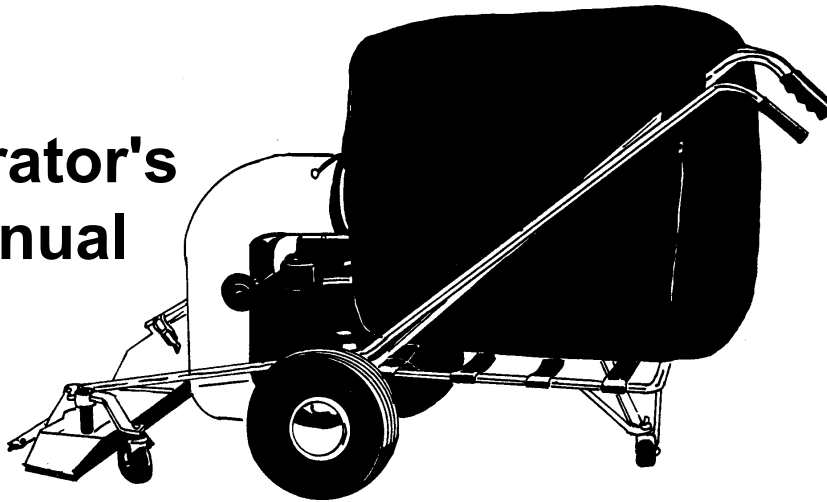


**Operator's
Manual**



**LV-30
LV-30H**

READ THIS BOOK

This book has important information for the use and safe operation of this machine. Failure to read this book prior to operating or attempting any service or maintenance procedure to your Clarke Technology machine could result in injury to you or to other personnel; damage to the machine or to other property could occur as well. You must have training in the operation of this machine before using it. If your operator(s) cannot read this manual, have it explained fully before attempting to operate this machine.

Si Ud. o sus operadores no pueden leer el Inglés, se hagan explicar este manual completamente antes de tratar el manejo o servicio de esta máquina.

All directions given in this book are as seen from the operator's position at the rear of the machine.

For new books write to: ALTO U.S. Inc., 2100 Highway 265, Springdale, Arkansas 72764.

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OPERATOR SAFETY INSTRUCTIONS



WARNING



AVERTISSEMENT



ADVERTENCIA

DANGER means:	Severe bodily injury or death can occur to you or other personnel if the DANGER statements found on your machine or in your Owner's Manual are ignored or are not adhered to. Read and observe all DANGER statements found in your Owner's Manual and on your machine.
WARNING means:	Injury can occur to you and to other personnel if the WARNING statements found on your machine or in your Owner's Manual are ignored or are not adhered to. Read and observe all WARNING statements found in your Owner's Manual and on your machine.
CAUTION means:	Damage can occur to the machine or to other property if the CAUTION statements found on your machine or in your Owner's Manual are ignored or are not adhered to. Read and observe all CAUTION statements found in your Owner's Manual and on your machine.



DANGER:

Failure to read the Operator's Manual prior to using this machine could result in injury to you or to other personnel; damage to the machine or to other property could occur as well. You must have training in the operation of this machine before using it. If your operator(s) cannot read this manual, have it explained fully before attempting to operate this machine



DANGER:

Machines can cause an explosion when operated near flammable materials and vapors. Do not use this machine with or near fuels, grain dust, solvents, thinners, or other flammable materials.



DANGER:

Operating a machine that is not completely or fully assembled could result in injury or property damage. Do not operate this machine until it is completely assembled.



DANGER:

Filling a machine with fuel in an explosive or poorly-ventilated area can cause an explosion. Only fill the fuel tank in an open area. Do not fill the tank near open flames or while the machine is running. Do not smoke while filling the tank. Do not over-fill the tank. Wipe up any spills. Tighten the cap on the tank when finished.



WARNING:

Removal of the impeller cover or other materials from the machine, without disconnecting the spark plug, could result in serious injury to the operator.



WARNING:

Failure to read and observe all safety statements found on your machine or in this Operator's Manual can result in serious injury or damage. Read and observe all safety statements. Make sure that all labels, decals, warnings, cautions, and instructions are fastened to the machine. Get new labels from your authorized Clarke Technology distributor.



