NPT
43	0653 9098-00	0653 9098-00	0653 9098-00	1	Washer R 1/2
44	9710 5278-01	9710 5278-01	9710 5278-01	1	Hose
45	9710 5324-00			1	Check Valve
46	1310.3160-34			1	Motor 2HP 3/60/230-460V 145T
	1310 3160-35			1	Motor 2HP 3/60/200V 145T
	1310 3160-32			1	Motor 2HP 1/60/115-230V .182T
	1310 3160-33			1	Motor 2HP 1/60/200V 182T
	1310 3160-36	1310 3160-36		1	Motor 3HP 1/60/115-230V 182T
	1310 3160-37	1310 3160-37		1	Motor 3HP 1/60/200V 182T
	1310 3160-38	1310 3160-38		1	Motor 3HP 3/60/230-460V 182T
	1310 3160-39	1310 3160-39		1	Motor 3HP 3/60/200V 182T
		1310 3160-40		1	Motor 5HP 1/60/230V 184T
		1310 3160-41		1	Motor 5HP 1/60/200V 184T
		1310 3160-42		1	Motor 5HP 3/60/230-460V 184T
		1310 3160-43		1	Motor 5HP 3/60/200V 184T
			1310 3160-44	1	Motor 7 1/2HP 3/60/230-460V 213T
		1310 3160-45	1	Motor 7 1/2HP 3/60/200V 213T	
47	9710 6011-49	9710 6011-49	9710 6011-49	1	Elbow 1/4 NPT x 900 Street
48	9710 5309-03 (2)	9710 5309-03(2)		1	Press. Swt. 3HP/1PH 175 PSI
		9710 5309-00	9710 5309-00	1	Press. Swt. 175 PSI



**Figure 1**

REF. NO.	PART NO.	PART NO.	PART NO.	QTY.	DESCRIPTION
	LE6, LT6 LE6A	LE7, LE8 LT7, LT8	LE9, LT9		
48	9710 5309-04	9710 5309-02	9710 5309-02	1	Press. Swt. 120 PSI
	9710 5309-06			1	Press. Swt. 175 PSI 2HP
				1	Press. Swt. 120 PSI 2HP
49		9710 5300-00	9710 5300-00	1	Solenoid Valve 230V
50	9710 5628-00	9710 5628-00	9710 5628-00	1	Nipple 1/4 NPT x 2 1/2" Lg.
51		9710 5632-00	9710 5632-00	1	Cross 1/4 NPT
52		9710 5630-01	9710 5630-01	1	Nipple 1/4 NPT Close
53		9710 5679-00	9710 5679-00	1	Bushing 1/4 x 1/8 NPT
54		9710 5630-00	9710 5630-00	1	Nipple 1/8 NPT Close
55		0686 3116-02	0686 3116-02	1	Plug 1/4 NPT
56	9710 5613-03	9710 5613-03	9710 5613-03	4	Elbow 1/8 NPT x 1/4 Tube
				As	
57	9710 5610-00	9710 5610-00	9710 5610-00	Req'd	Tube 1/4 Dia.
58	9710 5342-03	9710 5342-03	9710 5342-03	1	Trigger Valve 165 PSI
	9710 5342-01	9710 5342-01	9710 5342-01	1	Trigger Valve 115 PSI

**NOTE:** (1) 3 PH  
(2) 1 PH

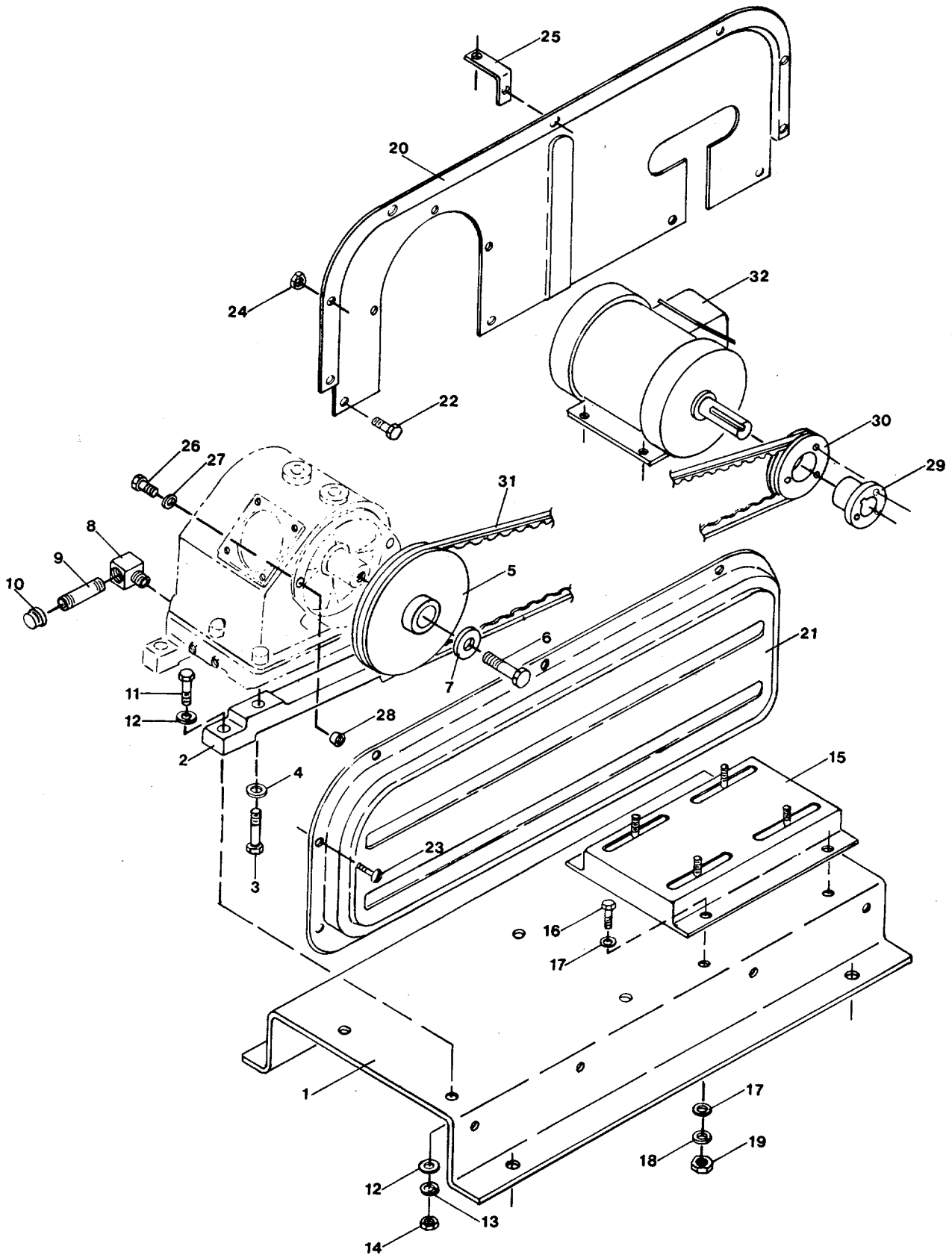


Figure 2

**Figure 2**

REF. NO.	PART NO.	PART NO.	PART NO.	QTY.	DESCRIPTION
	LE6, LT6 LE6A	LE7, LT7 LE8, LT8	LE9, LT9 LT11, LT12		
1	1310 0943-03 (1)			1	Base
	1310 0943-04 (2)	1310 0943-04	1310 0943-05	1	Base
2	1503 0104-00	1503 0058-00	1503 0026-00	1	Foot
3	0147 1326-03	0147 1326-03		2	Screw M8 x 30 mm Lg.
	0147 1366-03			2	Screw M10 x 45 mm Lg.
4	0301 2335-00	0301 2335-00		2	Washer M8
	0301 2344-00			2	Washer M10
5	1310 0943-32			1	Flywheel 1GR.
		1310 0943-31		1	Flywheel 2GR.
			1310-0943-30	1	Flywheel 3GR.
6	0147 1367-03			1	Screw M10 x 50 mm Lg.
		0147 1485-03	0147 1485-03	1	Screw M16 x 80 mm Lg.
7	1503 0205-00			1	Washer
		1503 0206-00	1503 0206-00	1	Washer
8	9710 5666-00	9710 5666-00	9710 5666-00	1	Elbow
9	9710 5630-11	9710 5630-11	9710 5630-11	1	Nipple
10	9710 5686-01	9710 5686-01	9710 5686-01	1	Cap
11	0144 3256-03	0144 3256-03		4	Screw 5/16-18 x 2 1/2" Lg.
			0144 3297-03	4	Screw 3/8-16 x 3" Lg.
12	0301 2335-00	0301 2335-00		8	Flat Washer
			0301 2343-00	8	Flat Washer
13	0333 2225-00	0333 2225-00		4	Lock Washer
			0333 2229-00	4	Lock Washer
14	0268 3205-00	0268 3205-00		4	Nut 5/16 Hex
			0268 3206-00	4	Nut 3/8 Hex
15	1310 2994-17 (1)				Slide Base Frm 145T
	1310 2994-18 (2)				Slide Base Frm 182T
	1310 2994-19				Slide Base Frm 184T
	1310 2994-20				Slide Base Frm 213T
	1310 2994-12				Slide Base Frm 215T
	1310 2994-13				Slide Base Frm 254T

