TROUBLESHOOTING & SPECIFICATIONS

OWNERS PLEASE NOTE: In the following portion of this manual on "Troubleshooting," please refer to the HORSE MODEL MASTER PARTS CATALOG for location and identification of tiller parts named in the solution to specific problems. You should have received the MASTER PARTS CATALOG along with this OWNER'S MANUAL when your tiller was delivered. The page numbers given below pertain to those in the OWNER'S MANUAL.

TROUBLESHOOTING: TILLER

PROBLEM	WHAT TO DO & REFERENCE
1. Forward/Reverse Lever:	
Jumps Out of "Gear"	• Belts may be too tight—raise belt adjusting block a little, see page 102. • Clutch spring, part #1122, might be over-stretched, replace if needed—see page 102.
Hard To Get Into Reverse	•Check reverse disc for excessive wear, part #1072. Replace disc if badly worn or chipped—see pages 104 105 and 106. • Check adjustment of reverse spring and plunger, part #1036 and #1035, see page 102. • Grease motor mount bars, part #1034, and belt adjustment block, part # 1133. Oil linkages for Forward/ Reverse Lever. • Make sure lower pulley is oiled and slides back and forth on drive shaft freely. • Forward/Reverse lever may be hitting handlebars. • Adjust reverse adjustment bolt, see page 102 • Grease motor mount bars, and #1133 block. Oil Forward/Reverse Lever linkages.
Reverse Very Noisy	• Check for chipped or worn reverse disc. • Check disc alignment. See page 103 about adjustment.
Reverse Remains Engaged When Lever Is Released	•Adjust reverse adjustment bolt, see page 102. •Grease motor mount bars and oil clutch lever linkages.
Locks In Forward Position	• Make sure you have grease on #1133 block and the #1034 mount bars. • Check position that the clutch roller takes on adjustment block -see page 122. If roller locks under the bottom edge of block in Forward, you may have to bend the mounting bracket for the #1133 adjustment block a fraction of an inch toward the engine. See page 122, Photos 7/65 & 7/66 and Sketch 7/67 for method of adjusting angle of bracket.

PROBLEM	WHAT TO DO & REFERENCE
2. Wheel Speed Shift Lever	
Drops Out of High Speed	•Tighten locknut, part #9806, on pivot point of lever.
Hard To Shift Wheel Speeds	• Loosen locknut on pivot point of Wheel Speed Shift Lever, see page 92. Oil shift lever linkage and hole in pivot point.
	• Check for rust on eccentric shaft (external portion). Oil and work back and forth by hand.
Very Hard To Shift or Stuck in High or Low Gear	• Possible binding clutch (spool), part #1237. Disconnect speed shift linkage; work eccentric lever by hand. If problem continues it might be necessary to replace the wheel shaft. The shaft could be swollen around the key—preventing you from shifting.
	• Oil shift lever linkage and hole in pivot point. (See Photo 7/2).
Lever Can't Shift Into Low, But Will Go Into High Gear	• Connecting rod, part #1231, at bottom of Wheel Speed Shift linkage might be backwards, or bent in toward transmission and hitting it. Other linkage might be bent inward. Straighten out.
Lever Will Shift Into High or Low Gear, But Won't Stay Engaged	• Eccentric drive pin may be broken or worn (on well-used tillers). Replace pin. (Contact Customer Service Representative for instructions.)
Can't Shift Out of High or Low Gear —Tiller Runs at Only One Speed	• Oil Shift lever linkage and hole in pivot point. (See Photo 7/2).
	• Possible broken eccentric drive pin inside transmission. Remove tiller top cover, drain ½ gear oil out, look for drive pin on clutch. If it is missing, replacement is necessary. Please send for installation instructions.
	• Possible broken eccentric inside transmission. If this is the case, replace it.
Moves Freely Back and Forth but Can't Move Tiller Under Power At All	• Possible broken eccentric shaft inside transmission. Disconnect eccentric lever from shift linkage and try moving by hand. Easily moving eccentric lever, without rolling tiller a few inches to lock lugs in gear, indicates probable broken eccentric. Send for eccentric replacement instructions.
	• Make sure lever is not too loose. Check locknut for tightness. See page 92.
	• Possible broken eccentric drive pin. Replace shoe. Send for installation instructions.
3. Tiller Starts Into Motion By Itself	• On very new tillers, give them 1 hour of operation to break-in. Problem should disappear.
(tines out of ground)	•Adjust belt tension by raising #1133 belt adjustment block up a little to loosen belt tension slightly.
4. Shift Forward/Reverse Lever into Forward or Reverse, Tines or Wheels won't Turn	•Check operation of tiller control, Section 2.
	•Possible missing key, part #9303, in engine pulley, part #1007-1, or key, part #9302, on transmission drive pulley, part #1008-1. See page 106 to remove engine pulley and page 132 to remove lower pulley.

