

# PARTS LIST AND INSTRUCTIONS

# REO

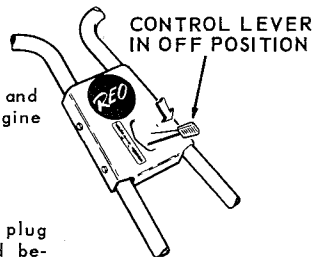
WHEELHORSE PRODUCTS, INC. • SOUTH BEND, IND.

## ROTARY MOWER 421-L & 421-LI

### STARTING

#### SAFETY FIRST

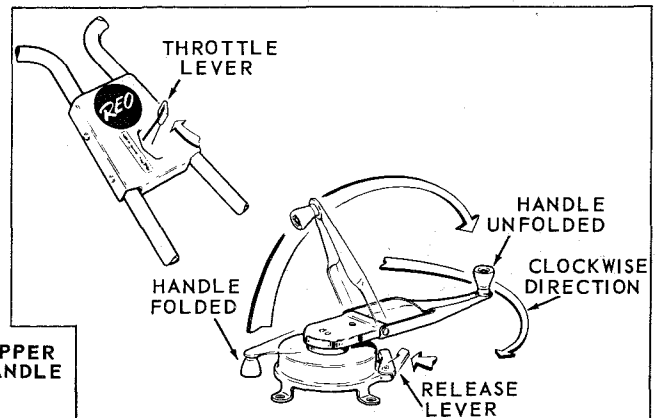
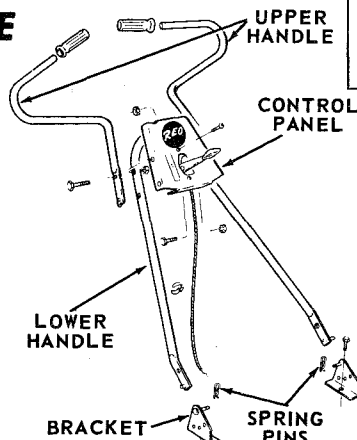
- 1 Avoid accidents by keeping hands and feet clear of blade while starting engine and while engine is running.
- 2 Shut off engine and remove spark plug wire before adding gas or oil and before making adjustments or inspection of any kind.



**WARNING!** BE SURE HANDS AND FEET ARE CLEAR OF THE MOWER BASE BEFORE ATTEMPTING TO START THE ENGINE.

#### ASSEMBLING HANDLE

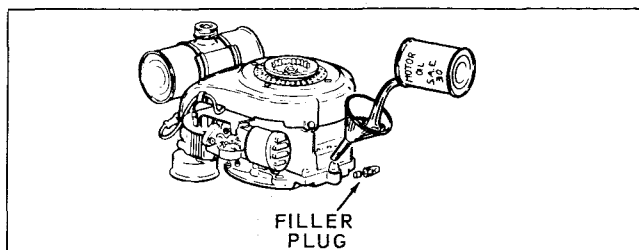
- 1 Assemble lower handle to deck by inserting pins, in handle, thru holes in brackets. The pins in the brackets likewise will assemble in holes in handle. Then secure the handle with spring pins provided.
- 2 Assemble upper handle, Control Panel and lower handle with nuts and bolts provided. See illustration at right.



- 1 Pull throttle lever to "choke" position. For **Impulse Starter**: Standing on left side of mower, push in on release lever, unfold the starter handle and wind-up clockwise about  $3\frac{1}{2}$  turns. Fold handle over and pull out on the release lever. For **Recoil Starter**: Standing at the rear of the mower, grasp the starter handle firmly in your hand and give it a quick pull to complete cord length. Return the Starter handle slowly.

