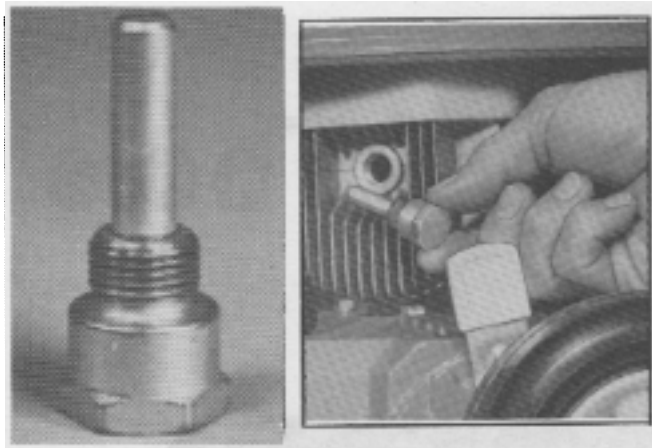


SECTION 14 - TOOLS - SPECIAL ITEMS



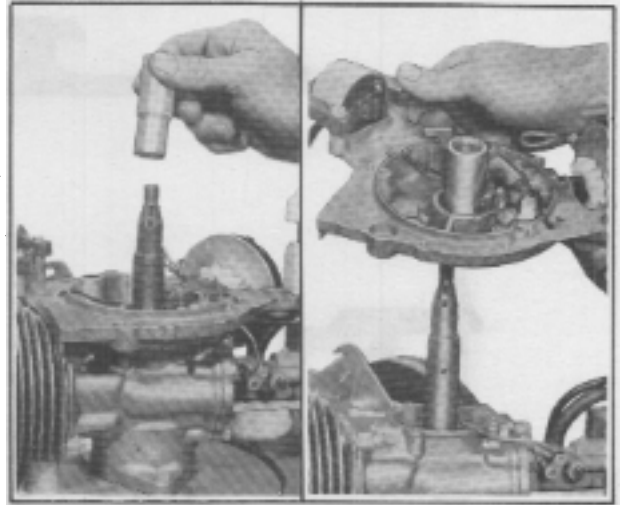
PISTON STOP

USED ON ALL MODELS OF LAWN-BOY ENGINES.

PART NO. 426814

Used to hold flywheel in place while loosening or tightening flywheel nut.

Remove spark pug and install piston stop. Screw finger-tight in spark plug opening.



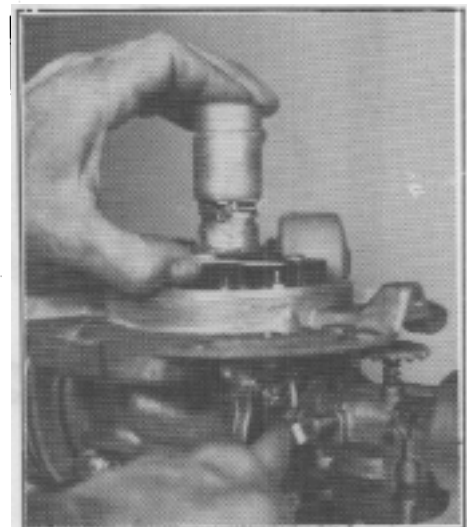
"D" SERIES

GOVERNOR ADJUSTING GAUGE

USED ON D-400, D-500 AND D-600 SERIES ENGINES.

PART NO. 604541

Used to adjust governor lever on "D" Series Engines only.



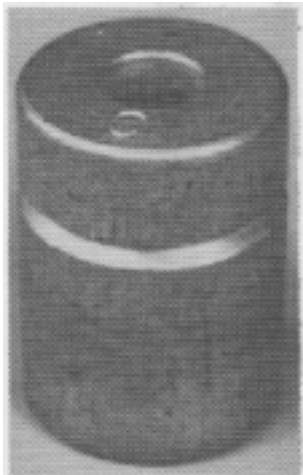
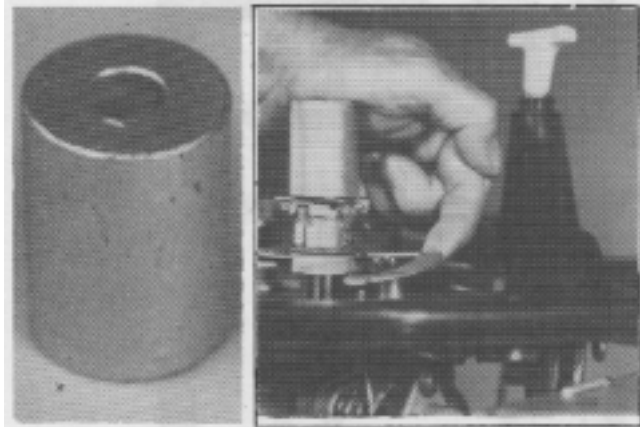
CRANKSHAFT GUIDE

USED ON LAWN-BOY MODEL "C" — D-400, D-500, D-600 SERIES ENGINES.

PART NO. 602887

Shown used to remove the armature plate and bearing assembly. Hold loose needles in bearing race on "D" Series Engines.

Shown used to reassemble the armature plate and bearing. Protects oil seals on both "C" and "D" Series Engines.



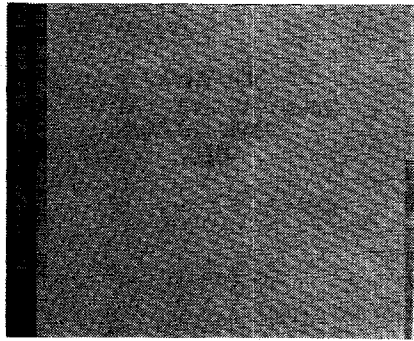
"C" SERIES

GOVERNOR ADJUSTING GAUGE

PART NO. 602885

Used to adjust governor lever on "C" Series Engines only.

