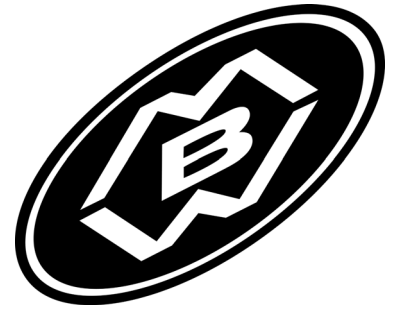


# OPERATOR'S SAFETY AND SERVICE MANUAL



## R442

This manual covers the following serial numbers  
and higher for each model listed:

R442H.....4420784



## SMART RAMMERS

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**WARNING**  
 OPERATION OF THIS EQUIPMENT MAY CREATE SPARKS THAT CAN START FIRES AROUND DRY VEGETATION. A SPARK ARRESTER MAY BE REQUIRED. THE OPERATOR SHOULD CONTACT LOCAL FIRE AGENCIES FOR LAWS OR REGULATIONS RELATING TO FIRE PREVENTION.

19791



21080

**OPERATING INSTRUCTIONS**

1. Check fuel level.
2. Open fuel valve.
3. Set throttle at idle position.
4. Choke engine. A warm engine may not need to be choked.
5. Pull starter rope.
6. After starting, open choke gradually and let engine warm up at idle.
7. To start compacting: open throttle fully.
8. To stop: return throttle to idle and allow engine to run for a few minutes before turning off.
9. Turn engine switch to off and close fuel valve.

14773

**CAUTION**  
 Machine is top heavy and could fall if not lifted from this bar.  
 R422 = 138 lb (63 kg)  
 R442 = 150 lb (68 kg)  
 R482/483 = 177 lb (80 kg)

20258

U.S. PATENT 8,057,125  
 19895

U.S. PATENT 8,202,022  
 20425

**WARNING**  
 Operating, servicing and maintaining this equipment can expose you to chemicals, including engine exhaust, phthalates and lead, which are known to the state of California to cause cancer and birth defects or other reproductive harm. Avoid breathing engine exhaust. Do not operate equipment in confined areas. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)

21820

**R442**

21445



14770

**CAUTION**

- Read Operating Instructions before operating this piece of equipment.
- Keep unauthorized and untrained people away from this equipment.
- ROTATING & MOVING PARTS!** Make sure all guards and safety devices are in place.
- Wear OSHA approved hearing protection, foot protection, eye protection and head protection.
- Avoid breathing dust from operating machine, wear OSHA specified dust mask/respirator.
- SHUT OFF** the motor before servicing or cleaning.
- DO NOT RUN** in an enclosed area. The engine produces carbon monoxide, a **POISONOUS GAS**.

Failure to comply could result in serious bodily injury.

13483

**AIR CLEANER INSTRUCTIONS**  
 CLEAN ELEMENT DAILY. MORE OFTEN UNDER DUSTY CONDITIONS. TAP ELEMENT LIGHTLY ON A FLAT SURFACE. IF DUST DOES NOT DROP OFF EASILY OR IF ELEMENT IS BENT OR CRUSHED... REPLACE IT!  
 WARNING: DO NOT OPERATE ENGINE WITHOUT AIR CLEANER ELEMENT - INTERNAL DAMAGE WILL RESULT!

06079



12500

**REMINDER**  
 CHECK ENGINE OIL DAILY. ENGINE MUST BE LEVEL.

15137

**DA**  
 DANGER PELIGRO  
 Compressed spring could cause severe injury. See manual for disassembly instructions.  
 La resorte comprimida podría causar la herida severa. Consulte el libro para ver el desmontaje correcto.