**Figure 2**

REF. NO.	PART NO.	PART NO.	PART NO.	QTY.	DESCRIPTION
	LE6, LT6 LE6A	LE7, LT7 LE8, LT8	LE9, LT9 LT11, LT12		
16	0144 3249-03 (1)			4	Screw 5/16-18 x 1 1/4" Lg.
16	0144 3288-03 (2)	0144 3288-03		4	Screw 3/8-16 x 1 1/4" Lg.
	0144 3365-03			4	Screw 1/2-13 x 1 1/2" Lg.
17	0301 2335-00 (1)			8	Flat Washer 5/16"
	0301 2343-00 (2)	0301 2343-00		8	Flat Washer 3/8"
			0301 2364-00	8	Flat Washer 1/2"
18	0333 2225-00 (1)			4	Lock Washer 5/16"
	0333 2229-00 (2)	0333 2229-00		4	Lock Washer 3/8"
			0333 2238-00	4	Lock Washer 1/2"
19	0268 3205-00 (1)			4	Nut 5/16 Hex
	0268 3206-00 (2)	0268 3206-00		4	Nut 3/8 Hex
			0268 3208-00	4	Nut 1/2 Hex
20	1310 0943-16	1310 0943-20	1310 0943-18	1	Belt Guard - Inner
21	1310 0943-17	1310 0943-15	1310 0943-19	1	Belt Guard - Outer
					Self
22	9710 5906-00	9710 5906-00	9710 5906-00	3	Screw 1/4 20 x 3/4 Tapping
23	9710 5909-00	9710 5909-00	9710 5909-00	7	Screw #10-32 x 1/2" Lg.
24	9710 5909-10	9710 5909-10	9710 5909-10	7	Nut #10-32 Hex
25	1310 0943-49	1310 0943-48	1310 0943-47	1	Bracket
26	0147 1320-03			2	Screw M8 x 12 mm Lg.
		0147 1246-00	0147 1246-00	2	Screw M16 x 16 mm Lg.
27	0301 2335-00			2	Flat Washer M8
28		1503 0685-00	1503 0673-00	2	Insert M6
29	9710 5168-01 (1)				Bushing 2 & 3HP
	9710 5167-01 (2)	1310 0350-17	1310 0350-18		Bushing 5-10HP
			1310 0350-07		Bushing 15HP
30	1310 0444-25			1	Sheave 5.30 O.D. 1GR.
	1310 0444-26			1	Sheave 6.00 O.D. 1GR.
		1310 0444-28		1	Sheave 6.90 O.D. 2GR.
		1310 0444-29		1	Sheave 8.00 O.D. 2G
			1310 0444-32	1	Sheave 9.30 O.D. 3GR.
			1310 0444-30	1	Sheave 8.00 O.D. 3GR.
			1310 0444-31	1	Sheave 8.50 O.D. 3GR.

**Figure 2**

REF. NO.	PART NO.	PART NO.	PART NO.	QTY.	DESCRIPTION
	LE6, LT6 LE6A	LE7, LT7 LE8, LT8	LE9, LT9 LT11, LT12		
30			1310 0444-33	1	Sheave 10.60 O.D. 3GR.
			1310 0444-34	1	Sheave 11.60 O.D. 3GR.
31	9710 5181-00			1	Belt 3V X 450
	9710 5179-04			1	Belt 3V X 475
		9710 5181-03		2	Belt 3V X 560
		9710 5181-04		2	Belt 3V X 600
			9710 5179-01	3	Belt 3V X 670
			9710 5181-05	3	Belt 3V X 710
32	1310 3160-34			1	Motor 2HP 3/60/230-460V 145T
	1310 3160-35			1	Motor 2HP 3/60/200V 145T
	1310 3160-32			1	Motor 2HP 1/60/115-230V 182T
	1310 3160-33			1	Motor 2HP 1/60/200V 182T
	1310 3160-36	1310 3160-36		1	Motor 3HP 1/60/115-230V 182T
	1310 3160-37	1310 3160-37		1	Motor 3HP 1/60/200V 182T
	1310 3160-38	1310 3160-38		1	Motor 3HP 3/60/230-460V 182T
	1310 3160-39	1310 3160-39		1	Motor 3HP 3/60/200V 182T
		1310 3160-40		1	Motor 5HP 1/60/230V 184T
		1310 3160-41		1	Motor 5HP 1/60/200V 184T
		1310 3160-42		1	Motor 5HP 3/60/230-460V 184T
		1310 3160-43		1	Motor 5HP 3/60/200V 184T
			1310 3160-44	1	Motor 7.5HP 3/60/230-460V
					213T
			1310 3160-45	1	Motor 7.5HP 3/60/200V 213T
			1310 3160-46	1	Motor 10HP 3/60/230-460V
					215T
			1310 3160-47	1	Motor 10HP 3/60/200V 215T
			1310 3160-48	1	Motor 15HP 3/60/230-460V
					254T
			1310 3160-49	1	Motor 15HP 3/60/200V 254T

**NOTE:** (1) 3 PH  
(2) 1 PH

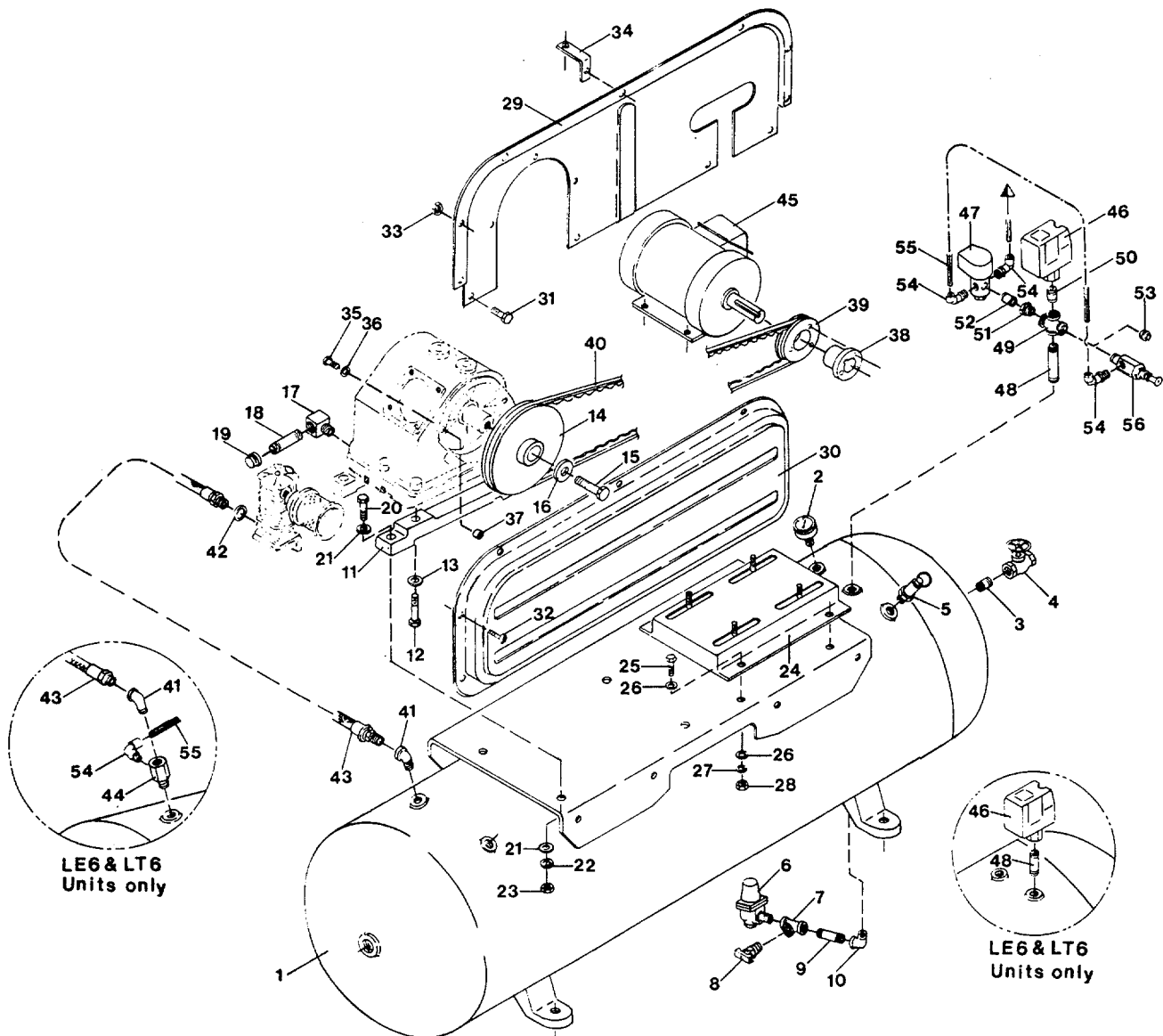


Figure 3

**Figure 3**

REF. NO.	PART NO.	PART NO.	PART NO.	QTY.	DESCRIPTION
	LE6, LT6 LE6A	LE7, LT7 LE8, LT8	LE9, LT9 LT11, LT12		
1	1310 0943-06 (1)			1	60 Gal. Horiz. Tank
	1310 0943-14 (2)	1310 0943-14		1	60 Gal. Horiz. Tank
		1310 0943-08		1	80 Gal. Horiz. Tank
			1310 0943-10	1	80 Gal. Horiz. Tank
			1310 0943-11	1	120 Gal. Horiz. Tank
2	9710 1003-00	9710 1003-00	9710 1003-00	1	Press. Gauge
3	9710 5630-02			1	Nipple 1/2 NPT
		9710 5630-03	9710 5630-03	1	Nipple 3/4 NPT
4	9710 5321-00			1	Gate Valve 1/2 NPT
		9710 5322-00	9710 5322-00	1	Gate Valve 3/4 NPT
5	9710 5333-00	9710 5333-00	9710 5333-00	1	Safety Valve
6	9710 5273-00	9710 5273-00	9710 5273-00	1	Drain Trap
7	1310 0943-42	1310 0943-42	1310 0943-42	1	Tee 3/8 NPT
8	1310 0140-00	1310 0140-00	1310 0140-00	1	Drain Cock
9	1310 0943-40	1310 0943-40	1310 0943-40(3)	1	Nipple 3/8 NPT x 4" Lg.
			9710 5630-11(4)	1	Nipple 3/8 NPT x 6" Lg.
10	1310 0943-41	1310 0943-41	1310 0943-41	1	Elbow 3/8 NPT
11	1503 0104-00	1503 0058-00	1503 0026-00	1	Foot
12	0147 1326-03	0147 1326-03		2	Screw M8 x 30 mm Lg.
			0147 1366-03	2	Screw M10 x 45 mm Lg.
13	0301 2335-00	0301 2335-00		2	Washer M8
			0301 2344-00	2	Washer M10
14	1310 0943-32			1	Flywheel 1 Groove
		1310 0943-31		1	Flywheel 2 Groove
			1310 0943-30	1	Flywheel 3 Groove
15	0147 1367-03			1	Screw M10 x 50 mm Lg.
		0147 1485-03	0147 1485-03	1	Screw M16 x 80 mm Lg.
16	1503 0205-00			1	Washer
		1503 0206-00	1503 0206-00	1	Washer
17	9710 5666-00	9710 5666-00	9710 5666-00	1	Elbow
18	9710 5630-11	9710 5630-11	9710 5630-11	1	Nipple
19	9710 5686-01	9710 5686-01	9710 5686-01	1	Cap