SECTION 14 - TOOLS - SPECIAL ITEMS

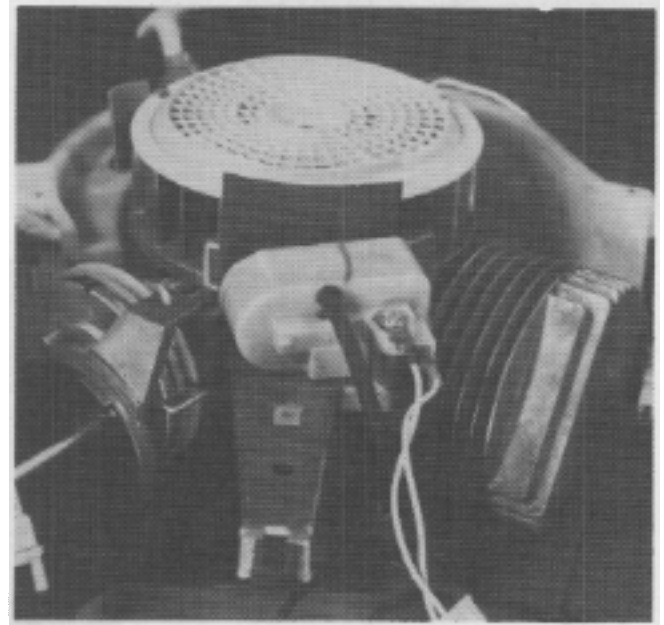
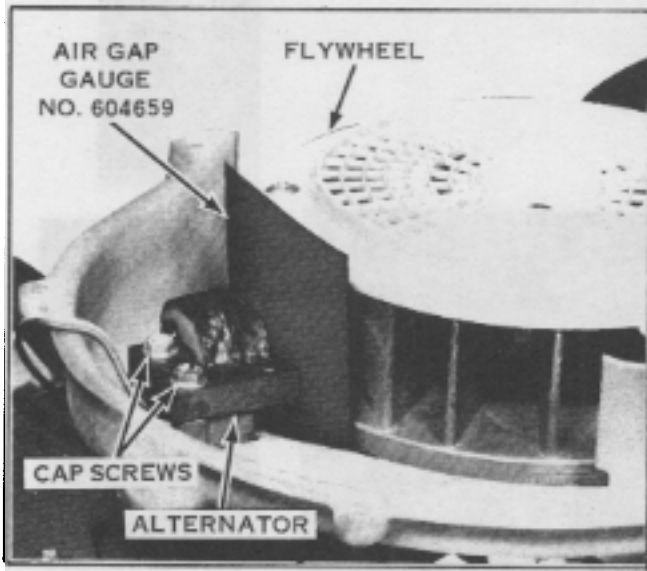


AIR GAP GAUGE

USED ON "D" AND "F" SERIES ENGINES

PART NO. 604659

.010 thick gauge to adjust air gap between flywheel magnet and heels of laminations on ignition coils, C.D. pack and alternator assemblies.



TEST PLUG

PART NO. 426814

USED ON ALL LAWN-BOY ENGINES.

Remove spark plug from engine. Used to check function and output of ignition systems.

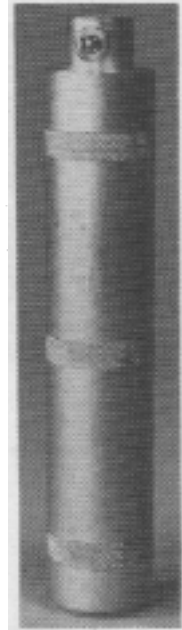
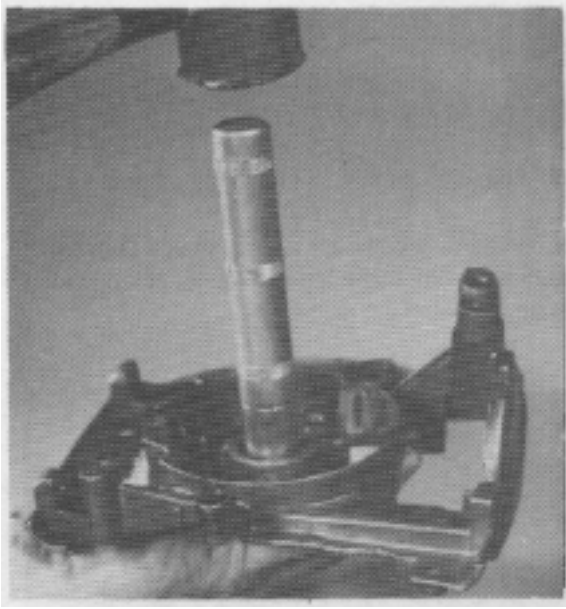


SECTION 14 - TOOLS - SPECIAL ITEMS

TOOL DRIVER HANDLE

PART NO. 378737

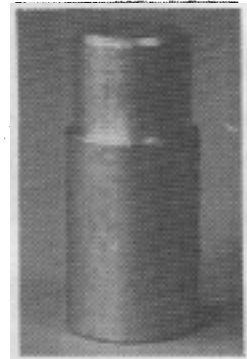
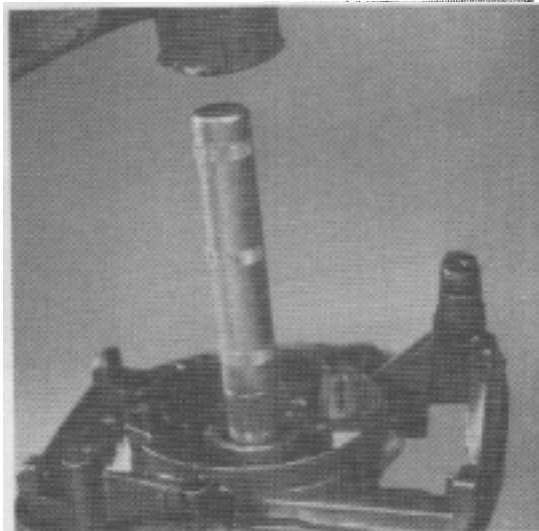
Used with tools 605081, and 605082.