01326



**UNLEADED GASOLINE**

14781

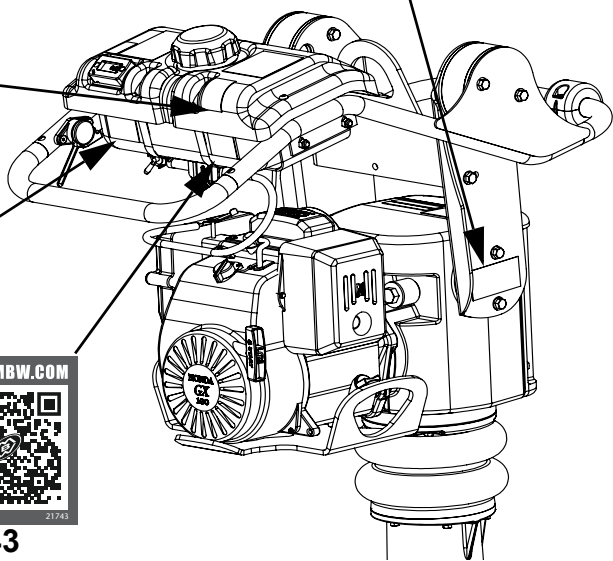
**OPTIMAL OPERATING SPEED**

420-421/422...	3500 RPM
440/442.....	3500 RPM
480-481.....	3200 RPM
482-483.....	3200 RPM

15287

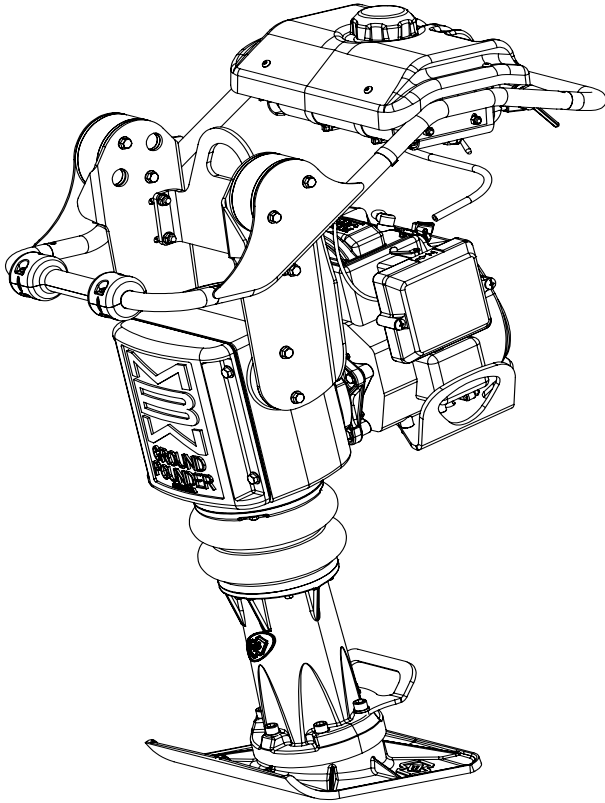


21743

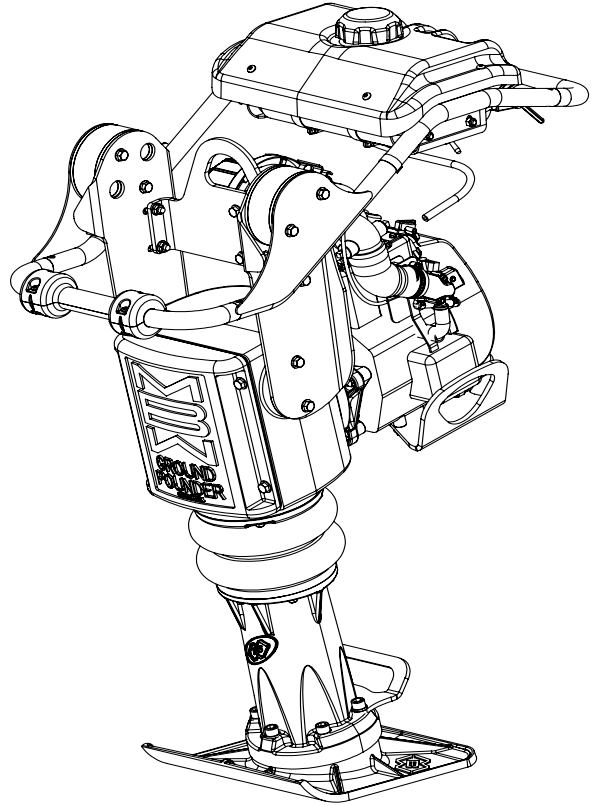


**Safety Decals (Decal Set #17777)**

# SPECIFICATIONS



**442H/442H12**



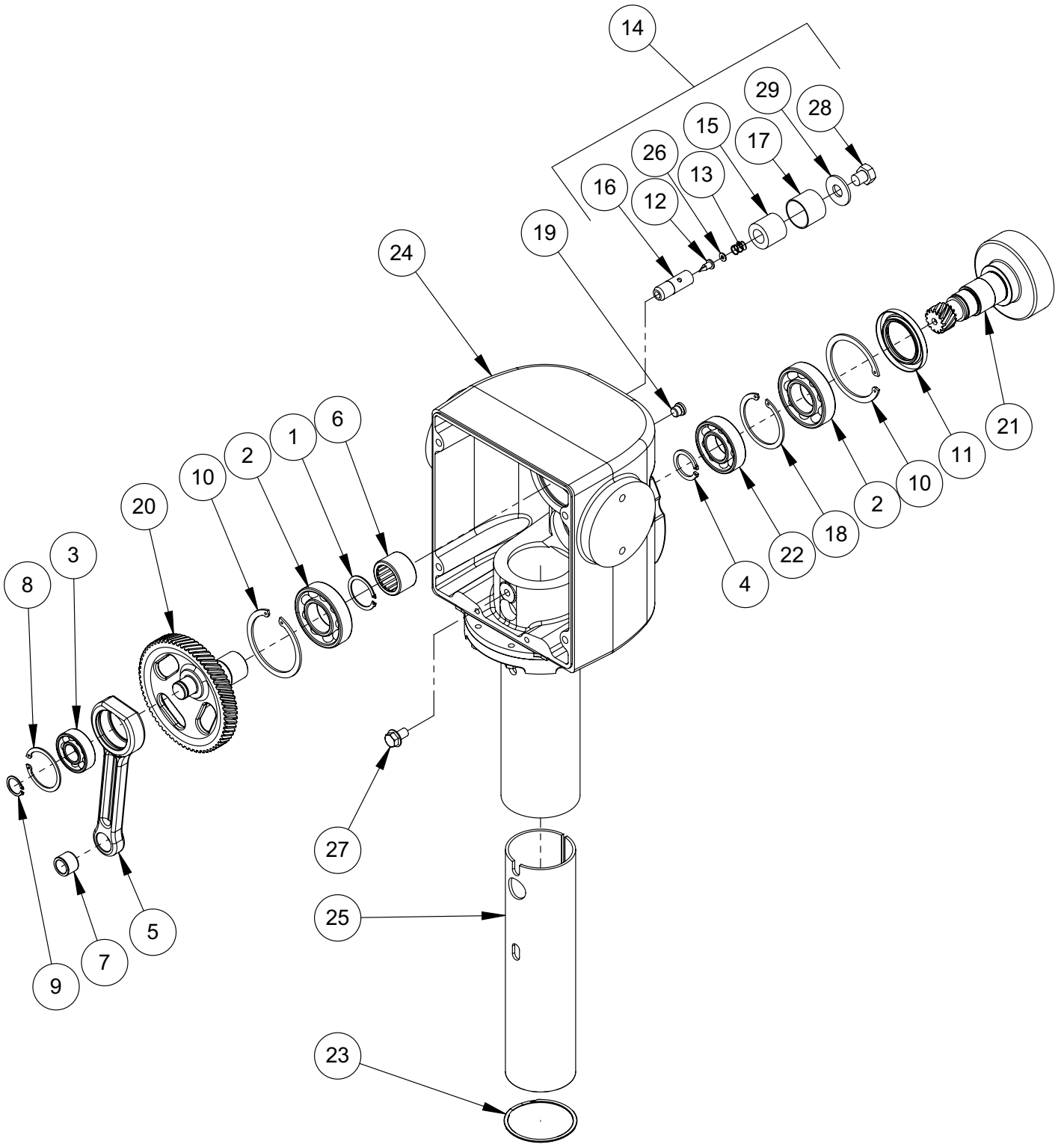
**442HA**

	<b>442H/442H12</b>	<b>442HA</b>
<b>Operating Weight - lbs (kg)</b>	150 (68)	154 (70)