PROBLEM	WHAT TO DO & REFERENCE
5. Tines Will Turn, But Wheels Won't Turn (Speed Shift Lever Goes Into Either Gear)	• (For assembled drive shaft only.) Key, part #9301, possible missing from front worm, part #1220. Remove top transmission cover and check front worm. If you can turn worm alone by hand key is missing. • (For welded and assembled drive shafts)—possible Hi-Pro key, part #9305, out of wheel shaft. Drain ½ gear oil out to make the check. Remove top cover from transmission and spin the #1237 clutch spool. If it spins freely, the key is missing. Request wheel shaft removal instructions and install a new #9305 Hi-Pro key.
6. Wheels Turn, But Tines Won't	•Possible missing keys at either rear worm, part #1063 (assembled shaft only), bronze tiller worm gear, or tiller shaft (part #1026). Before proceeding further, tilt the tiller up on its engine, and put the Forward/Reverse Lever in Forward and the Wheel Speed Shift Lever either in High or Low. Try to rotate tines by hand. A key is missing if you can rotate them •To check keys on tiller shaft, remove tines and look for missing keys. •To check an assembled shaft for a missing rear worm key, remove the side cover and rotate the tiller shaft with a hand on each side of the shaft. If the gear and worm turn, but the transmission pulley does not, then worm key, part #9301, is missing (all controls in Neutral). •To check for missing key in bronze tiller worm gear, the tiller shaft assembly will have to be removed from the tiller housing. See "tiller shaft removal" in Section 8.
7. Wheels and Tines Turn on Top of Ground, But Stop or Hesitate in Soil.	•Possible missing key in lower pulley, part #1008-1. (Front end quite noisy, belts might overheat). •Belts possibly loose and needs adjusting. (Noise not a factor.)
8. Tiller Jumps during Tilling	•Depth Regulator set too deep for soil conditions. •Throttle speed too high. •Shift to low wheel speed.
9. Engine Runs Well with no Load, But Labors when Tilling	•Possible worn bronze worm gear, part #1064, and loose drive shaft and bearing (on well used tiller). •Tilling depth possibly too deep, lower adjustment bar. •Check engine governor linkage for freedom of movement. •Check throttle setting and carburetor adjustment.
10. Depth Regulator Hard To Move Up or Down	•Lubricate its spring and plunger and depth adjustment bar. •Check for bent depth adjustment bar.
11. Can't Turn Lever To Lower Handlebar	•Loosen stud and lubricate stud threads and nut. Check both for stripped threads.
12. Wheel and Axle Move Out To One Side.	•Snap ring is out of its groove in wheel shaft, part #1235. Check for play in axle. Wheel bushing should be flush with casting. Shim bushing to remove play before replacing snap ring. Leave very little play in shaft. Shim and replace oil seal.