BEARING REMOVER

USED ON D-400 AND D-600 SERIES ENGINES.

Used with Driver, Part No. 378737 and soft hammer to drive old bearing out from the top towards bottom of the armature plate.

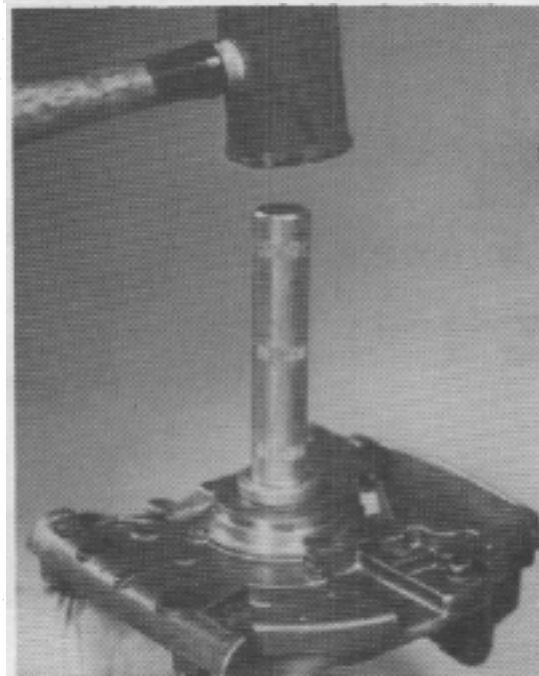


BEARING INTALLER

USED ON D-400 AND D-600 SERIES ENGINES.

PART NO. 605081

Use with Driver, Part No. 378737 and soft hammer to install new bearing in armature plate. Drive from bottom towards top of armature plate until Bearing Installer bottoms on armature plate face. Always drive bearing into plate with "lettered" end of bearing cage positioned against head of tool.



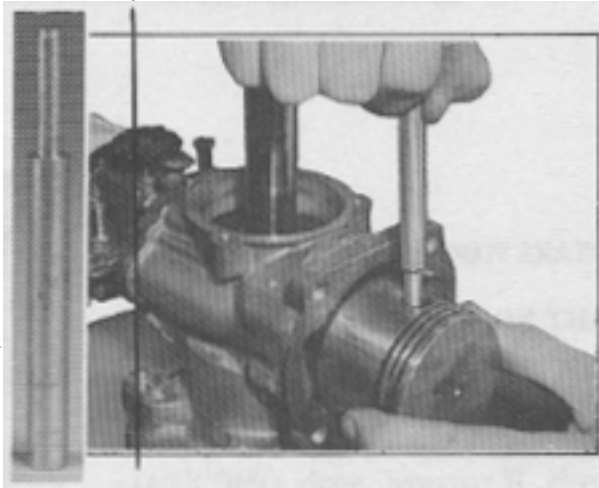
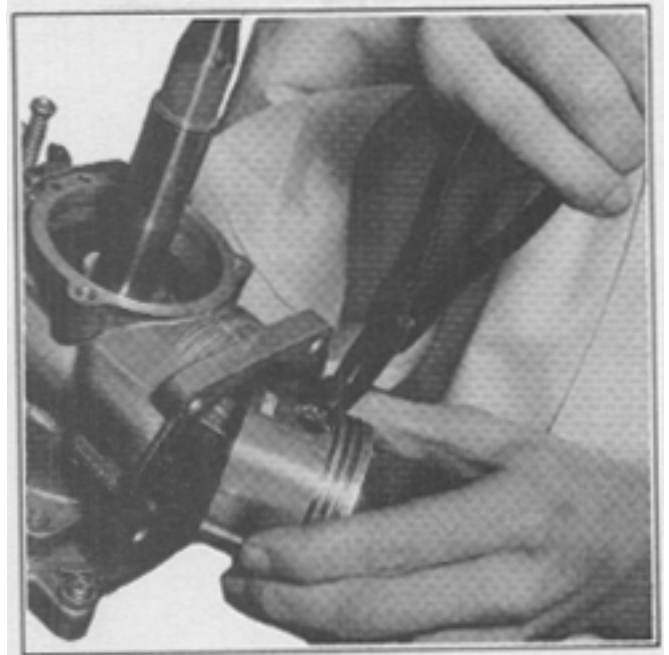
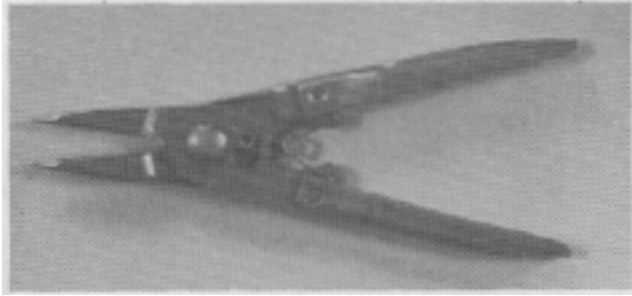
SECTION 14 - TOOLS - SPECIAL ITEMS

COMPRESSION PLIERS

PART NO. 303857

USED ON ALL LAWN-BOY ENGINES.

To remove the wrist pin retaining rings from pistons.

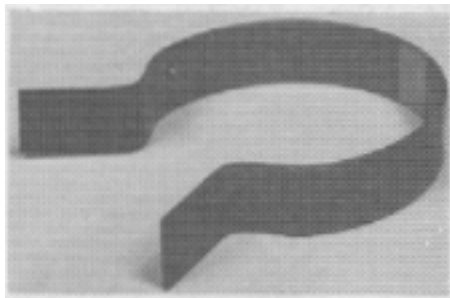


WRIST PIN TOOL

PART NO. 602884

USED ON ALL LAWN-BOY ENGINES.

Used to remove and assemble wrist pins in pistons.