<b>Height - in (cm)</b>	41 (104)	
<b>Width - in (cm)</b>	15 (38)	
<b>Length - in (cm)</b>	29 (74)	
<b>Engine</b>	Honda GX100/GXR120	Honda GX100
<b>Shoe (W x L) in (cm)</b>	11 x 13 (28 x 33)	
<b>Operating Noise Level<sup>1</sup> dBA</b>	93 dBA	
<b>Compaction Force lbf (kN)</b>	3800 (16.9)	
<b>Travel Speed ft/min (m/min)</b>	55 (16.8)	
<b>Compaction Area sq ft/hr (sq m/hr)</b>	3025 (281)	
<b>Percussion Rate blows/min</b>	up to 720	
<b>Engine Speed rpm</b>	3500	
<b>Fuel Capacity - gal (L)</b>	1.1 (4.2)	
<b>Gearbox Oil Capacity ounces (L)</b>	18 (0.5)	
<b>Engine Oil Capacity ounces (L)</b>	9.6 (0.28)	

Specifications subject to change without notice

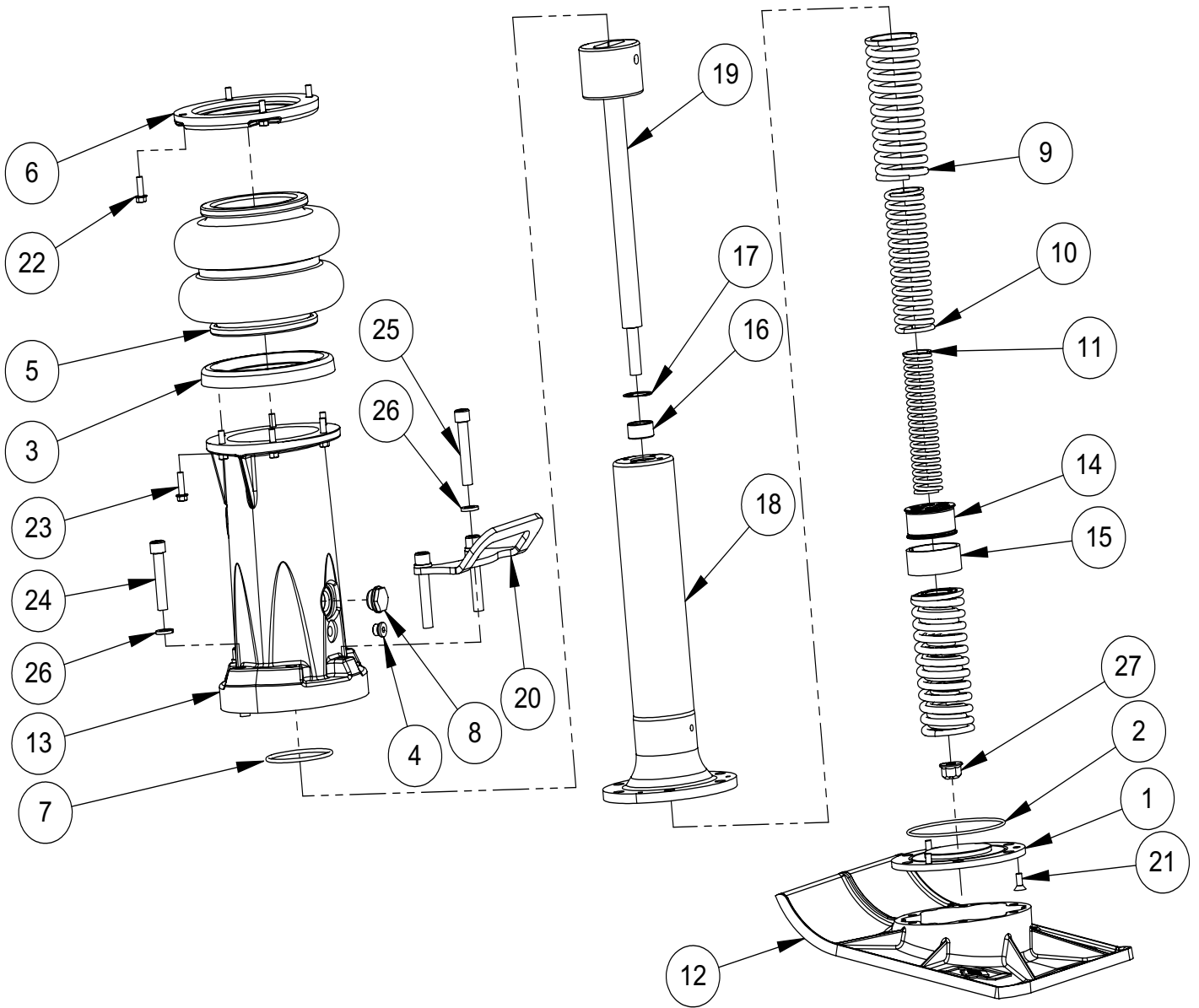
1. Noise levels are taken at the operating position and are based on operating conditions. Background noise will increase noise levels.
2. Noise level is operating on loose gravel surface. Hearing protection may be required.
3. Not all product variations shown.