**Figure 3**

REF. NO.	PART NO.	PART NO.	PART NO.	QTY.	DESCRIPTION
	LE6, LT6 LE6A	LE7, LT7 LE8, LT8	LE9, LT9 LT11, LT12		
20	0144 3256-03	0144 3256-03		4	Screw 5/16-18 x 2 1/2" Lg.
			0144 3297-03	4	Screw 3/8-16 x 3" Lg.
21	0301 2335-00	0301 2335-00		8	Flat Washer 5/16
			0301 2343-00	8	Flat Washer 3/8
22	0333 2225-00	0333 2225-00		4	Lock Washer 5/16
			0333 2229-00	4	Lock Washer 3/8
23	0268 3205-00	0268 3205-00		4	Nut 5/16 Hex
			0268 3206-00	4	Nut 3/8 Hex
24	1310 2994-17 (1)			1	Slide Base Frm 145T
	1310 2994-18 (2)			1	Slide Base Frm 182T
		1310 2994-19		1	Slide Base Frm 184T
			1310 2994-20	1	Slide Base Frm 213T
			1310 2994-12	1	Slide Base Frm 215T
			1310 2994-13	1	Slide Base Frm 254T
25	0144 3249-03 (1)			4	Screw 5/16-18 x 1 1/4" Lg.
	0144 3288-03 (2)	0144 3288-03		4	Screw 3/8-16 x 1 1/4" Lg.
			0144 3365-03	4	Screw 1/2-13 x 1 1/2" Lg.
26	0301 2335-00 (1)			8	Flat Washer 5/16"
	0301 2343-00 (2)	0301 2343-00		8	Flat Washer 3/8"
			0301 2364-00	8	Flat Washer 1/2"
27	0333 2225-00 (1)			4	Lock Washer 5/16"
	0333 2229-00 (2)	0333 2229-00		4	Lock Washer 3/8"
			0333 2238-00	4	Lock Washer 1/2"
28	0268 3205-00 (1)			4	Nut 5/16 Hex
	0268 3206-00 (2)	0268 3206-00		4	Nut 3/8 Hex
			0268 3208-00	4	Nut 1/2 Hex
29	1310 0943-16	1310 0943-20	1310 0943-18	1	Belt Guard - Inner
30	1310 0943-17	1310 0943-15	1310 0943-19	1	Belt Guard - Outer
31	9710 5906-00	9710 5906-00	9710 5906-00	3	Screw 1/4-20 x 3/4 Tapping
32	9710 5909-00	9710 5909-00	9710 5909-00	7	Screw #10-32 x 1/2" Lg.
33	9710 5909-10	9710 5909-10	9710 5909-10	7	Nut #10-32 Hex
34	1310 0943-49	1310 0943-48	1310 0943-47	1	Bracket



**Figure 3**

REF. NO.	PART NO.	PART NO.	PART NO.	QTY.	DESCRIPTION
	LE6, LT6 LE6A	LE7, LT7 LE8, LT8	LE9, LT9 LT11, LT12		
35	0147 1320-03			2	Screw M8 x 12 mm Lg.
		0147 1246-00	0147 1246-00	2	Screw M6 x 16 mm Lg.
36	0301 2335-00			2	Flat Washer M8
37	1503 0685-00	1503 0673-00		2	Insert M6
38	9710 5168-01 (1)			1	Bushing 2 & 3HP
	9710 5167-01 (2)	1310 0350-17	1310 0350-18	1	Bushing 5-10HP
			1310 0350-07	1	Bushing 15HP
39	1310 0444-25			1	Sheave 5.30 O.D. 1GR.
			1310 0444-26	1	Sheave 6.00 O.D. 1GR.
			1310 0444-28	1	Sheave 6.90 O.D. 2GR.
			1310 0444-29	1	Sheave 8.00 O.D. 2GR.
			1310 0444-32	1	Sheave 9.30 O.D. 3GR.
			1310 0444-30	1	Sheave 8.00 O.D. 3GR.
			1310 0444-31	1	Sheave 8.50 O.D. 3GR.
			1310 0444-33	1	Sheave 10.60 O.D. 3GR.
			1310 0444-34	1	Sheave 11.60 O.D. 3GR.
40	9710 5181-00			1	Belt 3V X 450
	9710 5179-04			1	Belt 3V X 475
		9710 5181-03		2	Belt 3V X 560
		9710 5181-04		2	Belt 3V X 600
			9710 5179-01	3	Belt 3V X 670
			9710 5181-05	3	Belt 3V X 710
41	9710 5691-00	9710 5691-00	9710 5691-00	1	Elbow 1/2 NPT
42	0653 9098-00	0653 9098-00	0653 9098-00	1	Washer R 1/2
43	9710 5278-02			1	Hose - 60 Gal. Tank
		9710 5278-01	9710 5278-01	1	Hose - 80 Gal. Tank
			9710 5278-02	1	Hose - 120 Gal. Tank
44	9710 5324-00			1	Check Valve
45	1310 3160-34			1	Motor 2HP 3/60/230-460V 145T
	1310 3160-35			1	Motor 2HP 3/60/200V 145T
	1310 3160-32			1	Motor 2HP 1/60/115-230V 182T
	1310 3160-33			1	Motor 2HP 1/60/200V 182T

Figure 3

REF. NO.	PART NO.	PART No.	PART NO.	QTY.	DESCRIPTION
	LE6, LT6 LEM	LE7, LE8, LT8	LT7, LT9, LT11, LT12		
	1310 3160-36	1310 3160-36		1	Motor 3HP 1/60/115-230V 182T
	1310 3160-37	1310 3160-37		1	Motor 3HP 1/60/200V 182T
	1310 3160-38	1310 3160-k		1	Motor 3HP 3/60/230-460V 182T
	1310 3160-39	1310 3160-39		1	Motor 3HP 3/60/200V 182T
		1310 X60-40		1	Motor 5HP 1/60/230V 184T
		1310 3160-41		1	Motor 5HP 1/60/200V 184T
		1310 3160-42		1	Motor 5HP 3/60/230-460V 184T
		1310 3160-43		1	Motor 5HP 3/60/200V 184T
			1310 3160-44	1	Motor 7.5HP 3/60/230-460V 213T
			1310 3160-45	1	Motor 7.5HP 3/60/200V 213T
			1310 3160-46	1	Motor 10HP 3/60/230-460V 215T
			1310 3160-47	1	Motor 10HP 3/60/200V 215T
			1310 3160-48	1	Motor 15HP 3/60/230-460V 254T
			1310 3160-49	1	Motor 15HP 3/60/200V 254T
46	9710 5309-03 (2)	9710 5309-03(2)		1	Press. Swt. 3HP/1PH 175 PSI
		9710 5309-00(1)	9710 5309-00	1	Press. Swt. 175 PSI
		9710 5309-02	9710 5309-02	1	Press. Swt. 120 PSI
	9710 5309-04			1	Press. Swt. 175 PSI
	9710 5309-06			1	Press. swt. 120 PSI
47		9710 5300-00	9710 5300-00	1	Solenoid Valve 230V
48	9710 5628-00	9710 5628-00	9710 5628-00	1	Nipple 1/4 NPT x 2 1/2" LB.
49		9710 5632-00	9710 5632-00	1	Cross 1/4 NPT
50		9710 5630-01	9710 5630-01	1	Nipple 1/4 NPT Close
51		9710 5679-00	9710 5679-00	1	Bushing 1/4 x 1/8 NPT
52		9710 5630-00	9710 5630-00	1	Nipple 1/8 NPT Close
53		0686 3116-02	0686 3116-02	1	Plug 1/4 NPT
54	9710 5613-03	9710 5613-03	9710 5613-03	4	Elbow 1/8 NPT x 1/4 Tube
55	9710 5610-00	9710 5610-00	9710 5610-00	1	AS Req'd. Tube 1/4 Dia.
56	9710 5342-03	9710 5342-03	9710 5342-03	1	Trigger Valve 165 PSI
	97 10 5342-01	9710 5342-01	9710 5342-01	1	Trigger Valve 115 PSI