WARNING:

To avoid inhaling exhaust fumes, operate machine in a well ventilated area only. Engine exhaust fumes are dangerous to your health.



CAUTION:

Maintenance and repairs performed by unauthorized personnel could result in damage or injury. Maintenance and repairs performed by unauthorized personnel will void your warranty. Servicing of this unit must always be referred to an authorized Clarke Technology distributor.

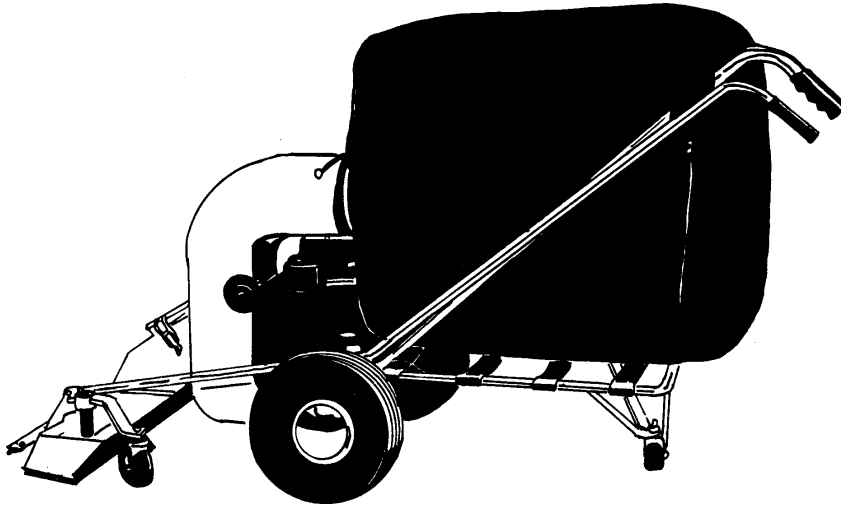


CAUTION:

Use of this machine to move other objects or to climb on could result in injury or damage. Do not use this machine as a step or furniture. Do not ride on this machine.

Introduction and Machine Specifications

The LV-30 Litter Vac is powered by a 6hp gasoline engine and generates 900 CFM to handle the toughest cleaning jobs. This commercial vacuum cleaner can clean debris from large indoor and outdoor areas. The LV-30 is designed for uneven terrain and with a hose and wand attachment its versatility is greatly enhanced.



- Large 11 cu. ft. bag with side zipper disposal system.
- Non-rusting fan housing allows easy passage of debris to bag.
- Heavy duty impeller picks up bottles, cans, washers, sticks, leaves.
- Large wheels allows the LV-30 to traverse rough terrain, curbs, and gutters.
- Powered by an industrial 5.5 HP Tecumseh or Honda engine with low oil shut-off.
- Large adjustable up-down front swivel casters.
- Trap door allows large debris to pass into the vacuum chamber.

Machine Specifications:

Power Source	5.5 HP Tecumseh or Honda recoil start
Cleaning Path Bag/ Hopper Capacity	30" path, bag holds (76.2 cm) 11 cu. ft. (.31 cu. meter)
Frame	Steel & Polydur
Dimensions	75" L x 41½" H 190.5 cm x 76.8 cm x 105.4 cm
Weight	167 lbs. (75.8k)
Shipping Weight	194 lbs. (88.0k)

How to Prepare The Machine for Operation

1. Before assembling the Litter Vac, remove all parts of the machine from the cartons. Fasten the handles and the filter bag to the main frame. Follow the instructions in the handle carton.

HOW TO CHECK THE OIL

WARNING: Do not check the engine oil level when the engine is running. Failure to check the oil level before you use the machine can destroy the engine. Always make sure the machine has the correct amount of oil.

Follow this procedure to check the oil:

1. Make sure the machine is on level ground.
2. Turn the cap marked "Engine Oil" counterclockwise.
3. Lift the dipstick out of the tube.
4. If the mark is below "OK", add oil. See figure 1.
5. When adding oil, make sure the oil does not pass the mark "FULL" on the dipstick.