PROBLEM	WHAT TO DO & REFERENCE
13. After Replacing Bolo Tines, Tine Stud Breaks or Holders Loosen	•Make sure that keys are in the **keyways**. Without key in holder, left tine stud will tighten and break. Right holder will loosen.
14. Cultivating Tines Break With First Use	•It might be that inside tine holders on left and right side were put on wrong side. Cutting edge of tine must face forward and strike the ground first. Tip follows edge into ground. See page 143.
15. Tines Rattle	•Even though bolts are tight, tines may rattle and make noise. This is due to shrinkage of casting of holder. No correction is necessary. Just make sure that tines don't hit transmission tube or hood. Sometimes an extra washer under tine clip will quiet it down.
16. After Belt Adjustment Block Is Replaced, Forward/Neutral/ Reverse Lever Locks In Forward	• Check to make sure that block was not installed upside down or backwards. Indentation on #1133 adjustment block should be at bottom of block as it is installed.
17. Tiller Pulls to Right or Left	•Equalize tire pressure.
18. Traction is Poor While Tilling, Using Dozer/Snow Blade or Furrower	•Use tire chains or Bar Tread tires.
19. Oil Leaks	
From Wheel Axle	•Give seals time to lap in. • Replace worn or damaged seals.
From Left Side of Tiller Housing	•Check for loose cover. Make sure screw threads have Permatex on them. Replace seal if bad; see page 127.
From Right Side of Tiller Housing	• Replace seal if bad; see page 127.
From End Cap	• Remove hood bracket and check end cap screws to make sure there is sealant on threads. If end cap screws were tight, remove cap (replace gasket) and check main drive shaft end play—see page 129. Shim drive shaft. Permatex threads of screws.
From Handlebar Base or Bottom Of Reverse Spring & Plunger	•Check oil level to be sure it is not overfull. These spots act as oil relief points. No further action necessary.
Under Front of Tiller Transmission	•Check to make sure engine oil isn't dripping from air cleaner or engine base and traveling along yoke to tiller transmission. Make sure oil doesn't come from reverse spring and plunger and run down front of transmission. (Look for it in bottom of engine mount, part #1002.) •Check seal in front tiller cap and gasket, part #1124. •Check engine seal on Power Take Off (PTO) shaft. •*NOTE:* Oil can't leak from threaded hole at bottom of transmission with plastic cap in it. That hole doesn't go through transmission case. It is for mounting of lower part of Dozer/Snow Blade attachment bracket.

PROBLEM	WHAT TO DO & REFERENCE
19. Oil Leaks (continued)	
At Back of Tiller Transmission Case	•Check "O" rings at eccentric shaft, part #1027.
From One of Three Pipe Plugs In Transmission Case	•Tighten plugs; make sure the threads are coated with Permatex.
Between Transmission Cover and Case	•Tighten cover bolts. •Replace cover gaskets if leaking.
20. Hard to Shift Forward/Neutral/ Reverse Lever Into Forward	•Check motor mount bars for lubrication. Check for bent bar, binding in hole. Lubricate belt adjustment block, the clutch roller and linkage.

TROUBLESHOOTING: ENGINE

PROBLEM	WHAT TO DO & REFERENCE
1. Engine Lacks Power	•Adjust power adjustment screw, see page 114, Section 7. •Dirt or water in fuel or fuel system. •Low engine compression. (See Low Engine Compression below.) •Power adjustment screw might not have been correct for your altitude—it could cause a loss of up to 2 horse power if not properly adjusted. •Tecumseh 6 H.P.—make sure engine isn't running with choke partially engaged. •All engines—throttle cable clamp on engine could be loose, or maladjusted. See page 107, Section 7. •Spark plug—dirty, or wet with oil. •Engine crankcase low in oil. •Engine crankcase has too much oil. •Crankcase breather oil—return hole clogged. •Engine overheating—check oil level, clean cooling fins, check fly wheel (blower). Oil may be dirty. Allow hot engine to cool down before restarting. •Engine under excessive work load.
2. Engine Hard Starting	•Air cleaner restricted with dirt and/or oil. •Spark plug worn or fouled (weak spark). •Breaker points worn, pitted or improperly adjusted. See Service Dealer (for engines under warranty). Adjust or replace points. •Dirt or water in fuel system. •Fuel line restricted. •Low engine compression—see Low Engine Compression below. •Throttle cable and wire may not be properly adjusted. See page 107, Section 7. •Choke not functioning—see page 42.