**Atlas Copco** Industrial Compressors Inc.  
161 Lower Westfield Rd.  
Holyoke, MA 01041-0431

NOTE: (1) 3 PH (3) 80 Gal. Tank  
(2) 1 PH (4) 120 Gal. Tank  
3M IP 4/87

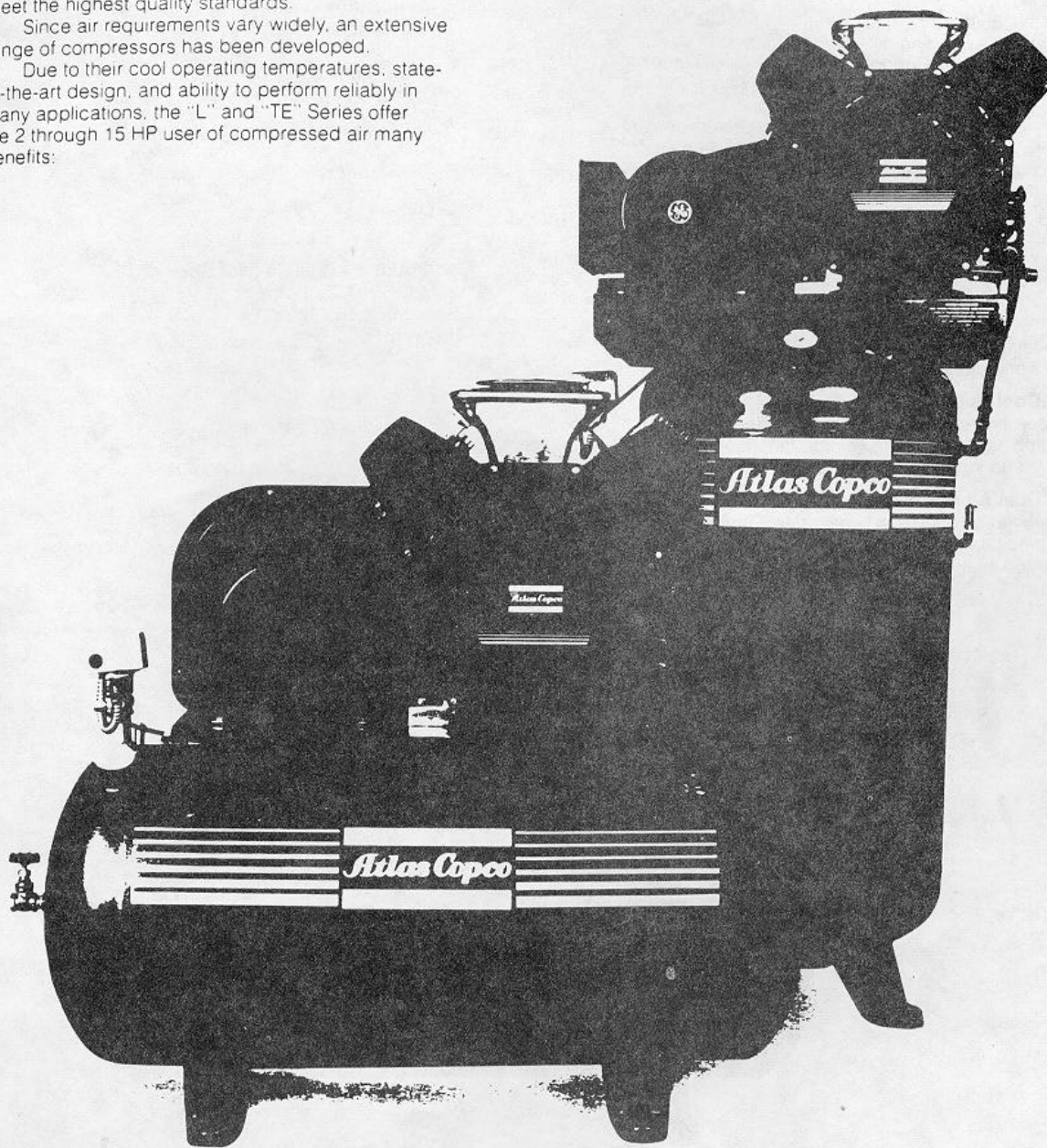
## Atlas Copco Unmatched Experience

Atlas Copco has been manufacturing compressors since 1904. Today, we are one of the largest companies in the world specializing in compressed air equipment.

Many years of experience, advanced design, strict quality control and a professional work force ensure that the "L" and "TE" Series compressors meet the highest quality standards.

Since air requirements vary widely, an extensive range of compressors has been developed.

Due to their cool operating temperatures, state-of-the-art design, and ability to perform reliably in many applications, the "L" and "TE" Series offer the 2 through 15 HP user of compressed air many benefits:



## Better Heat Dissipation—Longer Life

Atlas Copco builds its "L" Series compressor blocks of die-cast aluminum alloy, and incorporates a large flow, high volume fan and shroud to remove heat generated during compression that can adversely affect any reciprocating compressor.

In fact, the "L" Series runs up to 150° cooler than the competition, reducing the likelihood of carbon build-up.

Cooler running temperatures ensure higher reliability, extending oil, valve and service life.

The Atlas Copco "L" Series is available in tank and base mounted configurations, single and two stage models, 2 through 15 HP.

In addition, 5 and 7.5 HP oil-free versions are offered as well to deliver absolutely oil-free air . . . oil-free air because no oil is used anywhere, not even in the crankcase, making them ideal for food, medical and other oil-free applications.

## Quality Packaging

All components used in the "L" Series reciprocating compressor package have been designed to work together. These components include:

### 1. Cool Running

Deep-finned aluminum alloy cylinders and heads, combined with a high volume fan, reduce heat build-up in critical areas.

### 2. Dual Air Filtration

Air filtration occurs in two stages. First, by a dry type replaceable cartridge, then by an oil mist within the venturi intake chamber.

### 3. Temperature Reducer

The air-cooled temperature reducer lowers discharge air temperatures before entering the tank. Thus air can be piped directly into a dryer, in many instances eliminating an aftercooler often required with hotter-running cast iron units.

### 4. T.E.F.C. Motors to Satisfy Most Special Applications

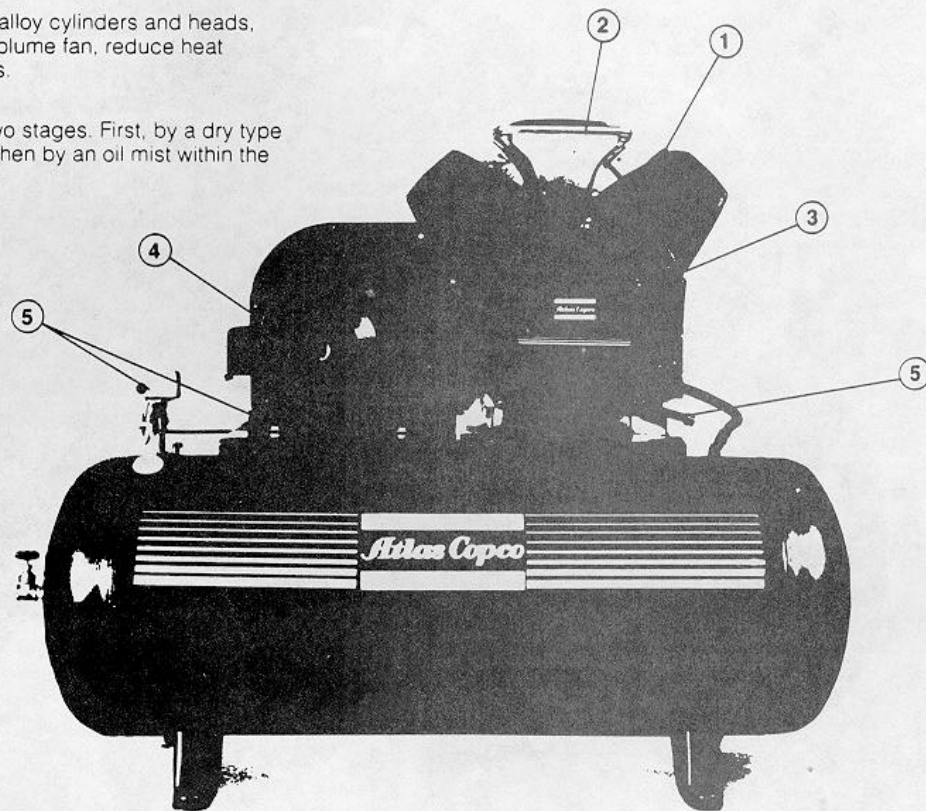
Energy efficient *totally enclosed fan-cooled* motors are standard, providing long life and protection from environmental contaminants which can cause premature motor failure.

### 5. Other Standard Features on the "L" Series

- Pressure Switch, factory set for stop-start operation
- ASME Approved Pressure Valve
- Tank Drain
- Oil Sight Glass
- Belt Tension Device

### 6. Options Available (Not Shown)

- 5 to 15 HP Dual Control
- Magnetic Starters
- Low Oil Shut Down
- Automatic Tank Drain



## TE Portable Compressors

Atlas Copco "TE" portable air compressors are designed to be extremely rugged and built to last.

All models have positive action, automatic splash-type lubrication with easily accessible oil fill, drain and sight glass.

Maximum job site portability is obtained, and tip-over damage is reduced to a minimum with our low center gravity design. This, combined with weighing an average of 30% less than competition, ensures job site air on demand.

All models come equipped with totally enclosed metal belt guard, pressure relief valve, tank gauge, tank drain, handles, and wheels. Electric models include a heavy-duty cord set and built-in motor overload protection. For conditions when air requirements are varied, all gas engine models include a slow down control device which reduces RPM to an idle speed, saving fuel.

### TE Features

#### 1. Belt Guard

Heavy-duty, totally enclosed, easily removed metal guard on all models.

#### 2. Filter

Filter/silencer for cleaner intake air and quiet running.

#### 3. Accessory Bracket

Protected area for accessory mounting with T bracket for better support.

#### 4. Rubber Pads

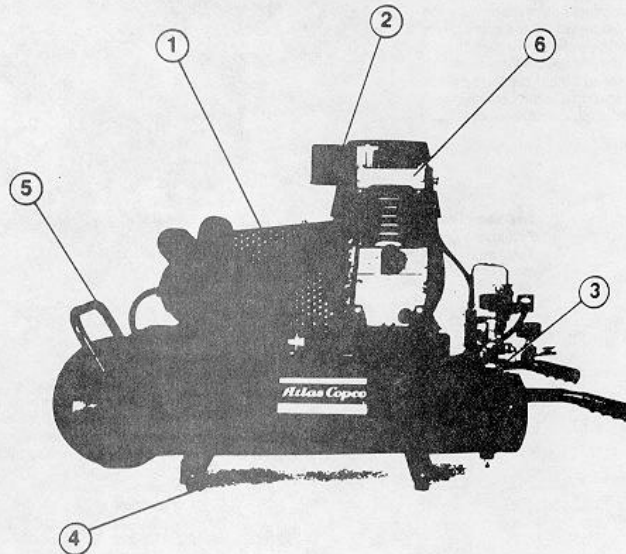
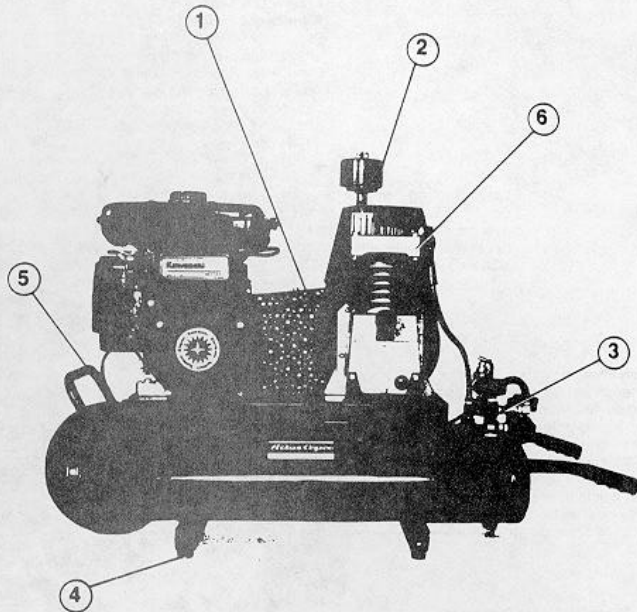
Unit rests on rubber pads to prevent vibration.