See the engine manual for the correct type of oil.

HOW TO FILL THE GASOLINE TANK

WARNING: Fill the gasoline tank in an open area. Do not fill the tank near open flames. Do not fill the gasoline tank while the engine is running. Gasoline is very flammable and creates vapors. Serious injury to the operator or others could occur.

WARNING: Gasoline is very flammable. When filling the gasoline tank, make sure the gasoline does not enter the extension. See figure 2. Make sure you do not spill any gasoline. Use a cloth to remove spilled gas.

WARNING: Do not mix oil with the gasoline. Damage to the engine could occur.

Fill the gasoline tank only with regular unleaded gasoline. The tank holds four quarts. Use a clean container. Prevent dirt and debris from falling into the tank. Always tighten the cap on the tank.

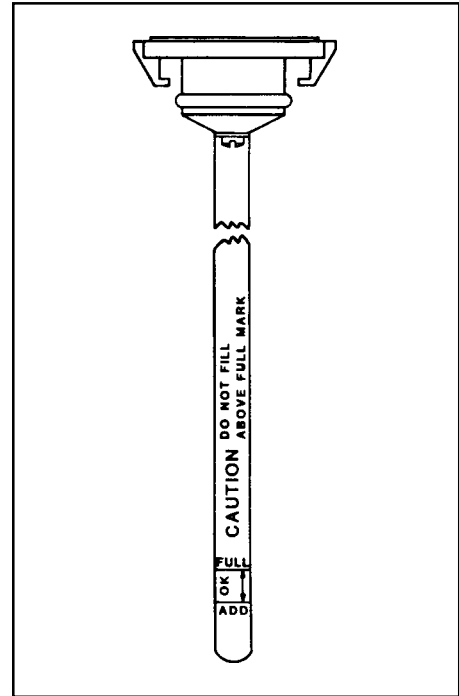


Figure 1

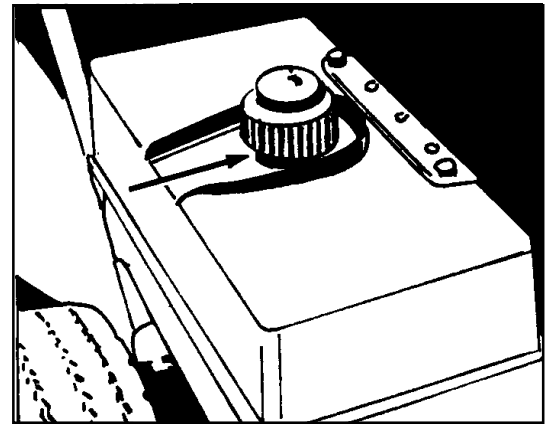


Figure 2

How to Prepare The Machine for Operation

How To Start Your Vacuum

To start your vacuum follow this procedure:

1. Make sure the spark plug is connected to the plug.
2. Move the throttle lever to the half throttle position. See figure 3.
3. If the engine has not run for a period of time, move the choke lever to the second detent toward the "Arrow" mark. See figure 4.
4. Pull the starting cord handle.
5. When the engine starts, move the choke lever to the "OFF" position.

NOTE: If the engine does not start, move the choke to the "OFF" position. Pull the starting cord again.