- No universal method or formula has been accepted for determining "Compaction Force". All manufactures employ their own method or formula.



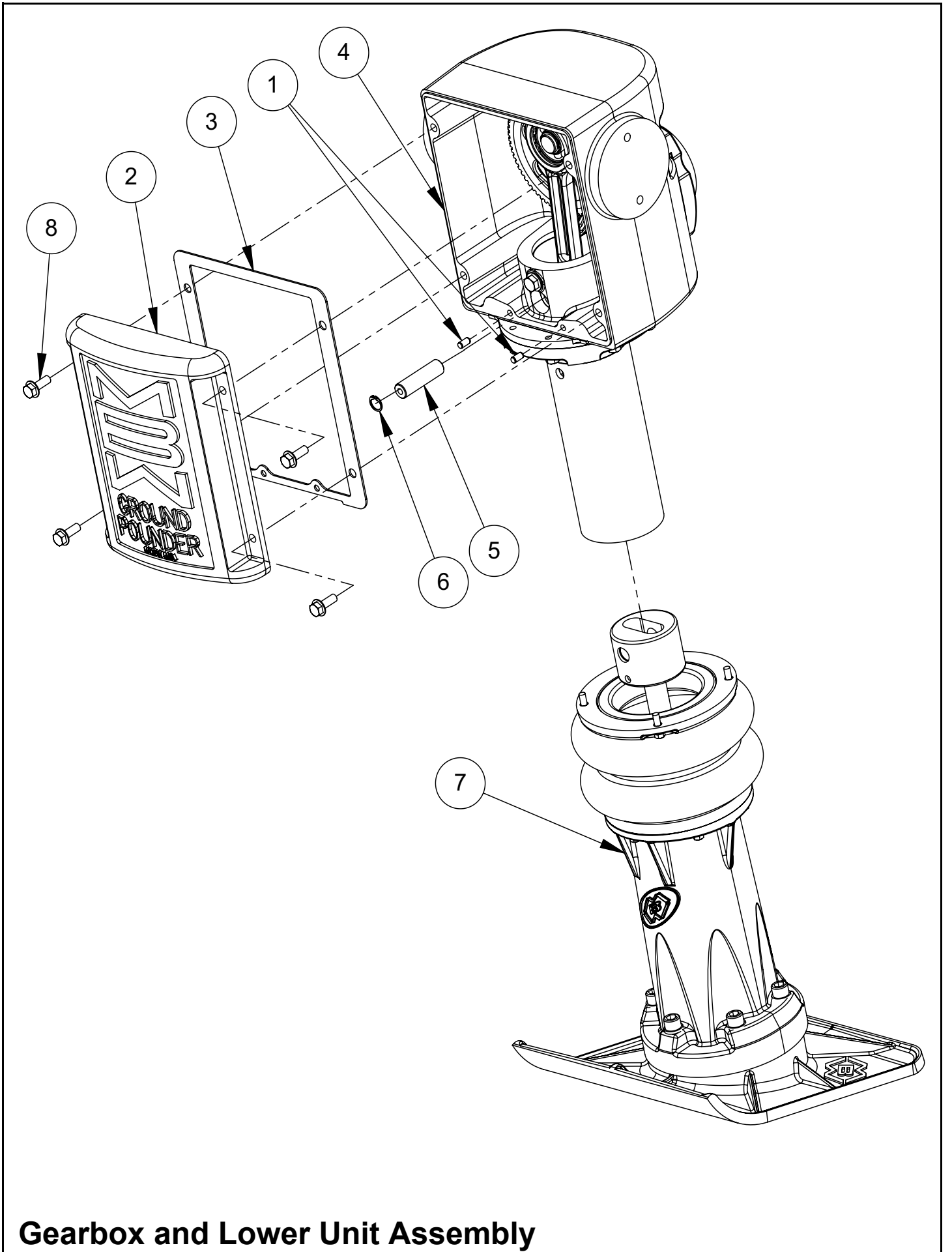
**Gearbox Assembly**





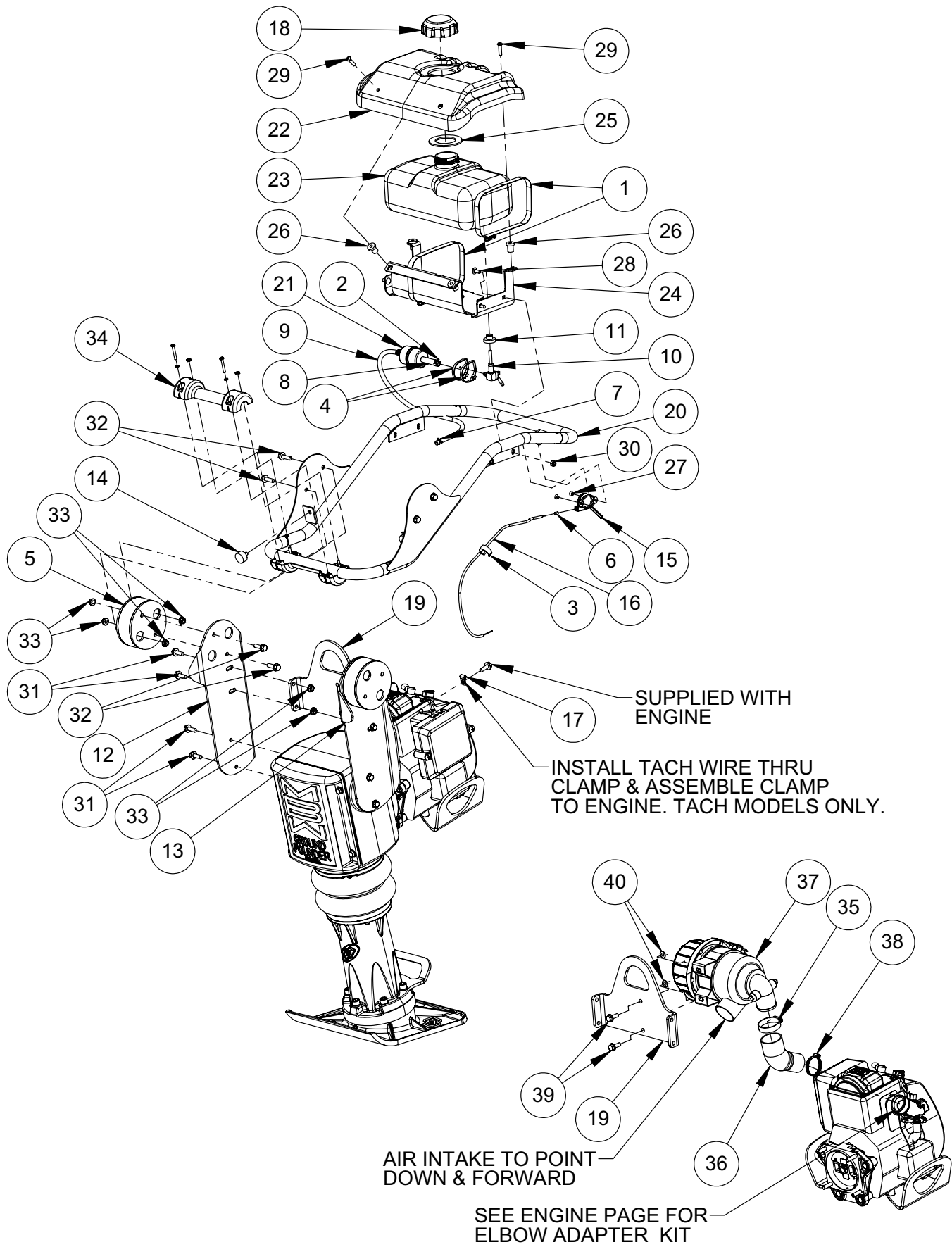
**Lower Unit Assembly**





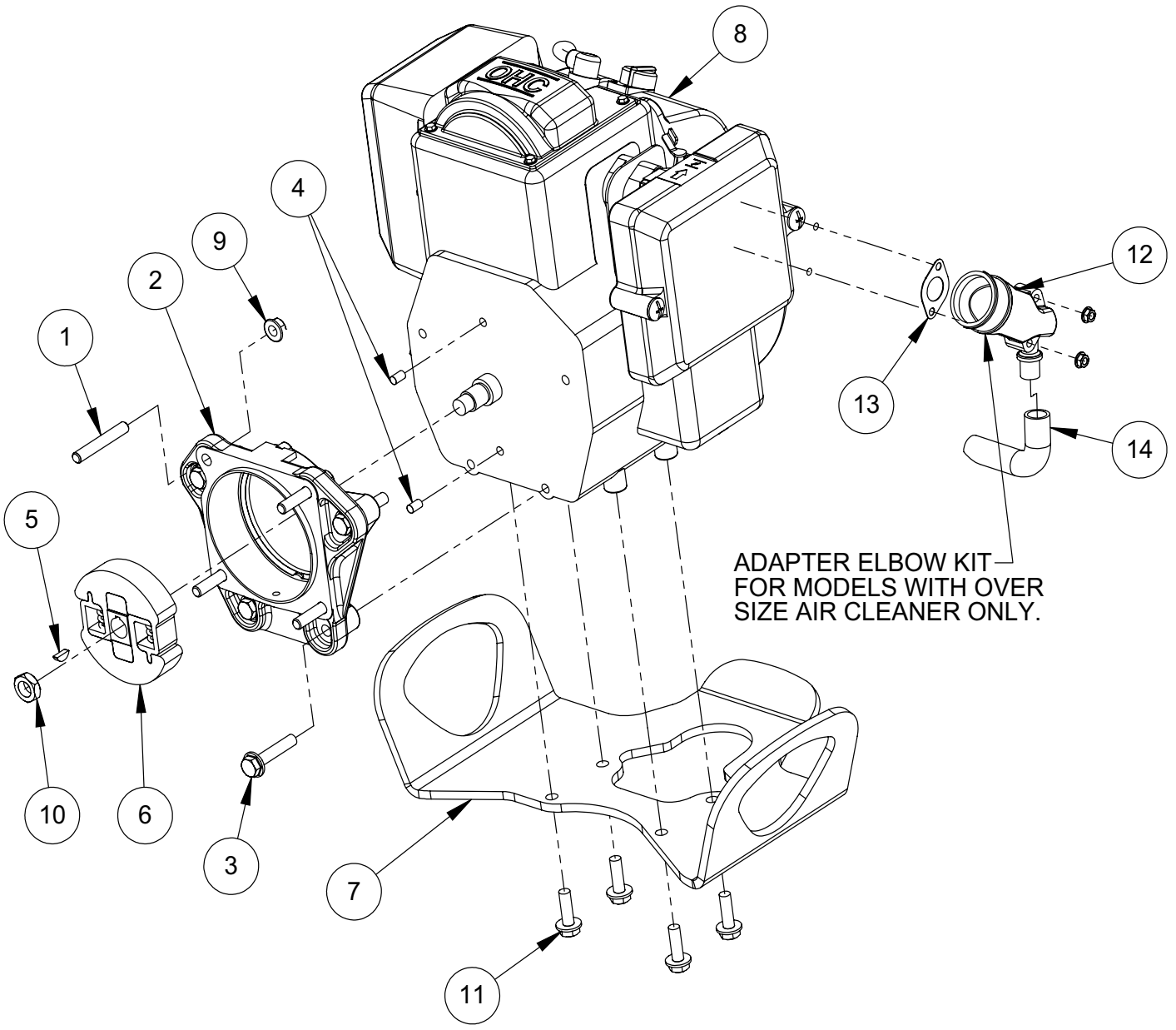
**Gearbox and Lower Unit Assembly**





## Handle Assembly

ITEM	PART NO.	DESCRIPTION	QTY
1.	01026	WORM DRIVE CLAMP	2
2.	01052	CLAMP, 1/4" FUEL HOSE	2
3.	01145	CLAMP, SPRING	1
4.	01291	CABLE TIE, 3/16 X 7-1/2, BLACK	2
5.	07351	TORSION MOUNT	2