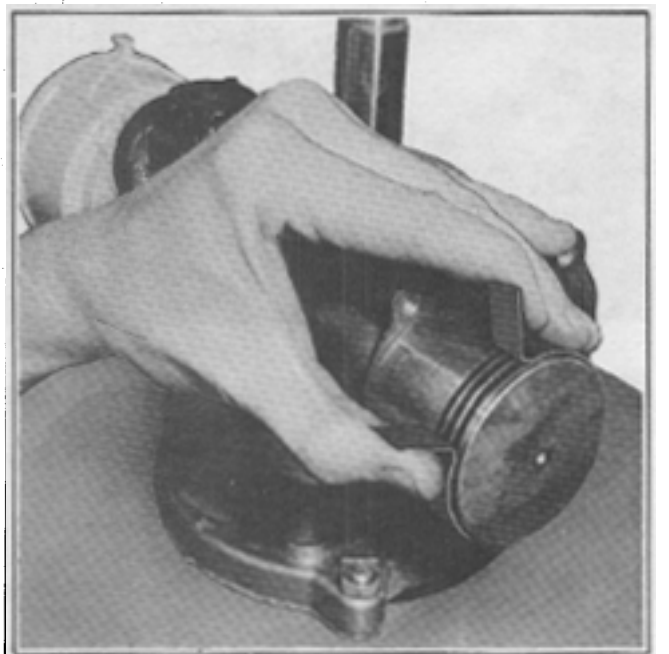


RING COMPRESSOR

USED ON C AND D SERIES ENGINES

PART NO. 426020

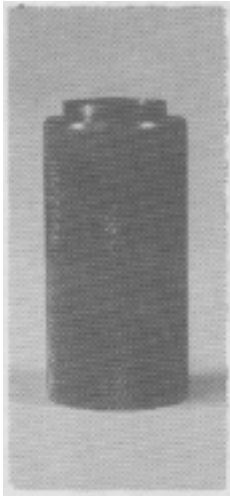
Stagger ring and gaps, liberally coat cylinder walls, piston skirt and rings with oil and clamp rings with Ring Compressor. Slipping cylinder over rings while they are being held in this manner eliminates ring breakage and damage to piston, and cylinder.



SERVICE BULLETIN REFERENCES

SECTION 14 - TOOLS - SPECIAL ITEMS

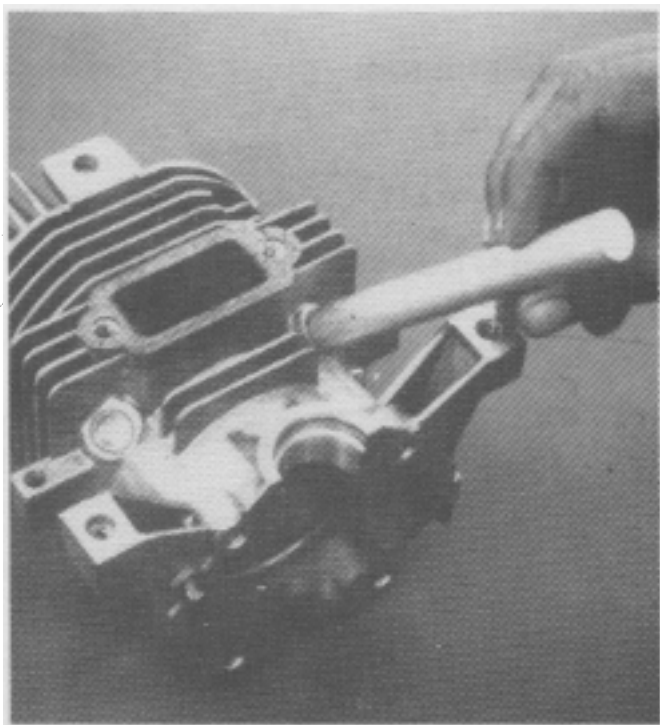
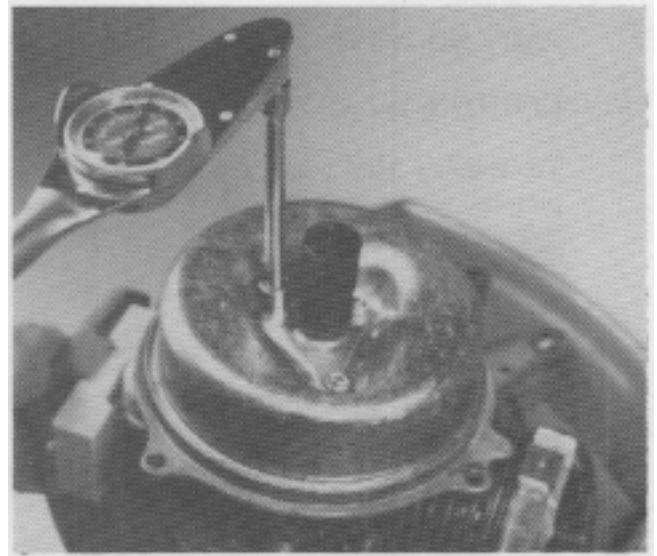
NOTE: "F" Series only.



CRANKSHAFT SUPPORT GAUGE

PART NO. 609968

"F" Series Only — Correctly positions crankshaft support to crankshaft cover during reassembly.