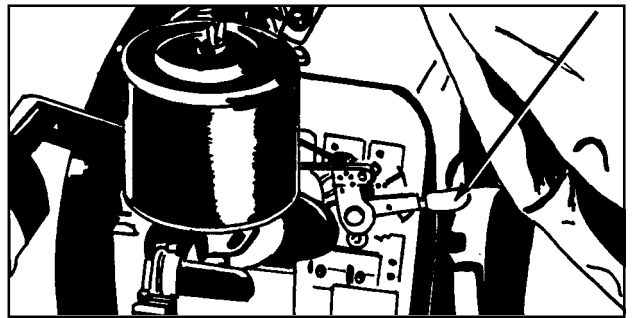


Figure 3

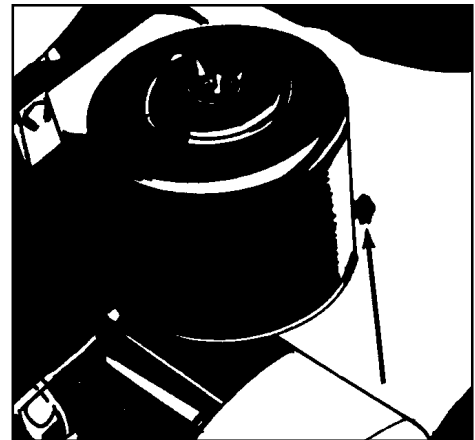


Figure 4

HOW TO STOP THE MACHINE

To stop the engine, follow this procedure:

1. Move the throttle to the "idle" position.

⚠ WARNING: Make sure your hand does not touch the spark plug before the grounding strip touches the spark plug cap. Severe shock could occur.

2. Push the strip against the spark plug cap.
3. Hold the strip against the spark plug cap until the engine stops.

HOW TO OPERATE THE MACHINE

Move the machine over the area to be cleaned. To lift objects too large to go under the intake housing, pull the intake door handle. See figure 5.

See figure 6. The scraper (1) and the shield (2) can be adjusted to three positions. When the vacuum is being used on an uneven outdoor surface, do the following:

1. Make sure the scraper is .06 of an inch above the surface.
2. Make sure the shield is in the lowest position above the surface.

To adjust the scraper and the shield, do the following:

1. Pull the pin (3). See figure 6.
2. Move the bracket support to the highest setting on the housing shaft (4). See figure 6.
3. Make sure the disconnect pin locks into the detent.

If the scraper is not .06 of an inch above the surface, do the following:

1. Loosen the five scraper screws.
2. If the scraper is more than .06 of an inch above the surface, pull the bottom edge of the scraper.
3. If the scraper is level with or below the surface, push the edge of the scraper.
4. Adjust the bottom edge so that it is .06 of an inch above the surface.
5. Tighten the five scraper screws.

CAUTION: Pieces of wire, metal, and rope can damage the vacuum. Do not try to lift or vacuum these objects.

NOTE: When an object is held between the impeller and the housing, do the following:

1. Stop the machine.
2. Disconnect the ignition wire from the spark plug.
3. Put the ignition wire behind the stop lever.
4. Remove the intake cap.

WARNING: Do not put your fingers into the housing. Severe injury to the fingers or operator could occur.

5. Use a tool to reach into the intake housing to remove the object.

When using the machine on uneven areas, set the casters to an outward position.

Optional Equipment

To remove heavy metal clippings and sand, use a special bag support and caster assembly (part # 760641). See figure 7.