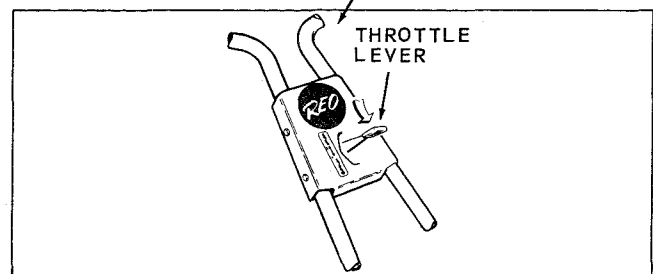
- 2 When engine starts. Push the throttle lever forward approximately halfway or until engine runs about  $\frac{1}{3}$  open throttle.

#### OIL AND GASOLINE

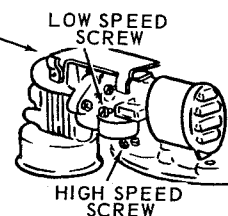


NEVER FILL THE GAS TANK WHILE THE ENGINE IS RUNNING. DO NOT MIX OIL WITH GASOLINE.

- 1 Remove oil filler plug and fill with S.A.E. No. 30 motor oil up to the top of the filler hole. Be sure engine is level when adding oil to avoid over filling.
- 2 Fill the gas tank with clean, fresh, regular gasoline. Premium Grade Ethyl is not recommended.



- 3 If engine fails to start after repeated attempts, turn the low speed screw and high speed screw clockwise until finger tight. Turn high speed screw counter-clockwise about one full turn and low speed screw counter-clockwise about one and one half turns. Repeat starting operation.

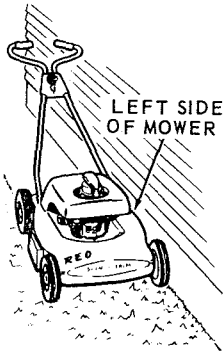


- 4 The first time the engine is started, allow to run at  $\frac{1}{3}$  open throttle for 10 to 15 minutes to thoroughly lubricate all moving parts and bearings.

## TO MOW

**WARNING!** BE SURE LAWN IS CLEAR OF BONES, WIRE, STICKS, STONES OR OTHER OBJECTS WHICH COULD DAMAGE THE CUTTING BLADES.

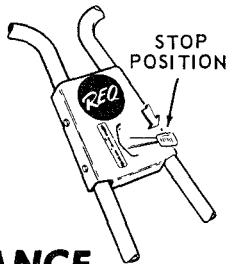
1 Take special care when straddling humps or ridges with your mower.



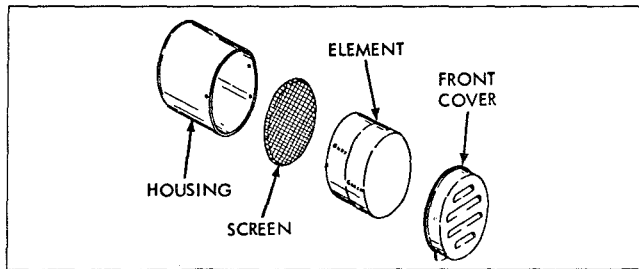
2 Use the left side (the side opposite the chute opening) of your mower when trimming close to buildings, fences, etc.