#### 5. Design

Low profile—wheel barrel tank design . . . maximum mobility to minimize tip-over while traveling to and from job sites.

#### 6. Pump

Single cylinder die-cast aluminum pump runs cooler, extending oil and valve service life. Better overall heat dissipation.



## The Heart of a Reciprocating Compressor The Pump.

### Longer Life/Low Maintenance Valves

Exclusive Flexidisc Valving System has just one moving part per valve. Atlas Copco's valves are stainless steel, annular discs, providing large flow area, low lift and low air velocities for reduced power consumption.

### Air Intake System

Air enters through an aluminum venturi-type suction silencer which includes an easily replaceable automotive-type filter. This unique design also incorporates a central tube for easy oil filling of the crankcase, allowing one routine service point.

### Large Cooling Fan

Up to 1,765 CFM of cool air flows over the V designed pump for better heat transfer and cool operation.

### Fan Shroud

The fan shroud directs the cooling air flow from the high volume fan evenly across the deep-cooling fins on the aluminum cylinders and heads, reducing temperature build-up at the hottest points of any compressor. This extends oil, valve and service life of the pump.

### Wear Resistant Cylinders

The cylinders are all cast in a special patented aluminum alloy, enabling the piston rings to run directly against the silicon-treated cylinder walls. This system eliminates the need of a case-in cylinder liner and gives excellent heat transfer from the cylinder wall to the cooling fins. Furthermore, this allows the possibility of keeping the clearance between the piston and cylinder within hundredths of millimeters, reducing oil carry-over.

### Loadless Starts

Pneumatic unloading system assures loadless starts and longer motor life.

### Service Free Lubrication

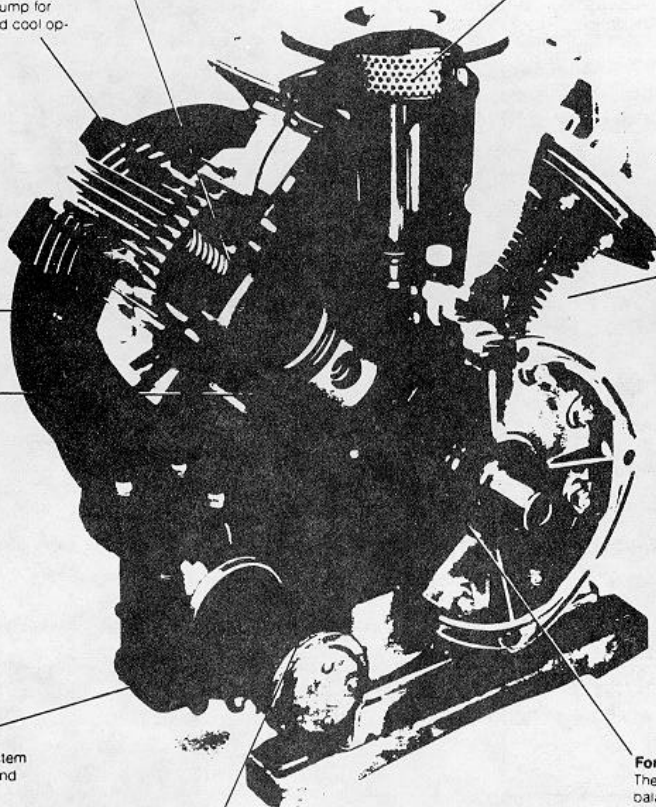
Atlas Copco uses a single steel ring which rotates off the crankshaft to assure positive lubrication. No splashpin to fall out and no oil pump to fail. Oil is forced to bearings through a rifle-drilled crankshaft.

### All Cast Aluminum Alloy Construction and Components

Aluminum dissipates heat faster than cast iron units, with discharge temperatures leaving the cylinder heads at continuous operation up to 150° F. cooler than competitive cast iron machines. In air-cooled machinery, lower temperatures relate directly to improved performance.

### Forged Steel Crankshaft

The crankshaft is dynamically balanced on three planes and is supported by heavy-duty ball bearings on each side of the crankcase for smooth operation.



## Weight & Dimensions

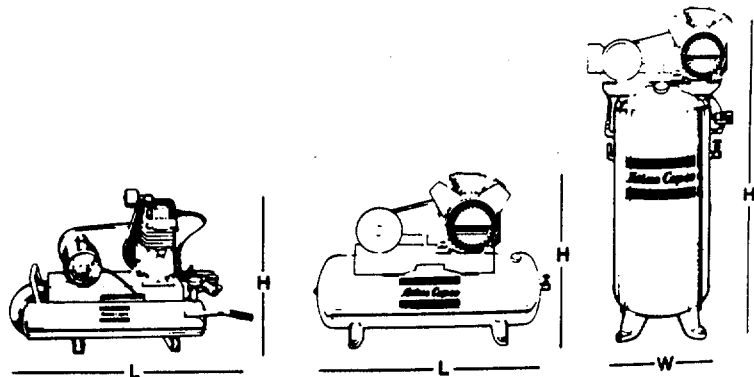
Tank Mounted Two Stage Units		
Model	Dimensions L x W x H	Shipping Weights lbs.
2-LT6-60H	50.50 x 21.00 x 42.24	375
2-LT6-60V	31.44 x 20.00 x 69.73	374
3-LT7-60H	50.50 x 21.19 x 46.25	465
3-LT7-60V	34.31 x 20.00 x 73.38	490
5-LT8-80H	66.00 x 21.19 x 46.25	534
5-LT8-80V	24.00 x 36.32 x 76.69	549
7-LT9-80H	66.00 x 24.00 x 50.63	715
7-LT9-80V	24.00 x 40.62 x 80.50	733
10-LT11-120H	71.00 x 25.75 x 57.00	814
15-LT12-120V	71.00 x 25.75 x 57.00	918
Base Mounted Two Stage Units		
Model	Dimensions L x W x H	Shipping Weights lbs.
2-LT6-B	29.44 x 16.88 x 20.98	192
3-LT7-B	34.81 x 20.88 x 25.50	291
5-LT8-B	34.81 x 20.88 x 25.50	311
7-LT9-B	41.38 x 25.00 x 29.88	486
10-LT11-B	41.38 x 25.00 x 29.88	520
15-LT12-B	41.38 x 25.00 x 29.88	624
Tank Mounted Single Stage Units		
Model	Dimensions L x W x H	Shipping Weights lbs.
2-LE6-60H	50.50 x 21.00 x 42.24	372
2-LE6-60V	30.18 x 20.00 x 69.73	372
3-LE6A-60H	50.50 x 21.00 x 41.73	410
3-LE6A-60V	31.38 x 20.00 x 68.86	399
5-LE8-80H	66.00 x 21.19 x 46.25	530
5-LE8-80V	24.00 x 35.60 x 76.69	545
7-LE9-80H	66.00 x 24.00 x 50.63	709
7-LE9-80V	24.00 x 39.68 x 80.50	727
10-LE11-120H	71.00 x 25.75 x 57.00	807
Single Stage Base Mounted Units		
Model	Dimensions L x W x H	Shipping Weights lbs.
2-LE6-B	28.18 x 16.88 x 20.98	190
3-LE6A-B	31.12 x 19.76 x 20.98	226
5-LE8-B	34.10 x 20.88 x 25.50	307
7-LE9-B	40.43 x 25.00 x 29.88	480
10-LE11-B	40.43 x 25.00 x 29.88	513
Single Stage Oil Free Units and Base Mounts		
Model	Dimensions L x W x H	Shipping Weights lbs.
5-LE7N-80H	66.00 x 21.19 x 46.25	525
7-LE9N-120H	71.00 x 25.75 x 57.00	774
5-LE7N-80V	24.00 x 35.60 x 76.69	540
5-LE7N-B	34.10 x 20.88 x 25.50	302
7-LE9N-B	40.43 x 25.00 x 29.88	480

(See Engineering data for bare block dimensions and weight)

**Atlas Copco**  
 Atlas Copco  
 Industrial Compressors Inc.  
 161 Lower Westfield Road  
 Holyoke, MA 01040 (413) 536-0600

**More Per Hour**

The information contained herein is general in nature and is not intended for specific construction, installation or application purposes.



**Atlas Copco**

# TEST CERTIFICATE

This certifies that

Machine type LE 63L

Serial Number 1A1C - 226923

Tested by 27-3-88 1099  
Inspector/room

has been tested prior to delivery and fully conforms with our specifications as regards quality and operating efficiency

AC 343/2

**Atlas Copco**

Machine type LE 63L

Serial Number 1A1C - 226923

Product Number 8-175-177034

Delivery date  
year | month | day

From 39

A 2406 jan. 72

This part is to be filled in, detached and returned

**Atlas Copco**

# TEST CERTIFICATE

This certifies that

Machine type LE 63L

Serial Number 1A1C - 226906

Tested by 27-3-88 1099  
Inspector/room

has been tested prior to delivery and fully conforms with our specifications as regards quality and operating efficiency

AC 343/2

**Atlas Copco**

Machine type LE 63L

Serial Number 1A1C - 226906

Product Number 8-175-177034

Delivery date  
year | month | day

From 39

A 2406 jan. 72

This part is to be filled in, detached and returned



## ADDENDUM A

This addendum covers the Atlas Copco Air Compressor Model 3LE6A and contains the following information:

<u>Paragraph</u>	Title
1	Operating Instructions
2	Preventive Maintenance Checks and Services
3	Lubrication Instructions
4	Troubleshooting
5	Valve Replacement Procedures
6	List of Recommended Spare Parts

1. Operating Instructions for Air Compressor (Model No. 3LE6A). The air compressor is designed for automatic operation through a pressure switch without damaging the air compressor or the piping and valves. Procedures for energizing and operating the air compressor follow:

Energizing and Operating the Air Compressor.