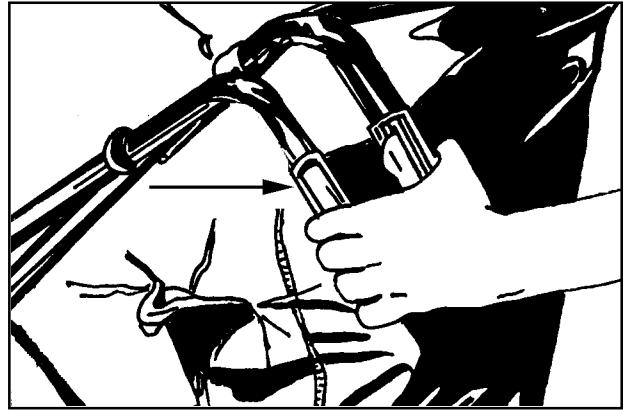


Figure 5

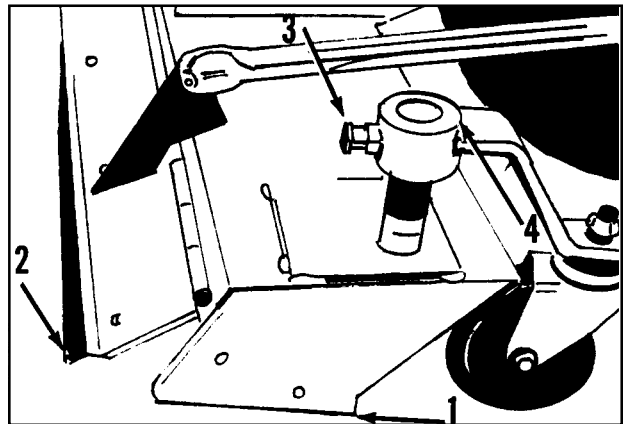


Figure 6

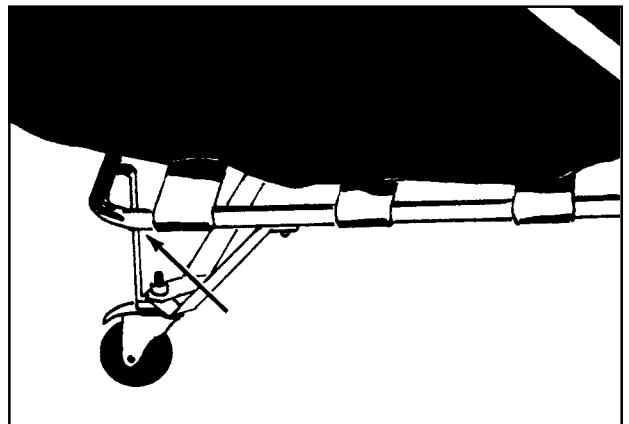


Figure 7

MAINTENANCE PROCEDURES

Keep the vacuum clean, it will have longer life and need fewer repairs.


When To Change The Oil

To change the oil, follow this procedure:

1. Drain the oil from the engine after the first two hours of use.
2. Fill with 19 ounces of clean oil.

NOTE: See the engine manual for the correct type of oil.

3. After the first change of oil, drain the oil after every 25 hours of use. Fill with 19 ounces of clean oil.

 **CAUTION: Never operate the engine when the level of oil is below the "ADD" mark on the dipstick. The engine could be damaged.**

4. Check the oil level every five hours of use. When the machine is used in very dirty areas, frequently check the oil level. If the level of oil is below the "ADD" mark, add oil.

How To Lubricate The Litter Vac

Every fifteen days of use, apply lubricant to the caster wheel axle, the caster pivot, and the main bushings.

How To Clean The Filter Bag

1. Wash the filter bag when the bag is dirty.
2. Dry the filter bag before using.

How To Check The Tires

Each day inspect the tires on the vacuum. Use a low pressure gauge to check the air pressure. The air pressure in each tire must be 35 psi.

Engine Maintenance

Clean the plastic filter and the cooling fins after every 25 hours of use. The engine manual tells how to clean the filter and the cooling fins.

The engine used on the Clarke Technology® Litter Vac is a Tecumseh H-60, 5.5 HP engine or Honda GX160 engine. For service on the engine, see a Tecumseh or Honda dealer.