## TO STOP ENGINE

1 Push forward on throttle lever to the stop position.

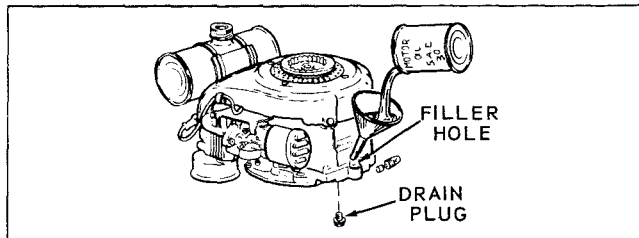


## ROUTINE MAINTENANCE AND ADJUSTMENT



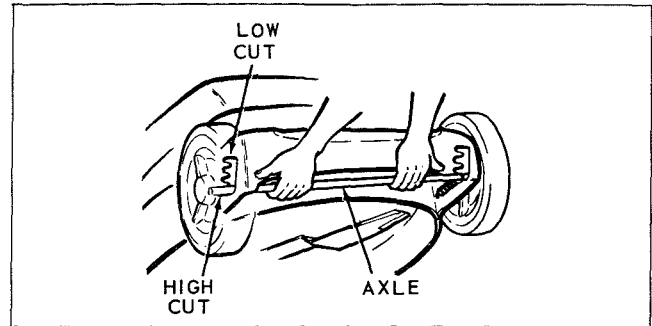
### 1 AIR CLEANER

Polyurethane Type-Serviceable. Clean element every ten (10) hours or oftener if engine runs rich and emits black smoke from the exhaust. Service by removing air cleaner cover. Remove polyurethane element and wash in detergent and water solution by squeezing similar to a sponge. Squeeze out cleaning solution. Re-oil element by applying generous quantity of oil to sides and open ends. Squeeze to distribute oil and to remove excess oil. Reinstall element and air cleaner cover.



2 Drain and refill the crankcase after the first 5 hours of operating. Thereafter, drain and refill after every 25 hours of operating. Refill crankcase with SAE No. 30 Motor Oil. Fill to top of threads in filler hole. Check oil level of the crankcase before each use, (with mower on level ground). **BE SURE DRAIN PLUG IS TIGHT.**

**WARNING!** DO NOT ATTEMPT TO MAKE ANY ADJUSTMENTS OR CLEAN GRASS FROM THE MOWER BASE UNTIL ENGINE IS STOPPED, AND SPARK PLUG WIRE IS REMOVED.



3 To adjust height of cut, grasp the axle firmly in your hands, using the thumbs against the outside of mower base for leverage, pull axle forward and up or down, releasing into the slots for desired setting. Raising the axles will give a lower height of cut. Lowering the axles will give a higher height of cut.

Be sure that all four adjustments be placed in the same position to keep the mower level.

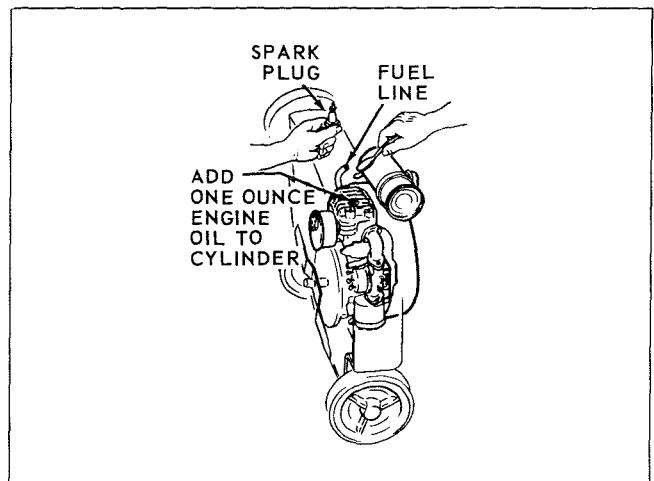
## STORING

When it is necessary to store your mower for a period of 30 days or more:

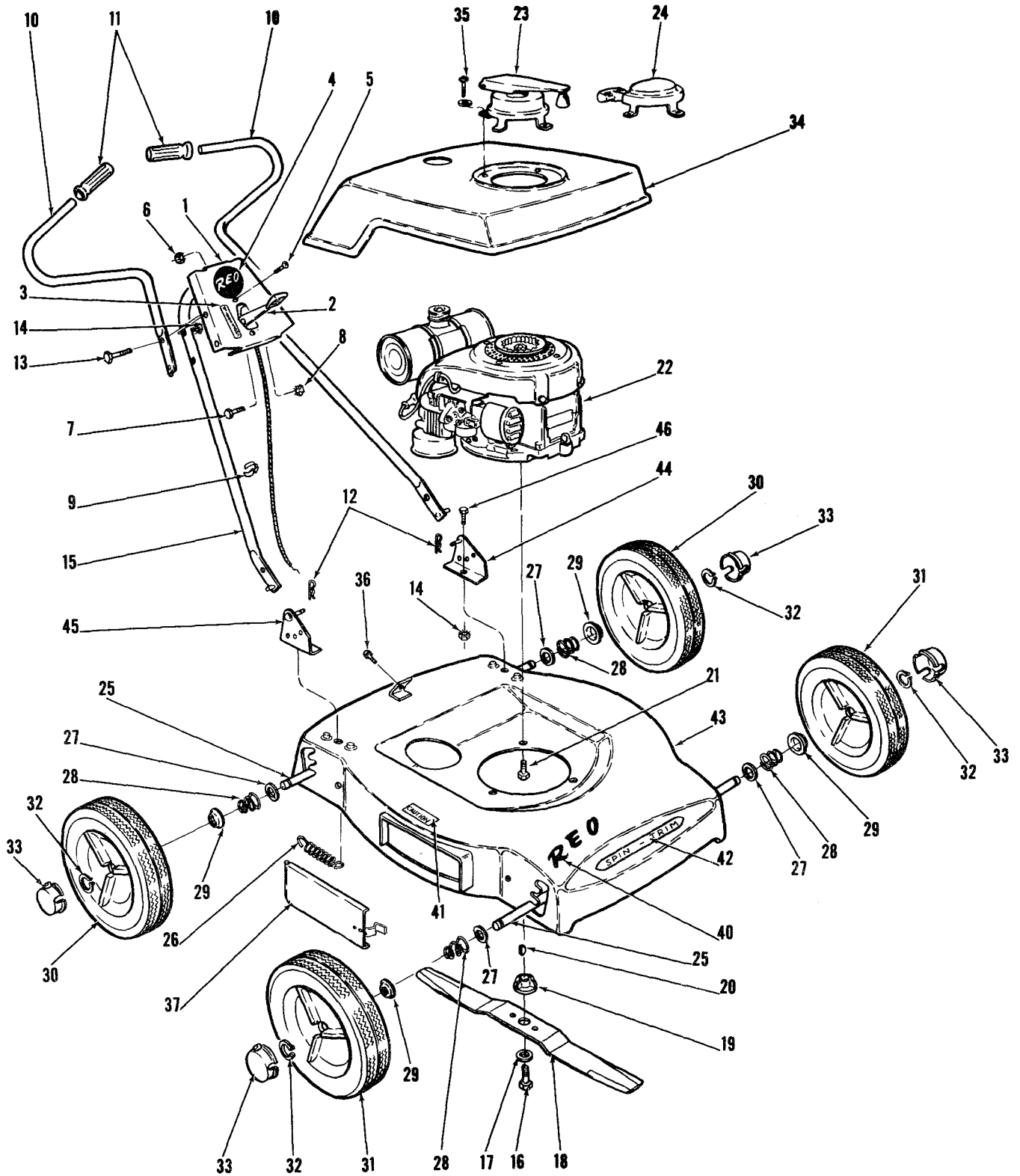
1 Drain gas tank by removing fuel line at the carburetor or fuel tank.

**NOTE**--If carburetor has float bowl, drain by pushing upward on bowl drain.

2 Remove the spark plug and pour approximately one ounce of engine oil into cylinder. Crank engine slowly about 12 revolutions to spread the oil over internal surfaces of the engine and then replace the spark plug. A little chassis grease on the cutting edges of the blade will prevent them from rusting during prolonged storage. Store your mower in a clean dry place, and cover it with canvas or paper to keep off excess dust and dirt.



# REO FOUR CYCLE POWER MOWER MODELS 421-L & 421-LI



SEE PARTS LIST ON REVERSE SIDE

# REO FOUR CYCLE POWER MOWER MODELS 421-L & 421-LI

## PARTS LIST

When ordering parts always list Part No. and name of part.

Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
1	MW-8551	Plate	24	MW-8580	Starter Assy. (421-L Recoil)
2	MW-8677	Throttle Control	25	MW-8641	Axle
3	MW-8621	Decal (Throttle)	26	MW-8402	Spring (Height Adj.)
4	MW-8606	Decal - Reo	27	GM-446485	Washer
4	GM-159908	Screw	28	PT-5148	Spring
6	GM-271166	Nut and Lockwasher	29	MW-5191	Cupwasher
7	GM-9415477	Bolt	30	MW-8661	Wheel (rear)
8	GM-271178	Nut and Lockwasher	31	MW-8662	Wheel (front)
9	MW-4846	Clip	32	MW-4564	Retaining Ring
10	MW-8664	Upper Handle	33	MW-8663	Hub Cap
11	MW-8503	Grip	34	MW-8588	Shroud
12	MW-4893	Spring Pin	35	GM-450986	Screw and Lockwasher
13	GM-122033	Bolt	36	MW-4194	Screw and Lockwasher
14	GM-271184	Nut and Lockwasher	37	MW-8690	Plate-Mulching
15	MW-8555	Lower Handle	40 thru 45	MW-8672	Base Assembly - 421-LI
16	GM-181639	Bolt	40 thru 45	MW-8674	Base Assembly - 421-L
17	MW-4335	Washer	40	MW 8605	Decal - (Reo)
18	MW-7759	Blade	41	MW-8622	Decal - (Caution)
19	MW-7726	Blade Driver	42	MW-8599	Decal - (Model Name)
20	GM-124546	Key	43	use MW-8672	Base
21	MW-4754	Bolt	44	MW-8590	Bracket L.H.
22	MW-8578	Engine Assy. Less Starter	45	MW-8591	Bracket R.H.
23	MW-8581	Starter Assy. (421-LI Impulse)	46	GM-122007	Bolt

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Wheel Horse Service Bulletins 1961 - 1990: **#3** Issued: December 1965

## Engine Cross Reference

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This list provides the engine manufacturers model number for the engine used on Reo equipment. This information will be of assistance to you when ordering engine replacement parts. Models from 1964 through 1966 are included. Reminder: All "Reo Raider" engines with the prefix of M or MW were manufactured by Lauson. Lauson's model number may be located in the "Reo Engine Interchangeable Parts List."

### SNOW THROWERS

Reo Model Numbers	Lauson Model Numbers
415 ST-3	HT22B-3452 & H22-15016
417 ST-3	HTC30B-3434 & H30-35008
420 ST-3	HTR35B-3453 & H35-45005
ST-420	H35-45059E
STE-420	H35-45061E
ST-626 & STE-626	H60-75072B
ST-267	H60-75179E

### MOWERS

418LR, 421LR	H22-15029C
418L	LAV22-10021
421L, 421LI, 421LC	LAV25-20019
421LCP	LAV25-20020A
425L	V40-50030
L-158	LAV25-20098C
LC-521	LAV35-40126C
LCP-521	LAV35-40127C
RR-46 (1965)	V40-50077C
RR-65	V60-70066C
RE-65	V60-70067C
L-618	LAV30-30268E
LC-621	LAV35-40126E
LCP-621	LAV35-40127E
RR-46 (1966)	V40-50077D
RR-66	V60-70066D
RE-66	V60-70067D

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 Wheel Horse Service Bulletins 1961 - 1990: **#301e** Issued: February 1987

**Engine Cross Reference Listing**
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THIS SERVICE BULLETIN SUPERSEDES ALL PREVIOUS

**ENGINE CROSS REFERENCE SERVICE BULLETINS (3, 9, 18, 71, 79, 93, 121, 129, 135, 153, 171, 187, 208, 234, 246, 276, 301, 301A, 301B, 301C, 301D)**

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1977-78	301 A-13 & 14
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1981-82	301A-17,18 & 19
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1984	301C-22
1985	301D-23
1986	301D-24 & 25
1987	301E-26 & 27

**1964 thru 1966 REO PRODUCTS ENGINE CROSS REFERENCE LISTING**

This list provides the engine manufacturers model number for the engine used on Reo equipment. This information will be of assistance to you when ordering engine replacement parts. Models from 1964 through 1966 are included.