- a. Check all electrical wiring for loose connections.
- b. Check that oil level is in middle of the sightglass. If oil level is low. fill to proper level. See Lubrication Instructions for the proper oil to be used.
- c. Ensure all air outlet valves in the system are closed.
- d. Open drain valves one at a time in the system. Drain any condensation and close valves.
- e. Place appropriate circuit breaker to the ON position and start the air compressor by placing switch on air compressor controller to the ON position.
- f. Verify proper operation of the compressor pressure switch. Switch is set to stop the compressor when pressure in accumulator reaches 120 psi and to start the compressor when pressure drops to 60 psi.
- g. To shut down automatic operation of the compressor, place switch on controller to OFF position.
- h. Check all air valves and piping for leaks.

2. Preventive Maintenance Checks and Services For Air Compressor (Model 3LE6A). Routine maintenance ensures trouble-free operation. When performing a preventive maintenance check, always perform all of the shorter interval checks that precede it.

Interval/ Running Hours	Check/Service	Note
Daily	Check oil level.	Refer to Lubrication Instructions, paragraph 3.
Weekly	Drain Condensate from air tank by opening draincock in bottom of tank.	
Weekly	Inspect air filter.	Clean with compressed air or replace if necessary.
Monthly	Check operation of safety valve by pulling test link.	If air does not escape from the tank, replace safety valve.
Monthly	Clean unit.	Remove dust or dirt from cooling fins.
Monthly	Check that pressure switch operates properly.	Adjust or replace switch if necessary.
Yearly or 350 hours	Change air filter.	More often if operating in dusty atmosphere.
Yearly or 1000 hours	Inspect and clean non-return valve.	
Yearly or 1000 hours	Change strainer in non-return valve assembly.	
Yearly or 1000 hours	Change muffler.	
Yearly or 1000 hours	Check tension of drive belts.	Correct adjustment is obtained when each V-belt can be pushed inward 15 mm (0.6 inches) per m distance between the two axle centers when a force of 20 N (4.5 lbf) is exerted midway between the two pulleys.
Yearly or 2000 hours	Change oil.	Refer to Lubrication Instructions, paragraph 3.
Bi-annually or 2000 hours	Change crankcase breather valve.	
Bi-annually or 3000 hours	Change non-return valve assembly.	
Bi-annually or 5000 hours.	Change valves.	Refer to Valve Replacement Procedure, paragraph 5.

3. Lubrication Instructions For Air Compressor (Model 3LE6A). It is recommended that the oils listed in the lubrication chart in the front of this manual be used when available. If these oils are not available, any good quality mineral motor oil (not multigrade) with a viscosity grade of SAE 10W20 may be used if it meets the requirements of the American Petroleum Institute classification code SE-CC or SE-CD, military specification MIL-L-46152 or HIL-L-2104C. The crankcase oil capacity of the air compressor model number 3LE6A is 0.50 gallons.

**NOTE**

The crankcase is connected to the air intake silencer or suction line through a breather valve. Faulty operation of this valve or clogging of the metered hole will result in too high a crankcase pressure and promote oil consumption.

4. Troubleshooting The Air Compressor (Model 3LE6A).

Condition	Possible faults	Suggested remedy
1. Insufficient air pressure	<ul style="list-style-type: none"> <li>a. Air leak(s)</li> <li>b. Air filter choked</li> <li>c. Air pressure switch incorrectly set</li> <li>d. Air consumption exceeds capacity of compressor</li> <li>e. Damaged valve(s) parts where necessary.</li> <li>f. Pressure gauge defective necessary</li> <li>g. Release valve of air pressure switch not airtight during loading periods replace valve.</li> </ul>	<ul style="list-style-type: none"> <li>a. Check and correct as necessary</li> <li>b. Service filter</li> <li>c. Adjust switch</li> <li>d. Check equipment connected.</li> <li>e. Inspect valves and replace</li> <li>f. Check and replace if</li> <li>g. Check mechanism of valve. If leak cannot be cured,</li> </ul>
2. Unit does not speed up	<ul style="list-style-type: none"> <li>a. Low voltage at motor terminals Adjust if necessary</li> <li>b. Ambient temperature too low</li> <li>c. Pressure release valve of air pressure switch malfunctioning</li> </ul>	<ul style="list-style-type: none"> <li>a. Check generator output.</li> <li>b. Increase temperature in room</li> <li>c. Check operation of valve; replace if necessary</li> </ul>
3. Air receiver pressure rises above maximum and causes safety valve to blow	<ul style="list-style-type: none"> <li>a. Air pressure switch incorrectly set or out of order pressure. it does not respond</li> </ul>	<ul style="list-style-type: none"> <li>a. Set switch to unload compressor at rated maximum Replace switch if</li> </ul>
4. Receiver does not hold pressure	<ul style="list-style-type: none"> <li>a. Non-return valve leaks springs</li> <li>b. Air leak(s)</li> </ul>	<ul style="list-style-type: none"> <li>a. Check for broken valve and</li> <li>b. Check and correct as necessary</li> </ul>
5 Too frequent starting and too short operating periods	<ul style="list-style-type: none"> <li>a. Air pressure switch incorrectly set</li> <li>b. Non-return valve leaks</li> <li>c. High condensate level in receiver frequently</li> </ul>	<ul style="list-style-type: none"> <li>a. Increase pressure difference</li> <li>b. See 4a</li> <li>c. Drain condensate more</li> </ul>
6 High oil consumption	<ul style="list-style-type: none"> <li>a. Oil level too high Keep level within lower half of sightglass</li> <li>b. Breather valve malfunctioning</li> <li>c. Piston ring(s) worn or broken checked</li> </ul>	<ul style="list-style-type: none"> <li>a. Do not overfill crankcase.</li> <li>b. Replace breather valve</li> <li>c. Have condition of piston rings</li> </ul>
7. Loading periods too long	<ul style="list-style-type: none"> <li>a. Excessive air consumption</li> <li>b. Compressor not in optimum condition</li> <li>c. Sticking or damaged valves</li> </ul>	<ul style="list-style-type: none"> <li>a. Decrease consumption</li> <li>b. Have compressor inspected</li> <li>c. Clean or replace</li> </ul>
8. Unit does not start	<ul style="list-style-type: none"> <li>a. Electrical failure system checked</li> <li>b. Air pressure between stopping and starting pressure setting pressure of air pressure switch</li> <li>c. Coupling sleeve damaged</li> </ul>	<ul style="list-style-type: none"> <li>a. Check or have electrical</li> <li>b. Wait until air pressure is lower than pre-set starting</li> <li>c. New sleeve</li> </ul>

Condition	Possible faults	Suggested remedy
9. Thermal overload relay cuts out during operation	a. Overload relay incorrectly set b. One phase of mains supply line interrupted  c. Mains supply voltage variations exceed normal tolerances d. Ambient temperature too high and causes overload relay to trip e. Motor stops and starts too frequently f. Overcurrent due to motor or compressor/vacuum pump failure	a. Check and adjust. Reset relay b. Check fuses and line terminals for tightness. Check voltage across motor line terminals c. Check generator output  d. Improve ventilation of room  e. See 5 f. Measure motor line current in the three phases. If currents exceed rated motor current, have compressor inspected; if currents are not equal, have motor inspected.

5. Valve Replacement Procedure For Air Compressor (Model 3LE6A). A faulty valve must be replaced immediately. Serious damage will result within a short time if a unit is running with a broken valve disk. A faulty valve can be discovered by insufficient air pressure or by a decreased vacuum. It is highly recommended to replace the valves and gaskets each time the cylinder heads are disassembled, because a new position of old valves results in accelerated wear and damage of the valves. The following instructions have to be faithfully followed when replacing the valve disks. Refer to Figure 1A.

**WARNING**

Release pressure from the unit and turn electrical power to the unit OFF before starting repair work. Failure to comply with this warning could result in injury or death to personnel.

Figure 1A

- |                       |                      |                         |                      |
|-----------------------|----------------------|-------------------------|----------------------|
| 1. Rubber cord joint  | 2. Guide pin (2 off) | 3. Rubber cord joint    | 4. Cylinder          |
| 5. O-ring             | 6. Inlet valve disk  | 7. Valve seat           | 8. Outlet valve disk |
| 9. Outlet valve guard | 10. Spiral spring    | 11. Cylinder head cover |                      |

**DISASSEMBLY**

- a. Remove oil filler cap and remove retaining cover, air filter and the cover of the air intake silencer.
- b. Disconnect cylinder head cover (11) from the inlet and outlet pipe flanges. Remove cover (11).
- c. Remove spring (10) outlet valve guard (9) and outlet valve disk (8).
- d. Lift off valve seat (7) and remove inlet valve disk (6). Do not remove guide pins (2).
- e. Remove and discard all the O-rings and rubber cord joints.

- f. Remove the carbon deposits from the inlet valve guard at the cylinder top. Take care that no dirt drops into the cylinder.
- g. Clean and inspect all the parts. Discard any valve disks that are cracked or worn.

**REASSEMBLY**

- a. Fit a new rubber cord joint (3). Do not stretch the rubber while inserting it in its groove; the ends should meet. Lightly smear the cords, O-rings and their grooves with graphite grease.
- b. Put inlet valve disk (6) into place and install valve seat (7).
- c. Fit O-ring (5) and cord joint (1).
- d. Install outlet valve disk (8), guard (9) and spring (10).
- e. Install cylinder head cover (11). Use new flange gaskets, if necessary. Fit the flange and cylinder head bolts and tighten them alternately.
- f. Reinstall the cover of the air intake silencer, the air filter, the retaining cover and the knob or oil filler cap.
- g. Run an operational check on the unit.

6. List of Recommended Spare Parts For Air Compressor (Model 3LE6A). The following is a list of spare parts recommended by the manufacturer to be carried in the field.