LV-30

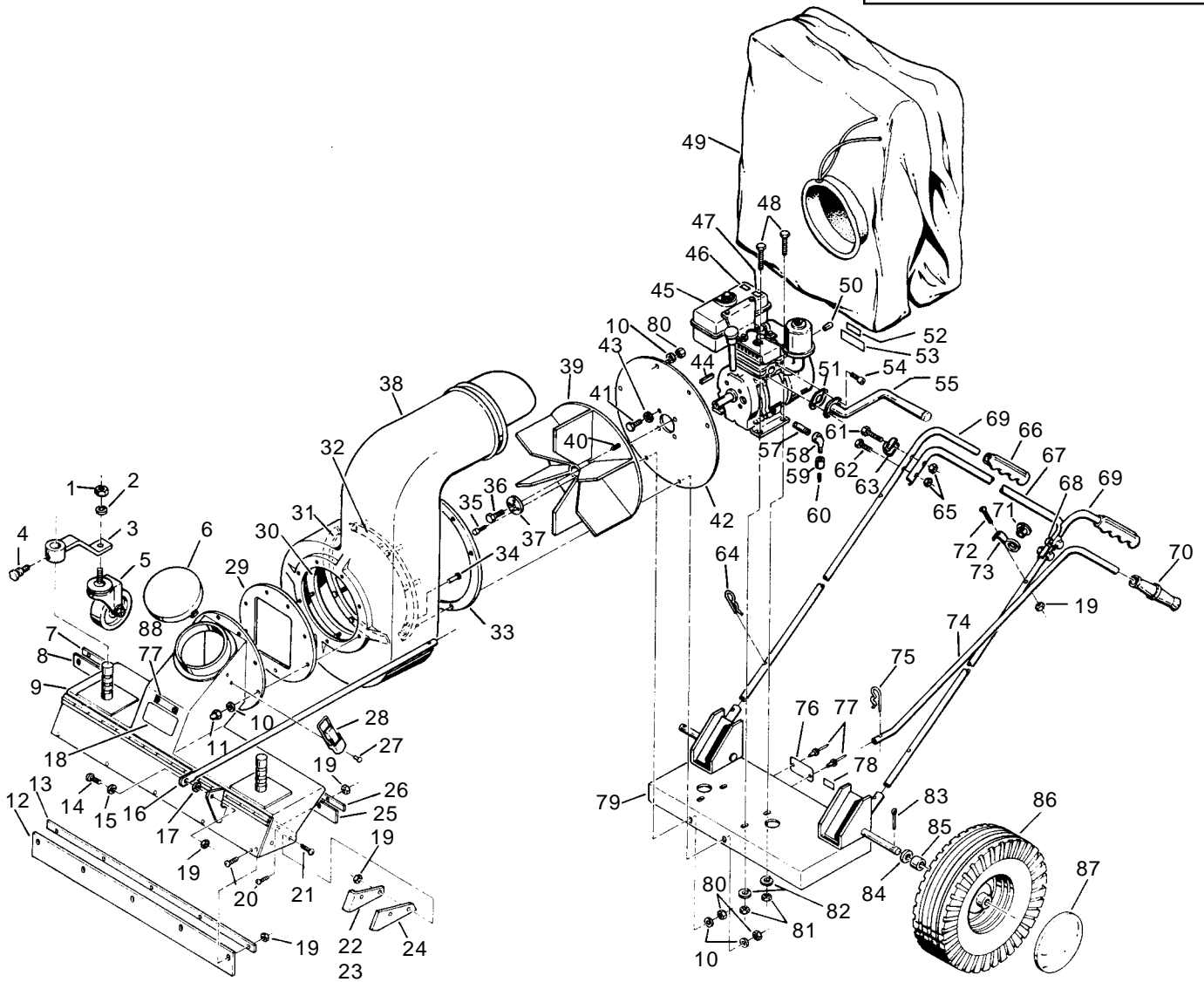
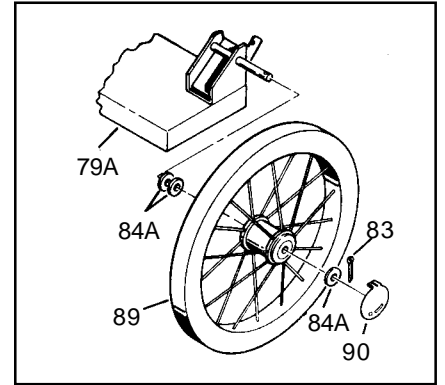
LV-30H

Section II

Parts and Service Manual

(78043D)