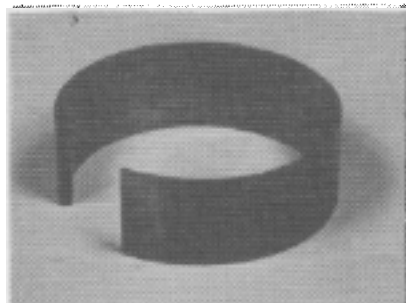
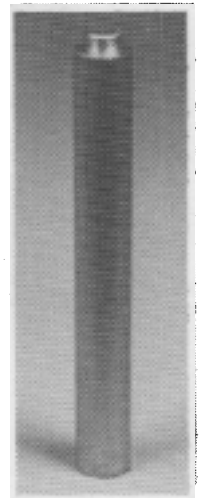


INTAKE PLUG INSTALLER

PART NO. 609964

"F" Series Only

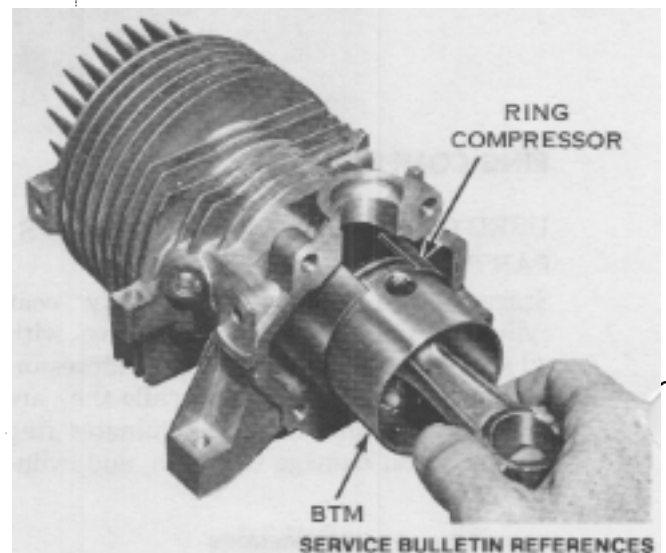
The intake plugs do not have to be removed. If removed, apply OMC SEALANT PART #609790 and use tool #609964 when reinstalling.



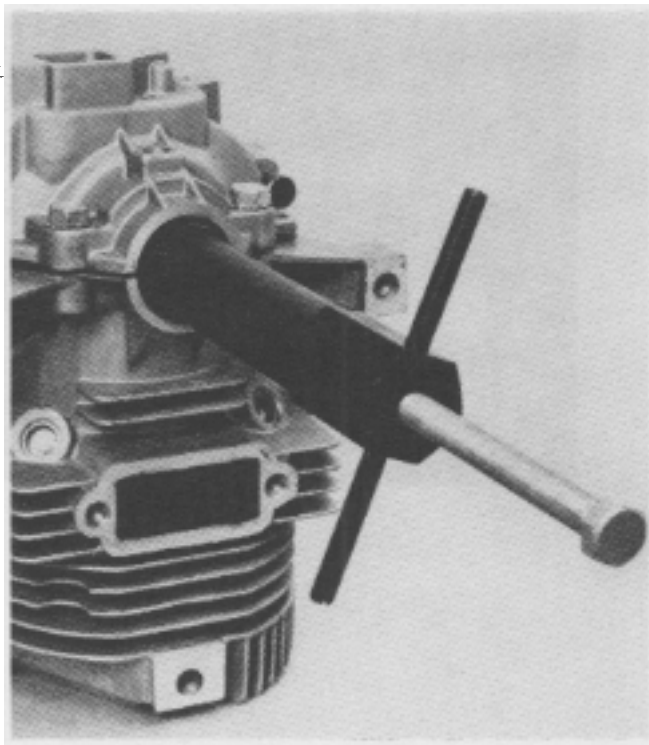
RING COMPRESSOR

PART NO. 609967

"F" Series Only — Allows for easy installation of piston into cylinder without damaging piston or rings.



SECTION 14 - TOOLS - SPECIAL ITEMS

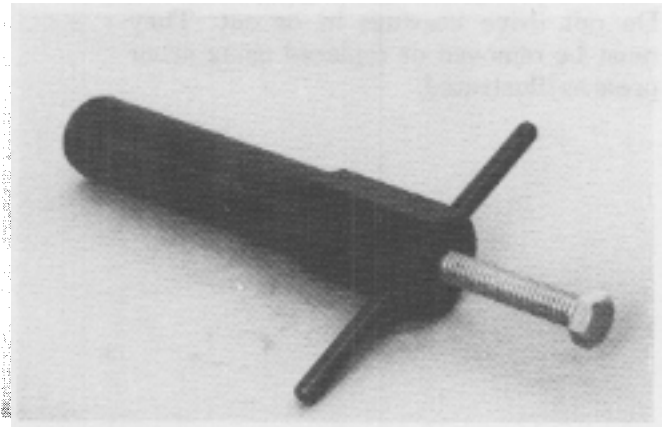


SEAL REMOVER

PART NO. 681867

USED ON ALL "C", "D", AND "F" SERIES LAWN-BOY ENGINES.

Used to remove upper and lower main bearing seals.

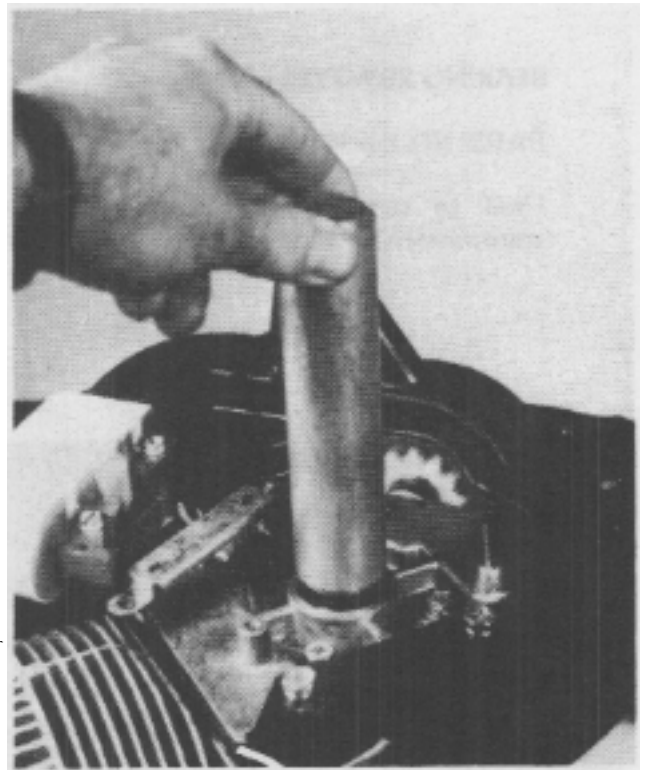


SEAL INSTALLER

PART NO. 608976

USED ON ALL "C", "D" AND "F" SERIES LAWN-BOY ENGINES.