PROBLEM	WHAT TO DO & REFERENCE
	•Throttle wire and linkage binding, or bent and not free to move. See Photo 7/54. •Remote throttle lever not free to move full distance.
3. Engine Won't Start	•Tiller controls not in *NEUTRAL.* •Fuel tank empty. •Fuel line restricted or clogged, or valve turned off. •Choke not functioning properly, see page 42.
	•Water or dirt in fuel, and/or fuel system. Drain some fuel from bowl. •Spark plug fouled or worn, see page 119. •Carburetor power adjustment screw not set properly—see page 114. •Air filter clogged with oil or dirt.
	•Engine stop switch shorting out ignition system. For 6 H.P. Tecumseh, see page 119, Section 7. •Faulty coil or condenser—check spark plug for bright spark, see page 119, Section 7. •Breaker points out of adjustment, or pitted and worn. See service dealer for engines under warranty. External breaker assembly cover on Kohler can be removed to service points. Write to us for tune-up instructions for your engine.
	•Electrical connections (6 H.P. Electric) loose or shorted against metal frames, brackets or covers. •Battery discharged (6 H.P. Electric). •Electric starter motor faulty (6 H.P. Electric). •Carburetor float faulty (or float valve leaking—if so, tap side of bowl with handle of screwdriver). See engine serviceman if it doesn't stop. •Stale fuel—won't vaporize properly, gums up carburetor float, channels and valves. Drain and add new fuel. •Ignition timed incorrectly.
4. Engine Idles Too Fast	•Adjust idle speed set screw. See page 114, Section 7. •Check throttle cable adjustment. See page 107, Section 7. •Check all throttle linkage for freedom of motion.
5. Engine Won't Idle at All	•Check idle speed screw. See page 114, Section 7. •Adjust idle speed adjustment needle while engine is at lowest throttle setting. See page 114, Section 7. (Recheck power adjustment screw setting after you achieve proper idling.)
6. Engine Has Slow Recovery After Abruptly Moving Throttle From Idle To High Speed	•Open up idle adjustment needle (clockwise). See page 115, Section 7. •Condenser may be defective or weak.
7. Engine Stalls Out (Without Load)	•Cold engine, allow few minutes warm up time before moving tiller. •Open vent hole in fuel cap with a fine wire. •Fuel line blocked.

PROBLEM	WHAT TO DO & REFERENCE
7. Engine Stalls Out (Without Load) (continued)	•Carburetor—Power adjustment screw and/or idle adjustment needle—improperly set. •Loose ignition system connections. •Faulty condenser. •Check with authorized engine service dealer.
8. Engine Overheats	•Clean engine cooling fins and engine shroud and covers. •Check for fly wheel fins broken off (under engine shroud). •Check oil level for too much or insufficient oil. •Ignition timing improperly set.
9. Engine Blows Black Smoke	•Power adjustment screw set too rich. Lean out. See page 114, Section 7.
10. Low Compression	•Pull recoil starter rope a few inches until you feel resistance. •Blown head gasket, or loose head bolts—check two bolts nearest muffler first. •Valve stuck open, no real compression. •Excessive piston ring wear.
11. Engine Backfires	•Mixture too lean, adjust carburetor power adjustment screw. See page 114, Section 7. •Loose cylinder head, or head gasket leak. •On 6HP engine ignition timing set improperly. Send for tuneup kit instructions. •Loose carburetor or intake adapter plate. •Possible weak or defective condenser.
12. Engine Runs Erratically	•Water or dirt in gasoline or carburetor. •Carburetor adjustments not set properly. •Spark plug fouled or dirty. •Loose carburetor. •Hole plugged up in fuel cap. •Governor linkage not adjusted properly, or binding. Have serviceman check it. •Governor not functioning properly. •Condenser possibly weak or defective.
13. Engine Consumes Excessive Amounts of Oil	•Oil or dirt clogged crankcase breather assembly (indicated by oil dripping from air cleaner after engine shutdown). Clean drain holes in breather. •Breather assembly put in upside down(drain holes must be on bottom). • Piston rings worn, broken or not installed properly—allowing oil to pass (noted by blue or white smoke). •Check pan gasket, engine seals and drain plugs for leaks.
14. Electric Starter Motor Won't Turn Engine Over	•Check battery charge. Start engine with recoil start and run for 1 hour, then recheck electric start. •Check mounting bolts of starter motor for looseness. •Have serviceman check starter motor pinion gear and spring, and starter pinion alignment with engine ring gear. •Check battery terminals for corrosion.

PROBLEM	WHAT TO DO & REFERENCE
15. Engine Won't Recharge Battery	• Fuse on recharging line blown out. • Battery won't take a charge. • Diode might be defective. • Battery recharging wire loose or broken.
16. Battery Gets Hot And/Or Foams	• Battery acid level low—refill with distilled water. See top of page 25 for minimum specific gravity of acid in battery. • Battery acid level too high (foams).
17. Turn Key Switch And Nothing Happens	• Discharged battery. Check acid level and recharge battery. • Short in Key Switch, or Key Switch wires. See page 117, Section 7. • Defective solenoid. See pages 117 and 118, Photo 7/61. • Bad starter or short in fields of armature.
18. Fuse on Rectifier Keeps Burning Out	• Look for loose wires, or wires touching metal. • Short in fields of starter. • Positive and negative battery cables reverse (fuse blows immediately).
19. Engine Runs Well, But Labors under Tiller Load	• Check for worn bronze tiller worm gear inside tiller housing and loose driveshaft and bearing. • Check governor linkage for freedom of movement. • Check throttle setting and carburetor adjustment. • Tilling depth possibly too deep, lower adjustment bar.