Model LV-30 & LV-30H Assembly Drawing - 6/99



**Model LV-30 & LV-30H
Parts List - 6/99**

Ref.	Part No.	Description	Qty.	Ref.	Part No.	Description	Qty.
1	920196	Nut 1/2 - 13 Hex Jam	2	45	50035A	Engine - Gas 5.5 hp Tecumseh	1
2	980626	Washer - 1/2 Lock	2	*	53808A	Engine- Gas 5.5 hp Honda	1
3	760842	Bracket - Caster Support Asm.	2	46	215110	Label - Caution, Spanish	1
4	766742	Pin Assembly - Disconnect	2	47	215103	Label - Caution	1
5	769744	Caster - Front Support	2	48	962158	Screw - 5/16 - 18 x 7/8 Hex	4
6	60050A	Cover - Intake	1	*	962324	Screw - 5/16-18 x 1.5 Hx Hd	4
7	762043	Clamp - Rear R.H.	1	49	760660	Bag - Filter Plain	1
8	768542	Scraper - R.H.	1	50	765044	Knob - Throttle Control - Svc. Only	1
9	15711B	Housing Assembly - Intake	1	51	34267A	Gasket - Muffler Mtg. (Honda Only)	1
10	980646	Washer - 1/4"	15	52	215104	Label - Warning	1
11	920180	Nut - Acorn 1/4 - 20	7	53	215106	Label - Warning	1
12	760741	Blade - Door	1	55	62812A	Extension Assembly Honda	1
13	762047	Clamp - Door Blade	1	57	755721	Nipple - 1/4-18 Short	1
14	962483	Screw #10-24 x 5/8	1	58	822806	Elbow - 90° Street	1
15	980982	Washer #10 x 1/2	1	59	170266	Coupling - 1/4 NPT	1
16	763945	Handle - Lower	1	60	ref.	Drain Plug (part of engine)	1
17	768242	Spacer - Handle	1	61	85702A	Screw - 1/4-20 x 1 5/8 Hex St. Cap	2
18	73364A	Label	1	62	85701A	Screw - 1/4-20 x 1 1/2 Hex St. Mach	2
19	920296	Nut - #10-24 Elastic Stop	16	63	764541	Hook - Bag Right	1
20	84808A	Screw #10-24 x 3/4 Rd. Hd.	10	64	766740	Pin - Locking	2
21	962109	Screw #10-24 x 5/8	4	65	920284	Nut - 1/4-20 Stop	4
22	762045	Clamp - R.H. Shield	1	66	763740	Grip - Handle	2
23	762046	Clamp - L.H. Shield	1	67	761340	Brace - Handle	1
24	767841	Shield	2	68	764540	Hook - Bag Left	1
25	768543	Scraper - L.H.	1	69	763940	Handle	2
26	762044	Clamp - Rear L.H.	1	70	763701	Grip - Handle	1
27	930086	Rivet - 3/16 x .450	4	71	761140	Bushing - Handle	1
28	682006	Lid Clamp Assembly	2	72	962009	Screw #10-24 x 1 1/4 Rd St. Mach	1
29	763444	Gasket - Intake Hsg. Flange	1	73	763840	Guide - Handle	1
30	66909A	Retainer Assembly	1	74	763946	Handle - Upper	1
31	66908A	Retainer Assembly	1	75	766744	Pin - Locking	1
32	66907A	Retainer Assembly	1	76		Plate - Serial	1
33	763443	Gasket - Impeller Housing	1	77	930112	Rivet - 1/8 Pop	4
34	930113	Rivet - Pop 1/8	5	78	805160	Label - Inspection	1
35	962241	Screw - #10-24 x 1/2	4	79	763264	Frame Assembly- Small Wheel	1
36	962747	Screw - 3/8-24 x 3/4 Nylok Hex Hd	1	79a	763263	Frame Assembly - Large Wheel	1
*	962867	Screw 7/16 - 20 x 1 Hex Head	1	80	920208	Nut - 1/4-20	8
37	762050	Washer - Clamp Special	1	81	920110	Nut - 5/16-18 Elastic Stop	4
*	980013	Washer - Clamp Honda	1	82	980651	Washer - 5/16 Plain	4
38	35210B	Housing - Impeller	1	83	925006	Pin - 1/8 x 1 1/4 Lg. Cotter	2
39	764842	Impeller Tecumseh	1	84	980679	Washer - 13/16 x 1 1/4 x 1/8 Flat	2
*	764841	Impeller Honda	1	85	768244	Spacer - Wheel	2
40	962593	Screw - 1/4-20 x 3/8 Nylok	1	86	769701	Wheel - Assembly	2
41	962603	Screw - 5/16 - 24 x 1 1/4 Hex.	4	87	194446	Cap Hub w/Retainer	2
42	766664	Plate Assembly - Flange	1	88	765141	Label - Caution	1
43	980652	Washer - 5/16 Standard Lock	4	89	769740	Wheel - Large	2
44	915570	Key - 1/4 x 1/4 x 2 1/4 Square	1	90	761541	Hub - Cap	2

NOTE: □ indicates a change has been made since last publication of this manual.