Used to install upper and lower main bearing seals.

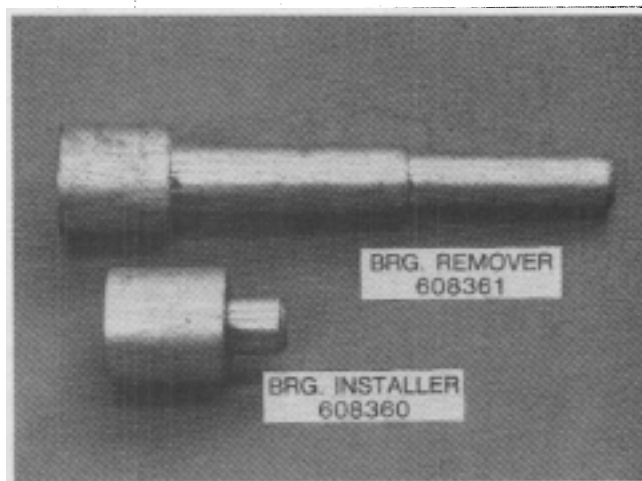


SECTION 14 - TOOLS - SPECIAL ITEMS

To replace bearing, press out damaged or worn bearing with special Lawn-Boy removal tool, part number 608361, and press in replacement with special installer tool, part number 608360.

 **NOTE**

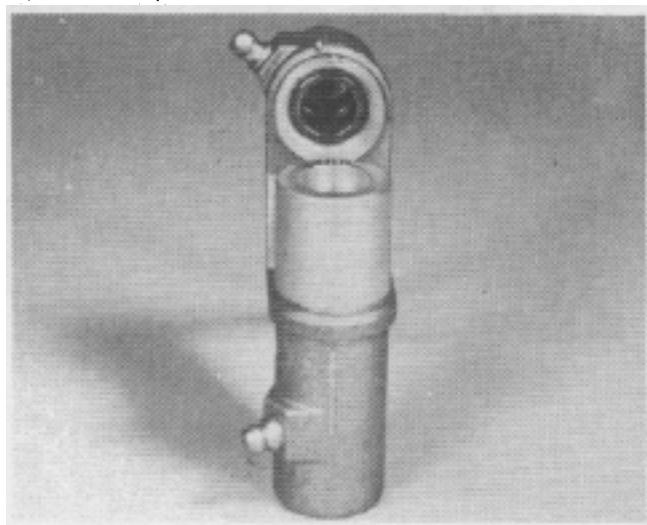
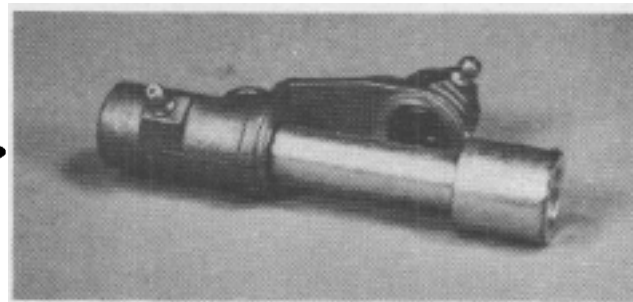
Do not drive bearings in or out. They must be removed or replaced using arbor press as illustrated.



BEARING REMOVER

PART NO. 608361

Used to remove bearings from diecast transmission housings on gear drive models.

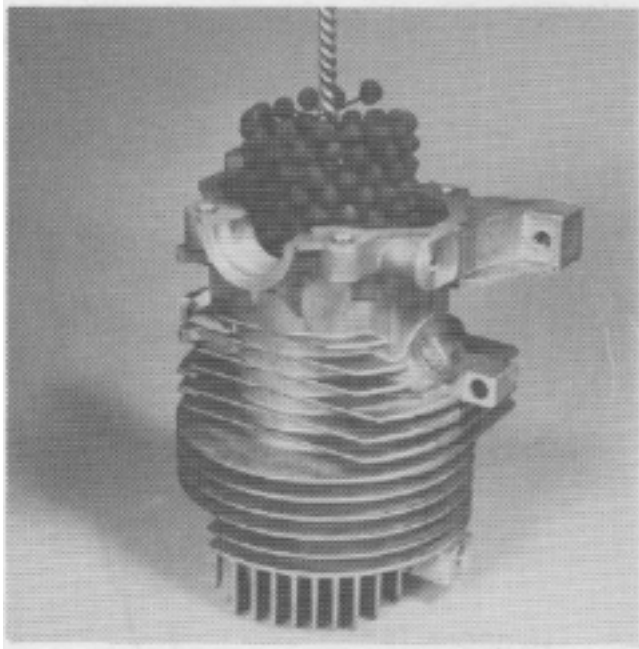


BEARING INSTALLER

PART NO. 608360

Used to install bearings in diecast transmission housings.