Part Number	Description	Quantity
1503614360	Filter Kit	1
1503018900	Filter	3
0661103300	Seal Washer	1
1503613160	Valve Kit	1
1503015500	Valve	2
1503015600	Valve	2
1503016500	Spring	2
1503019600	Gasket	4
1503020880	Vent Valve	1
1503023400	Seal	3
1503053200	O-Ring cord	1.6 ft
0663313200	O-Ring	4
0663983200	O-Ring	2
1503614260	PAO Oil	5 ltr cn

**APPENDIX A  
REFERENCES**

A-1. **Scope.** This appendix contains all forms, pamphlets and technical manuals referenced in both the Air mobile and Semitrailer mounted Laboratories.

A-2. **Forms.**

Recommended Changes to Publications .....	DA Form 2028
.....	DA Form 2028-2
Quality Deficiency Report .....	SF 368
Equipment Inspection and Maintenance Work Sheet .....	DA Form 2404
Hand Receipts .....	DA Form 2062

A-3. **Field Manuals.**

Petroleum Testing Facilities:

Laboratories and Kits .....	FM 10-72
Inspecting and Testing Petroleum Products .....	FM 10-70
ASTM Test Method Supplement to .....	FM 10-92C1/C2

A-4. **Technical Manuals.**

Atlas-Copco Compressor .....	TM 10-4310-392-13&P
Alcor Jet Fuel Thermal Oxidation Tester Operating and Maintenance Manual .....	TM 10-6635-210-13&P
Bacharach Gas Alarm and Calibration Data .....	TM 10-6665-297-13&P
Brother Portable Typewriter .....	TM 10-7430-218-13&P
Chemtrix Field Ph Meter .....	TM 10-6630-237-13&P
Elkay Manufacturing 30 GPH Cooler .....	TM 10-4130-240-13&P
Emcee Micro-Separometer .....	TM 10-6640-222-13&P
Foxboro Pressure Recording Gauge .....	TM 10-6685-365-13&P
Gammon Aqua Glo Water Detector .....	TM 10-6640-221-13&P
Gammon Mini Monitor Fuel Sampling Kit .....	TM 10-6630-230-13&P
Jelrus Burn-Out Furnace .....	TM 10-6640-231-13&P
Koehler Cleveland Open Tester .....	TM 10-6630-236-13&P
Koehler Cloud and Pour Point Chamber .....	TM 10-6630-238-13&P
Koehler Copper Strip Corrosion Bomb Bath .....	TM 10-6640-220-13&P
Koehler Distillation Apparatus .....	TM 10-6630-233-13&P
Koehler Dropping Point Apparatus .....	TM 10-6635-211-13&P
Koehler Electric Pensky-Martins Tester .....	TM 10-6630-231-13&P
Koehler Foaming Characteristics Determination Apparatus .....	TM 10-6640-228-13&P
Koehler Kinematic Viscosity Bath .....	TM 10-6630-239-13&P
Koehler Tag Closed Cup Flash Tester .....	TM 10-6630-235-13&P
Lab-Line Explosion Proof Refrigerator .....	TM 10-6640-219-13&P
Lily Freezer .....	TM 10-6640-234-13&P
Millipore OM 39 Filter Holder .....	TM 10-6640-225-13&P
Millipore Vacuum Pump .....	TM 10-6640-217-13&P
Ohaus Harvard Trip Balance .....	TM 10-6670-278-13&P
Precision Gas-Oil Distillation Test Equipment .....	TM 10-6630-219-13&P
Precision General Purpose Water Bath .....	TM 10-6640-229-13&P

Precision High Temperature Bronze Block Gum Bath .....	TM 10-6630-234-13&P
Precision General Purpose Ovens .....	TM 10-6640-218-13&P
Precision Heater Instruction Manual and Parts List .....	TM 10-6640-223-13&P
Precision Oxidation Stability Bath .....	TM 10-6640-232-13&P
Precision Pensky-Martens Flash Testers .....	TM 10-6630-231-13&P
Precision Reid Vapor Pressure Bath .....	TM 10-6640-226-13&P
Precision Slo-Speed Stirrer .....	TM 10-6640-224-13&P
Precision Universal Centrifuge .....	TM 10-6640-230-13&P
Precision Universal Penetrometer .....	TM 10-6640-228-13&P
Sargent-Welch Vacuum Pump .....	TM 10-4310-391-13&P
Sartorius Analytical Balance .....	TM 10-6670-277-13&P
Scotsman Cuber .....	TM 10-6640-227-13&P
Soltec VOM-Multimeter .....	
TM 10-6625-3127-13&P	
Teel Self-Priming Centrifugal Pump .....	TM 10-6640-217-13&P
Teel Submersible Pump .....	TM 10-4320-320-13&P
Texas Instrument TI-5030II Calculator .....	TM 10-7420-210-13&P

**A-5. Pamphlets.**

The Army Maintenance Management System (TAMMS) .....	DA Pam 738-750
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**A-6. Miscellaneous Publications.**

The Army Integrated Publishing and Printing Program .....	AR 25-30
Laboratory, Airmobile, Aviation Fuel .....	MIL-L-52733A(ME)
Apparatus, Instruments, Chemicals, Furniture, and Supplies for Industrial, Clinical, College and Government Laboratories .....	Fisher Scientific Laboratories Catalog
Petroleum-Petrochemical Testing Equipment .....	Precision Scientific Catalog

## APPENDIX B MAINTENANCE ALLOCATION CHART

### Section I. INTRODUCTION

#### B-1. General.

a. This section provides a general explanation of all maintenance and repair functions authorized at various maintenance categories.

b. The Maintenance Allocation Chart (MAC) in Section II designates overall authority and responsibility for the performance of maintenance functions on the identified end item or component. The application of the maintenance functions to the end item or component will be consistent with the capacities and capabilities of the designated maintenance categories.

c. Section III lists the tools and test equipment (both special tools and common tool sets) required for each maintenance function as referenced from Section II.

d. Section IV contains supplemental instructions and explanatory notes for a particular maintenance function.

B-2. **Maintenance Functions.** Maintenance functions will be limited to and defined as follows:

a. Inspect. To determine the serviceability of an item by comparing its physical, mechanical, and/or electrical characteristics with established standards through examination (e. g. , by sight, sound, or feel).

b. Test. To verify serviceability by measuring the mechanical, pneumatic, hydraulic, or electrical characteristics of an item and comparing those characteristics with prescribed standards.

c. Service. Operations required periodically to keep an item in proper operating condition, i. e. , to clean (includes decontaminate, when required), to preserve, to drain, to paint, or to replenish fuel, lubricants, chemical fluids, or gases.

d. Adjust. To maintain or regulate, within prescribed limits, by bringing into proper or exact position, or by setting the operating characteristics to specified parameters.

e. Align. To adjust specified variable elements of an item to bring about optimum or desired performance.

f. Calibrate. To determine and cause corrections to be made or to be adjusted on instruments or test, measuring, and diagnostic equipments used in precision measurement. Consists of comparisons of two instruments, one of which is a certified standard of knob accuracy, to detect and adjust any discrepancy in the accuracy of the instrument being compared.

g. Remove/Install. To remove and install the same item when required to perform service or other maintenance functions. Install may be the act of emplacing, seating, or fixing into position a spare, repair part, or module (component or assembly) in a manner to allow the proper functioning of an equipment or system.

h. Replace. To remove an unserviceable item and install a serviceable counterpart in its place. "Replace" is authorized by the MAC and is shown as the third position code of the SMR code.



*i. Repair.* The application of maintenance services, <sup>1</sup> including fault location/troubleshooting <sup>2</sup> removal/installation, and disassembly/assembly procedures <sup>3</sup> and maintenance actions <sup>4</sup> to identify troubles and restore serviceability to an item by correcting specific damage, fault, malfunction, or failure in a part, subassembly, module (component or assembly), end item, or system.

*j. Overhaul.* That maintenance effort (service/action) prescribed to restore an item to a completely serviceable/operational condition as required by maintenance standards in appropriate technical publications (i. e, DMWR). Overhaul is normally the highest degree of maintenance performed by the Army. Overhaul does not normally return an item to like-new condition.

*k. Rebuild.* Consists of those services/actions necessary for the restoration of unserviceable equipment to a like-new condition in accordance with original manufacturing standards. Rebuild is the highest degree of materiel maintenance applied to Army equipment. The rebuild operation includes the act of returning to zero those age measurements (hours/miles, etc. ) considered in classifying Army equipment/components.

### B-3. Explanation Of Columns In The MAC, Section II.

*a. Column 1. Group Number.* Column 1 lists functional group code numbers, the purpose of which is to identify maintenance significant components, assemblies, subassemblies, and modules with the next higher assembly. End item group number shall be "00. "

*b. Column 2. Component/Assembly.* Column 2 contains the names of components, assemblies, subassemblies, and modules for which maintenance is authorized.

*c. Column 3. Maintenance Function.* Column 3 lists the functions to be performed on the item listed in column 2. (For a detailed explanation of these functions, see paragraph B-2. )

*d. Column 4. Maintenance Category.* Column 4 specifies, by the listing of a work time figure in the appropriate subcolumn(s), the category of maintenance authorized to perform the function listed in column 3. This figure represents the active time required to perform that maintenance function at the indicated category of maintenance. If the number or complexity of the tasks within the listed maintenance function vary at different maintenance categories, appropriate work time figures will be shown for each category. The work time figure represents the average time required to restore an item (assembly, subassembly, component, module, end item, or system) to a serviceable condition under typical field operating conditions. This time includes preparation time (including any necessary disassembly/ assembly time), troubleshooting/fault location time, and quality assurance/quality control time in addition to the time required to perform the specific tasks identified for the maintenance functions authorized in the maintenance allocation chart. The symbol designations for the various maintenance categories are as follows:

- 
1. *Services inspect, test, service, adjust, align, calibrate, and/or replace.*
  2. *Fault locate/troubleshoot-the process of investigating and detecting the cause of equipment malfunctioning; the act of isolating a fault within a system or unit under test (UUT).*
  3. *Disassemble/assemble encompasses the step-by-step taking apart (or breakdown) of a spare/functional group coded item to the level of its least componency identified as maintenance significant (i. e. , assigned an SMR code) for the category of maintenance under consideration.*
  4. *Actions welding, grinding, riveting, straightening, facing, remachining, and/or resurfacing.*

- C.....Operator/Crew
- O .....Unit Maintenance
- F .....Direct Support Maintenance
- H .....General Support Maintenance
- D .....Depot Maintenance

e. Column 5. Tools and Equipment. Column 5 specifies, by code, those common tool sets (not individual tools) and special tools, TMDE, and support equipment required to perform the designated function.

f. Column 6. Remarks. This column shall, when applicable, contain a letter code, in alphabetic order, which shall be keyed to the remarks contained in section IV.