* Indicates parts that are for the LV 30H (Honda engine) only.

ALTO® PRODUCT SUPPORT BRANCHES

U. S. A. Locations

HEAD OFFICE

ALTO U.S. Inc., St. Louis, Missouri
16253 Swingley Ridge Road, Suite 200
Chesterfield, Missouri 63017-1725

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2100 Highway 265
Springdale, Arkansas 72764
(501) 750-1000

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Technical Service - 1-800-356-7274

ALTO U.S. Inc., Bowling Green, Ohio 43402
1100 Haskins

ALTO U.S. Inc., Clearwater, Florida 33765
1500 N. Belcher Road

SERVICE FACILITIES

ALTO U.S. Inc., Carlstadt, New Jersey 07072
150 Commerce Road
(201) 460-4774

ALTO U.S. Inc., Elk Grove, Illinois 60007
2280 Elmhurst Road
(847) 956-7900

ALTO U.S. Inc., Denver, Colorado 80204
1955 West 13th Ave.
(303) 623-4367

ALTO U.S. Inc., Houston, Texas 77040
7215 North Gessner Road

SALES AND SERVICE FACILITIES

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29815 John R.
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ALTO U.S. Inc., Marietta, Georgia 30062
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CLARKE TECHNOLOGY LIMITED U.S. WARRANTY

This Clarke Technology Industrial/Commercial Product is warranted to be free from defects in materials and workmanship under normal use and service for a period of one year from the date of purchase, when operated and maintained in accordance with Clarke Technology's Maintenance and Operations instructions.

This warranty is extended only to the original purchaser for use of the product. It does not cover normal wear parts such as electrical cable, rubber parts, hoses and motor brushes.

If a difficulty develops with the product, you should:

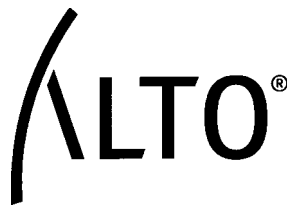
- a) Contact the nearest authorized Clarke Technology repair location or contact the ALTO U.S. Service Operations Department, 2100 Highway 265, Springdale Arkansas 72764, for the nearest authorized Clarke Technology repair location. Only these locations are authorized to make repairs to the product under this warranty.
- b) Return the product to the nearest Clarke Technology repair location. Transportation charges to and from the repair location must be prepaid by the purchaser.
- c) Clarke Technology will repair the product and/or replace any defective parts without charge within a reasonable time after receipt of the product.

Clarke Technology's liability under this warranty is limited to repair of the product and/or replacement of parts and is given to purchaser in lieu of all other remedies, including INCIDENTAL AND CONSEQUENTIAL DAMAGES.

THERE ARE NO EXPRESS WARRANTIES OTHER THAN THOSE SPECIFIED HEREIN. THERE ARE NO WARRANTIES WHICH EXTEND BEYOND THE DESCRIPTION OF THE FACE HEREOF. NO WARRANTIES, INCLUDING BUT NOT LIMITED TO WARRANTY OF MERCHANTABILITY, SHALL BE IMPLIED. A warranty registration card is provided with your Clarke Technology product. Return the card to assist Clarke Technology in providing the performance you expect from your new floor machine.

ALTO U.S. Inc., 2100 Highway 265, Springdale, Arkansas 72764.

**CLARKE TECHNOLOGY reserves the right to make changes or improvements to its machine without notice.
Always use genuine Clarke Technology Parts for repair.**



**CLARKE TECHNOLOGY
2100 Highway 265
Springdale, Arkansas, 72764**