SECTION 14 - TOOLS - SPECIAL ITEMS



FLEX HONE

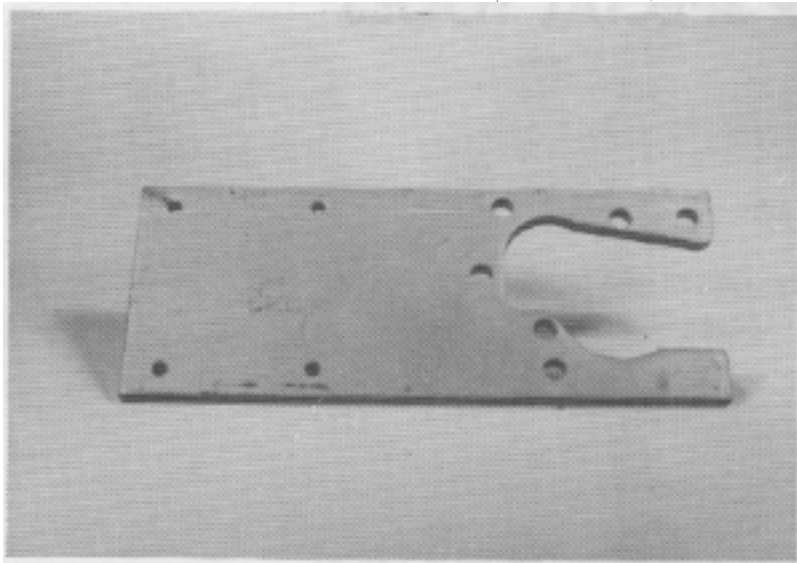
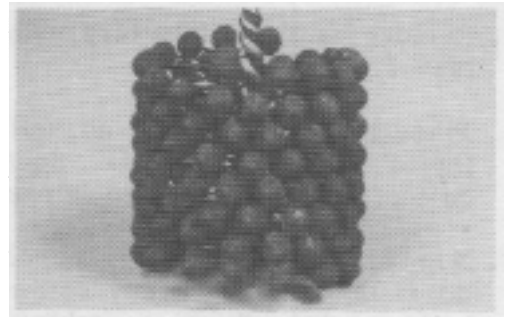
PART NO. 609765

USED ON "C", "D" AND "F" SERIES
LAWN-BOY ENGINES.

Used to break the glaze on cylinder walls.

NOTE:

For use in slow speed and reversible drill
for 5-7 strokes in each direction. USE
WITH OIL.



UNIVERSAL ENGINE HOLDING FIXTURE

PART NO. 681865

Special engine holding fixture
for C, D, and F Series Lawn-
Boy engines.

SECTION 14 - TOOLS - SPECIAL ITEMS

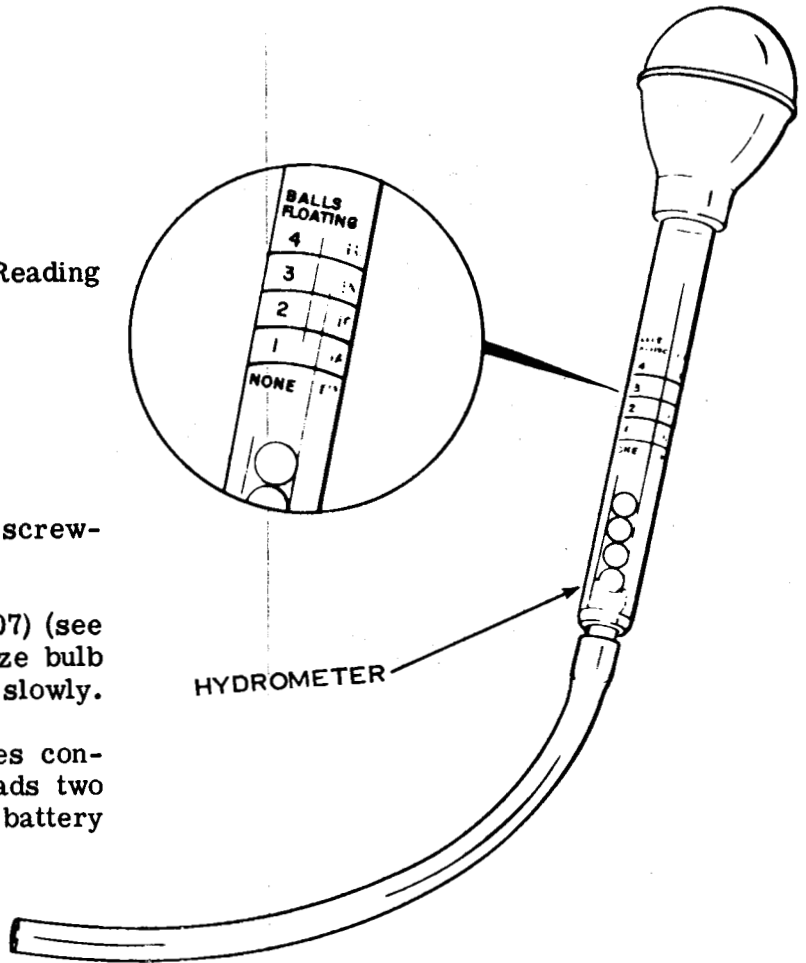
HYDROMETER (BATTERY TESTER)

FOR ALL LAWN-BOY WET CELL BATTERIES

PART NO. 681007

State of Charge	Specific Gravity Reading
Fully Charged	1.265
75% Charged	1.225
50% Charged	1.190
25% Charged	1.155
Discharged	1.120


1. Remove caps from battery using screw-driver.
2. Place hydrometer (part no. 681007) (see figure 3) into each cell. Squeeze bulb on top of hydrometer and release slowly.
3. Number of balls floating indicates condition of battery. If any cell reads two balls or less floating, recharge battery for 10 hours.

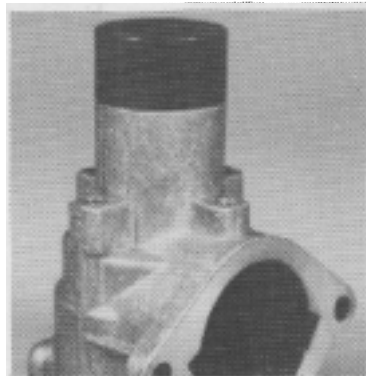
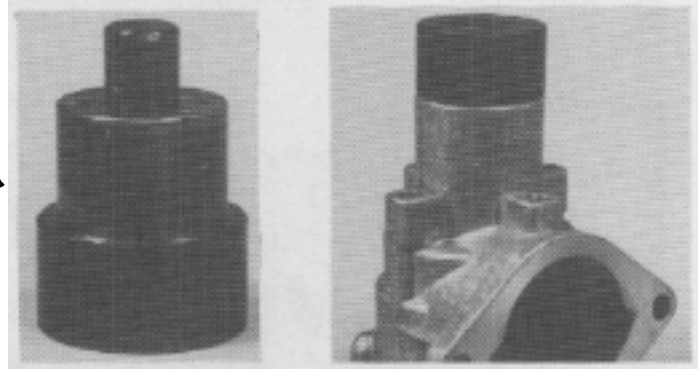


TRIMMER SPECIAL TOOLS

SEAL DRIVER


PART NO. 610569

Used to install main bearing. Seal in trimmer crankcase. 