Circle Your Engine Model & Specification Numbers Below

6 HP Tecumseh: HH60	Recoil start-105106F, or 105101F. Electric start-105107F, or 105103F.
7 HP Kohler: K161T	Recoil start, 281271 I, or 281181 J

Please see page 48 for assistance in locating your **engine model** and specification numbers. To locate your Troy-Bilt Horse Model **Tiller serial number,** see page 2.

HANDY TOOLS TO HAVE

Two	9/16" Wrenches
Two	1/2" Wrenches
Two	7/16" Wrenches (at least one open end)
One	3/8" Wrench
One	Rubber Mallet
One	Hammer
One	Screwdriver
One	Phillips Screwdriver
One	3/16" Socket Head (Allen) Wrench
One	5/32" Socket Head (Allen) Wrench
One	Pair of Pliers
One	Pair of Vise-Gripping Pliers
One	1/4" Drift Pin
One	Ice Pick, Awl, or Cold Chisel (Oil seal removal)
One	Spark Plug Removal Socket (Wrench)
One	Snap Ring Pliers
	Oil Can
	Light General Purpose Grease

HORSE MODEL TROY-BILT TILLER SPECIFICATIONS:

HORSEPOWER: 6 H.P. Tecumseh-Lauson, Cast Iron Block Engine, with Recoil Starting. **6 H.P. Tecumseh-Lauson.** Cast Iron Block Engine with 12-volt Battery Electric Starting (Automatic Recharging During Tiller Operation). **7 H.P. Kohler,** Cast Iron Block Engine, Industrially Rated, with recoil starting and Automatic Compression Release.

SPEEDS: When the engine is operating at 3,000 RPM (revolutions per minute), the machine ground speed and tiller tine speed are:

	LOW GEAR	HIGH GEAR
Ground Speed:	.5 MPH (45 ft./min.)	1.2 MPH (104 ft./min.)
Tiller Tine Speed:	146 RPM	146 RPM

HEIGHT: Can be varied for easier loading into a station wagon or car trunk by turning down handlebars, having Forward/Neutral/Reverse Lever disconnected, depth regulator adjusted all the way up or down, and depth drag bar propped up to lower engine; range from 32″ to any height suitable for operator. Without handlebars or Forward/Neutral/Reverse Lever — 32″, in normal position (with tines off the ground).

LENGTH: 66″ with handlebars. • 51″ without handlebars.

WIDTH: 23″ from hoodside to hoodside. • 20″ tilling width.

WEIGHT: With 6 H.P. engine—268 lbs. • With 6 H.P. engine and battery electric starting system—294 lbs. • With 7 H.P. engine—286 lbs.

• For shipping weight, add weight of shipping container—original corrugated fiber box is 40 lbs., wooden crate is 80-90 lbs.

BEARINGS: Tapered roller bearings: main drive shaft, front and rear; tiller shaft. • Ball bearings: pinion shaft. • Bronze bushings: wheel shaft.

TRANSMISSION: Worm gear driven. **Bronze worm gears** that drive wheel shaft and tiller shaft are themselves driven by **steel worms.** Heavy duty spur gears provide final reduction to wheels.

• Entire power drive assembly operates in a bath of oil. Power is transmitted from engine pulley, by a pair of durable matched belts, to transmission pulley, thereby turning the main drive shaft — providing power to wheels and tiller tines. Instant selection of two forward and two reverse speeds is made from the operator's position.

• Wheel Speed Shift Lever and linkage is used to shift clutch into **LOW, FREE WHEELING,** or **HIGH.** Sliding clutch engages proper spur gear for selected wheel speed and turns wheel shaft.

• Transmission case and tiller housing are cast iron, connected by a threaded and spot welded steel tube. **One gear oil fill position** provides lubrication for entire transmission including tiller shaft assembly.

WHEELS: Single piece steel, 8-inch.

TIRES: 4:80 x 8″, **tubeless,** standard tread tires with deep traction grip. • 4:80 x 8″ **tubeless Bar Tread tires, optional** at extra cost. • Tire chains available for either tire type.

UNIFORM DEPTH CONTROL: Eight-position depth regulator for instant selection of tilling depth—even while in motion. "Travel" position clears tines 1 or 2 inches above lawns, driveways and floors.