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**SNOW THROWERS**

REO MODEL	LAUSON MODEL
415 ST-3	HT22B-3452 & H22-15016
417 ST-3	HTC30B-3434 & H30-35008
420 ST-3	HTR35B-3453 & H35-45005
ST-420	H35-45059E
STE-420	H35-45061E
ST-626 & STE-626	H60-75072B
ST-267	H60-75179E

**MOWERS**

418LR, 421LR	H22-15029C
418L	LAV22-10021
421L, 421L1, 421LC	LAV25-20019
421LCP	LAV25-20020A
425L	V40-50030
L-158	LAV25-20098C
LC-521	LAV35-40126C
LCP-521	LAV35-40127C
RR-46 (1965)	V40-50077C
RR-65	V60-70066C
RE-65	V60-70067C
L-618	LAV30-30268E
LC-621	LAV35-40126E
LCP-621	LAV35-40127E
RR-46 (1966)	V40-50077D
RR-66	V60-70066D
RE-66	V60-70067D

## 1967 REO PRODUCTS ENGINE CROSS REFERENCE LISTING

The information below provides the engine manufacturer's model number for the engine used on 1967 model Reo equipment.

REO MODEL NUMBER	MOWERS	
	POWER PRODUCTS MODEL NUMBER	LAUSON MODEL NUMBER
LS-1827 (Challenger)	AV-52 Type 638-30	
LS-2027 (Challenger II)	AV-52 Type 638-26	
LS-2047 (Challenger IV)		LAV30-30268F
LC-2127 (Custom II)	AV-52 Type 638-26	
LC-2147 (Custom IV)		LAV35-40126F
LCP-2147 (Regal IV)		LAV35-40127F
LL-217 (Royal IV)		H25-25100F
RR-47		V40-50077E
RR-67		V60-70066E
RE-67		V67-0067E

### SNOW THROWERS

ST-420	H35-45059E
STE-420	H35-45061E
ST-268	H60-75179F

## 1968 REO PRODUCTS ENGINE CROSS REFERENCE LISTING

The information below provides the engine manufacturers model number for the engines used on 1968 model Reo equipment.

REO MODEL NUMBER	LAUSON MODEL NUMBER
LCP-2147 Regal IV	LAV 35-40127G
LCP-2147-1 Regal IV	LAV 35-40127G
LC-2147 Custom IV	LAV 35-40126G
LL-217 Reel Royal	H 25-25100F
4-2631 26" Snow Thrower	H 60-75179G
4-2632 26" Trailblazer	H 60-75179G
4-1031 20" Pathfinder	H 35-45176F
2-1231 Lawn Skiff Elec.	V 60-70067G
2-2231 Lawn Skiff Recoil	V 60-70066G

## ENGINE CROSS REFERENCE LISTING FOR 1955 THRU 1966 MODELS

All Wheel Horse Part Numbers are for reference only All engine and engine parts must be ordered from the Engine Manufacturers Sales and Service outlets.

VEHICLE IDENTIFICATION MODEL NUMBER	KOHLER MODEL NUMBER	CLINTON NUMBER MODEL NUMBER	LAUSON MODEL NUMBER
RJ 35, RJ 58, RJ 59	K-90	B1290-1107	
ST 400, 401	K91-31388A	B1290-1107	
ST 550, 551			H55B-1170 H55D-2113
701, 702	K161S-28622E		
32-R, 502			HT55C-3088
32-E, 552			HT55C-3089
33-R, 603			H60-75016
33-E, 653			H60-75009
633	K141T-29102A		
753	K161S-28626E		
953	K241S-40135A		
34-R, 604			H60-75004B
34-E, 654			H60-75063B
704	K161T-28937E		
854, 855, 875	K181S-30108A		
1054, 1054-A	K241S-46215A &		