6.	07916	FERRULE, THROTTLE LEVER	1
7.	15016	CLAMP, 3/16" FUEL HOSE	2
8.	15183	HOSE, FUEL, 1/4" X 2"LG.	2
9.	20303	HOSE, FUEL, 3/16 I.D. x 20" lg.	1
10.	16414	VALVE, FUEL	1
11.	16586	GROMMET, 1/2"	1
12.	18510	HANDLE SUPPORT, RIGHT	1
13.	18511	HANDLE SUPPORT, LEFT	1
14.	18515	SNUBBER	2
15.	18742	THROTTLE, RATCHET, FLANGE MOUNT	1
16.	19899	CABLE, THROTTLE	1
17.	14946	CLAMP, TACH WIRE	1
18.	20476	CAP, 2-1/4", EPA	1
19.	20713	BRACKET, LIFTING	1
20.	20719	HANDLE, COATED	1
21.	18883	HANDLE, COATED (For serial number 4420599 and lower)	
	21700	FUEL FILTER, IN-LINE	1
22.	21840	SHROUD, RAMMER HANDLE	1
23.	21842	FUEL TANK, ONE GALLON, EPA	1
24.	21844	MOUNTING BRACKET, FUEL TANKS	1
	21875	KIT, FUEL TANK UPDATE (For serial number #4220xxx and lower)	
25.	21847	GASKET, FUEL TANK	1
26.	21848	WELLNUT, 1/4-20	4
27.	F032402FSS	FLAT HEAD SOCKET SCREW, 10-24 X 1/4" ZP	2
28.	F042005CB	CARRIAGE BOLT, 1/4-20 X 5/8 LG.	4
29.	F042008BCS	BUTTON HEAD SCREW, 1/4-20 X 1.0	4
30.	F04ELN	NYLON LOCK NUT, 1/4-20	4
31.	F051807FWS	FLANGE SCREW, 5/16"-18 x 7/8"	8
32.	F051808FWS	FLANGE SCREW, 5/16"-18 x 1" ZP	8
33.	F0518FN	NUT, FLANGE 5/16"-18 ZP	16
34.	20549	KIT, HANDLE ROLLER	1
		<b>AIR CLEANER COMPONENTS, FOR "HA" MODELS ONLY</b>	1
35.	09215	CLAMP, ADAPTER TUBE, AIR CLEANER	1
36.	20544	ADAPTER TUBE, AIR CLEANER	1
37.	20714	AIR CLEANER	1
38.	20716	CLAMP, WORM DRIVE	2
39.	F051807FWS	FLANGE SCREW, 5/16"-18 x 7/8"	2
40.	F0518FN	NUT, FLANGE 5/16"-18 ZP	2
	20715	REPLACEMENT AIR FILTER (NOT SHOWN)	
	20718	EJECTOR BOOT, AIR CLEANER HOUSING (NOT SHOWN)	
		OPTIONAL ACCESSORIES	
	20305	KIT, FUEL HOSE ASSEMBLY (Includes items #2, 7, 8, 9 & 21)	



# Engine Assembly