**B-4. Explanation Of Columns In Tool And Test Equipment Requirements, Section III.**

a. Column 1. Reference Code. The tool and test equipment reference code correlates with a code used in the MAC, section II, column 5.

b. Column 2. Maintenance Category. The lowest category of maintenance authorized to use the tool or test equipment.

c. Column 3. Nomenclature. Name or identification of the tool or test equipment.

d. Column 4. National Stock Number. The National stock number of the tool or test equipment.

e. Column 5. Tool Number. The manufacturer's part number.

**B-5. Explanation Of Columns In Remarks, Section IV.**

a. Column 1. Reference Code. The code recorded in column 6, Section II.

b. Column 2. Remarks. This column lists information pertinent to the maintenance function being performed as indicated in the MAC, section II.

**Section II. MAINTENANCE ALLOCATION CHART**

(1) GROUP NO.	(2) COMPONENT/ ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE CATEGORY					(5) TOOLS AND EQUIPMENT REF CODE	(6) REMARKS CODE
			UNIT		DS	GS	DEPOT		
			C	O	F	H	D		
00	COMPRESSOR, AIR	INSPECT SERVICE	0.3 0.3						
01	PUMP ASSEMBLY	REPLACE REPAIR		2.0 2.0	4.0			1 1,2 A	
02	RESERVOIR REPLACE	INSPECT	0.1	1.0				2 B	
03	MOTOR	REPLACE REPAIR		1.0 2.0				2 C	

**Section III. TOOL AND TEST EQUIPMENT REQUIREMENTS  
FOR  
MAINTENANCE ALLOCATION CHART**

(1) TOOL/TEST EQUIP. REF CODE	(2) MAINTENANCE CATEGORY,	(3) NOMENCLATURE	(4) NSN	(5) TOOL NUMBER
1	O,F	TOOL KIT, GENERAL AUTOMOTIVE	5180-00-177-7033	(50980) SC 5180-90- CL-N26
2	O,F	SHOP EQUIPMENT, AUTOMOTIVE  MAINTENANCE AND REPAIR: COMMON No. 1 (LESS POWER)	4910-00-754-0654	(19204) SC 4910-95- CL-A74

**Section IV. REMARKS**

REFERENCE CODE	REMARKS
A	REPAIR AT ORGANIZATION LIMITED TO REPLACEMENT OF AIR INTAKE FILTER, DRIVE BELT, AND PRESSURE RELIEF VALVE.
B	REPLACE DEFECTIVE RESERVOIR.
C	REPAIR BY REPLACEMENT OF DEFECTIVE PARTS. IF REPAIRS EXCEED ECONOMIC LIMITS.

APPENDIX C

COMPONENTS OF END ITEM AND BASIC ISSUE ITEMS LISTS

NOT APPLICABLE

**APPENDIX D**  
**ADDITIONAL AUTHORIZATION LIST**  
**NOT APPLICABLE**

APPENDIX E

EXPENDABLE/DURABLE SUPPLIES AND MATERIALS LIST

Section I. INTRODUCTION

E-1. **Scope.** This listing is for informational purposes only and is not authority to requisition the listed items. These items are authorized to you by CTA 50-970, Expendable/Durable Items (except medical, class V, repair parts, and heraldic items).

E-2. **Explanation of Columns.**

a. Column (1) - Item Number. This number is assigned to the entry in the listing and is referenced in the narrative instructions to identify the material (e.g., Use cleaning compound, item 5, appendix C).

b. Column (2) - Level. This column identifies the lowest level of maintenance that requires the listed item.

- C - Operator/Crew
- O - Unit Maintenance
- F - Direct Support Maintenance
- H - General Support Maintenance

c. Column (3) National Stock Number. This is the National stock number assigned to the item; use it to request or requisition the item.

d. Column (4) Description. Indicates the Federal item name, and, if required, a description to identify the item. The last line for each item indicates the Commercial and Government Entity Code (CAGEC) in parentheses followed by the part number.

e. Column (5) Unit of Measure (U/M). Indicates the measure used in performing the actual maintenance function. This measure is expressed by a two-character alphabetical abbreviation (e. g. , EA, IN, PR). If the unit of measure differs from the unit of issue, requisition the lowest unit of issue that will satisfy your requirements.

Section II. EXPENDABLE/DURABLE SUPPLIES AND MATERIALS LIST

(1) Item Number	(2) Level	(3) National Stock Number	(4) Description	(5) U/M
	O		FILTER KIT (59379) 1503614360	EA
	O,C		PAD, OIL (59379) 1503614260	CN

**By Order of the Secretary of the Army:**

**CARL E. VUONO**  
General, United States Army  
Chief of Staff


**Official:**

**THOMAS F. SIKORA**  
Brigadier General, United States Army  
The Adjutant General

**DISTRIBUTION:**

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RECOMMENDED CHANGES TO EQUIPMENT TECHNICAL PUBLICATIONS

 <p style="font-size: small; margin: 0;"><i>THEN...JOT DOWN THE DOPE ABOUT IT ON THIS FORM. CAREFULLY TEAR IT OUT, FOLD IT AND DROP IT IN THE MAIL.</i></p>		SOMETHING WRONG WITH PUBLICATION	
		FROM: (PRINT YOUR UNIT'S COMPLETE ADDRESS)	
		DATE SENT	
PUBLICATION NUMBER		PUBLICATION DATE	PUBLICATION TITLE
IN THIS SPACE, TELL WHAT IS WRONG AND WHAT SHOULD BE DONE ABOUT IT.			
-----			
BE EXACT PIN-POINT WHERE IT IS			
PAGE NO.	PARA-GRAPH	FIGURE NO.	TABLE NO.
PRINTED NAME, GRADE OR TITLE AND TELEPHONE NUMBER		SIGN HERE	



## The Metric System and Equivalents

### *Linear Measure*

1 centimeter = 10 millimeters = .39 inch  
 1 decimeter = 10 centimeters = 3.94 inches  
 1 meter = 10 decimeters = 39.37 inches  
 1 dekameter = 10 meters = 32.8 feet  
 1 hectometer = 10 dekameters = 328.08 feet  
 1 kilometer = 10 hectometers = 3,280.8 feet

### *Weights*

1 centigram = 10 milligrams = .15 grain  
 1 decigram = 10 centigrams = 1.54 grains  
 1 gram = 10 decigram = .035 ounce  
 1 decagram = 10 grams = .35 ounce  
 acres  
 1 hectogram = 10 decagrams = 3.52 ounces  
 1 kilogram = 10 hectograms = 2.2 pounds  
 1 quintal = 100 kilograms = 220.46 pounds  
 1 metric ton = 10 quintals = 1.1 short tons

### *Liquid Measure*

1 centiliter = 10 milliliters = .34 fl. ounce  
 1 deciliter = 10 centiliters = 3.38 fl. ounces  
 1 liter = 10 deciliters = 33.81 fl. ounces  
 1 dekaliter = 10 liters = 2.64 gallons  
 1 hectoliter = 10 dekaliters = 26.42 gallons  
 1 kiloliter = 10 hectoliters = 264.18 gallons

### *Square Measure*

1 sq. centimeter = 100 sq. millimeters = .155 sq. inch  
 1 sq. decimeter = 100 sq. centimeters = 15.5 sq. inches  
 1 sq. meter (centare) = 100 sq. decimeters = 10.76 sq. feet  
 1 sq. dekameter (are) = 100 sq. meters = 1,076.4 sq. feet  
 1 sq. hectometer (hectare) = 100 sq. dekameters = 2.47  
 1 sq. kilometer = 100 sq. hectometers = .386 sq. mile

### *Cubic Measure*

1 cu. centimeter = 1000 cu. millimeters = .06 cu. inch  
 1 cu. decimeter = 1000 cu. centimeters = 61.02 cu. inches  
 1 cu. meter = 1000 cu. decimeters = 35.31 cu. feet

### Approximate Conversion Factors

<i>To change</i>	<i>To</i>	<i>Multiply by</i>	<i>To change</i>	<i>To</i>	<i>Multiply by</i>
inches	centimeters	2.540	ounce-inches	Newton-meters	.007062
feet	meters	.305	centimeters	inches	.394
yards	meters	.914	meters	feet	3.280
miles	kilometers	1.609	meters	yards	1.094
square inches	square centimeters	6.451	kilometers	miles	.621
square feet	square meters	.093	square centimeters	square inches	.155
square yards	square meters	.836	square meters	square feet	10.764
square miles	square kilometers	2.590	square meters	square yards	1.196
acres	square hectometers	.405	square kilometers	square miles	.386
cubic feet	cubic meters	.028	square hectometers	acres	2.471
cubic yards	cubic meters	.765	cubic meters	cubic feet	35.315
fluid ounces	milliliters	29,573	cubic meters	cubic yards	1.308
pints	liters	.473	milliliters	fluid ounces	.034
quarts	liters	.946	liters	pints	2.113
gallons	liters	3.785	liters	quarts	1.057
ounces	grams	28.349	liters	gallons	.264
pounds	kilograms	.454	grams	ounces	.035
short tons	metric tons	.907	kilograms	pounds	2.205
pound-feet	Newton-meters	1.356	metric tons	short tons	1.102
pound-inches	Newton-meters	.11296			

### Temperature (Exact)

°F	Fahrenheit temperature	5/9 (after subtracting 32)	Celsius temperature	°C
----	------------------------	----------------------------	---------------------	----