HOOD: Heavy duty steel. **Completely encloses revolving tiller tines,** greatly aids pulverizing lumpy soil. Trailing hood flap contains churning soil from the rear, smooths out seed beds and protects operator's feet and legs. Hood width—23″.

HANDLEBARS: Quickly adjustable Up & Down or Sideways without tools by loosening and resetting a lever for vertical movement, or a lever for horizontal adjustments.

• **Engine throttle control** mounted on right handlebar and **electric start** push **button** (if used) mounted **inside left handlebar grip.**

ENGINE SPECIFICATIONS:

A. 6 HP TECUMSEH-LAUSON

GENERAL DESCRIPTION: Four cycle, recoil start is standard; 12-volt battery electric key start, with automatic recharging during tiller operation, is optional.

MODEL: HH 60-105106F (Recoil Start). • HH 60-105107F (Electric Start) • Precision cast iron alloy cylinder and crankcase. • Compression release included for easy starts.

CRANKSHAFT: Steel, with integral counterweights. Crankpin and both main bearing journals are induction hardened.

MAIN BEARINGS: Durable bronze bushing with large bearing surface supports Power Take Off (PTO) end of crankshaft, bronze bushing at other end.

LONG LIFE MATERIALS: Resists heat and wear. **Exhaust** System—valve is austenitic (high quality carbon steel) and valve seat is iron alloy insert. **Intake** System — valve is heat treated alloy steel. Valve seat is cast integral with cylinder. **Valve guides** are iron alloy inserts. **Valve lifters** are precision machined and heat treated. **Piston rings**—two compression and one oil ring.

GOVERNOR: Reliable internal mechanical type, with external adjustment for trained servicemen.

BREATHER: Closed crankcase vent keeps dirt and dust from entering directly into crankcase.

FUEL TANK: Top mounted tank for full fuel flow on slopes; 1½ gallon capacity with fuel strainer screen, with shutoff valve.

OPERATOR CONTROLS FROM HANDLEBARS: Control of choke, engine speed, and engine shutoff from operator position at handlebar. With electric start models, operator can start and stop engine without leaving operator position.

AIR CLEANER: Polyurethane Sponge Element type.

ENGINE WEIGHT: 53 lbs., 3 oz.

SETTINGS: Spark Plug Gap—.030". • Point Setting—.020". • Valve Clearance—.010". • Breaker Point Tecumseh Part Number 30547A. Note: Point setting for Tecumseh engine serial numbers 2336 through 3345 is .018" instead of .020".

• Condenser Tecumseh Part Number 30548A.

• Head Bolt Torque—140 to 200 in. lbs. (12 to 14 ft. lbs.)

B. 7 HP KOHLER ENGINE

GENERAL DESCRIPTION: Four cycle, single cylinder, air cooled. Recoil start is standard.

CRANKSHAFT: Heat treated ductile iron casting with integral counterweights and induction hardened crankpin.

MAIN BEARINGS: Ball bearings on both ends of the crankshaft.

LONG LIFE MATERIALS: Resistant to heat and wear. **Valves**—forged steel alloy intake valve. Heat resistant (stellite) exhaust valve. **Valve tappets** — hardened and precision ground. **Exhaust valve seat**—stellite insert. **Positive valve rotation. Piston rings** — two compression and one oil control ring.

GOVERNOR: Mechanical flyweight type, with external adjustments.

FUEL TANK: Large, 1½ gallon capacity, top mounted tank for full fuel flow on slopes.

CHOKE: Manually operated at engine.

BREAKER POINTS & CONDENSER: Readily accessible and externally mounted for quick service.

MODEL: K161T, specification number **281271,** or **281181J.**

ENGINE SHUTOFF: Stop button mounted outside on breaker point cover.

ENGINE SPEED CONTROL: Controlled from operator position at handlebar.

AIR CLEANER: Replaceable dry paper element type.

ENGINE WEIGHT: 70 lbs.

SETTINGS: Spark Plug Gap—.025″. • Point Setting—.020″. • Valve Clearance—(Intake) .006″ to .008″ (Cold); (Exhaust) .015″ to .017″ (Cold).

• Breaker Point Kohler Part Number 220475.

• Condenser Kohler Part Number 220434.

• Head Bolt Torque—180 to 240 in. lbs. (15 to 20 ft. lbs.)