BEARING DRIVER

PART NO. 610568

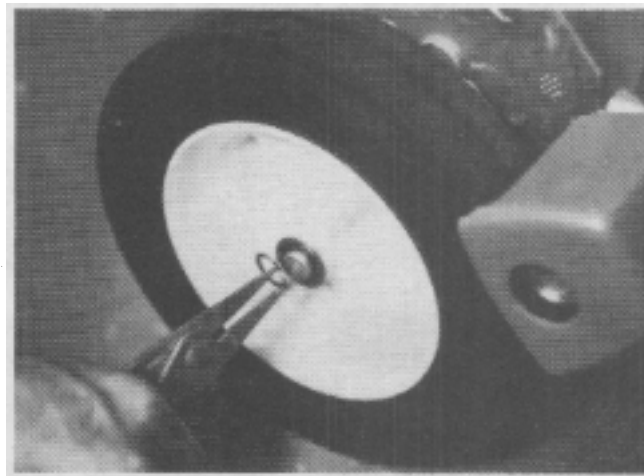
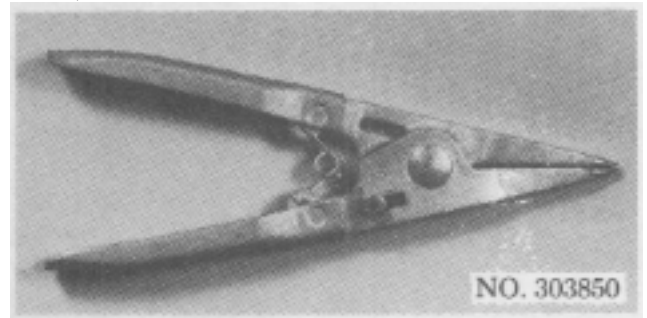
Used to install outer bearing in trimmer crankcase. 

SECTION 14 - TOOLS - SPECIAL ITEMS

EXPANSION PLIERS

303850

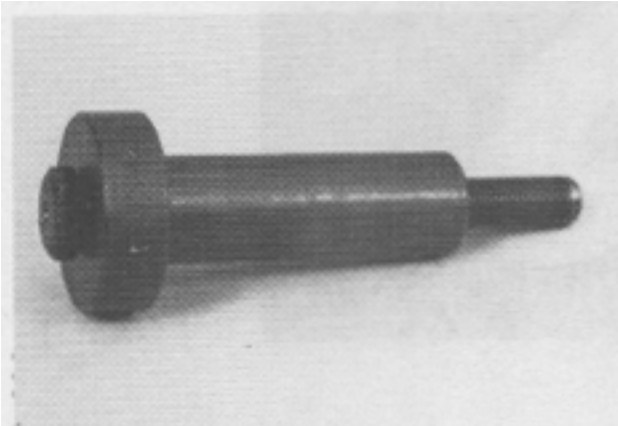
For assembly and disassembly of external retaining rings.



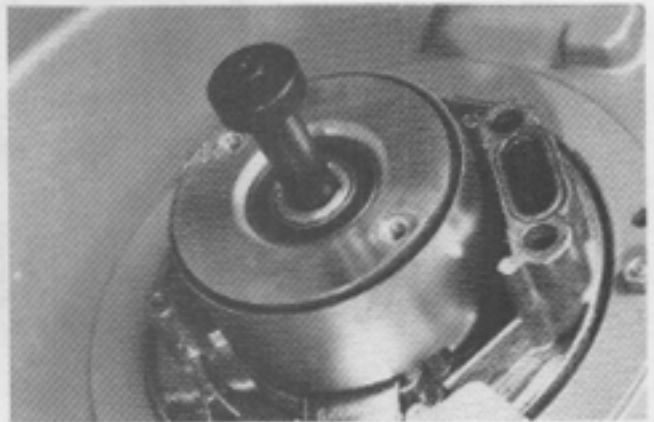
COMPLIANT MOWER SERVICE TOOLS



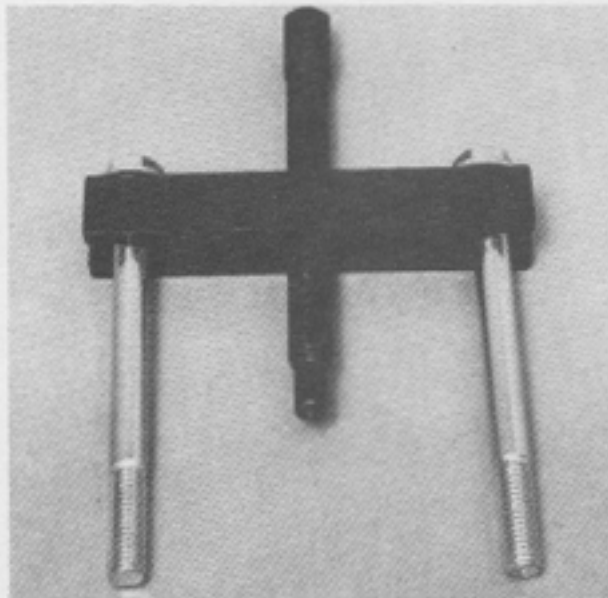
PART NO. 683055



611592 CLUTCH REMOVAL TOOL



USED TO RETAIN BRAKE CLUTCH ASSEMBLY.

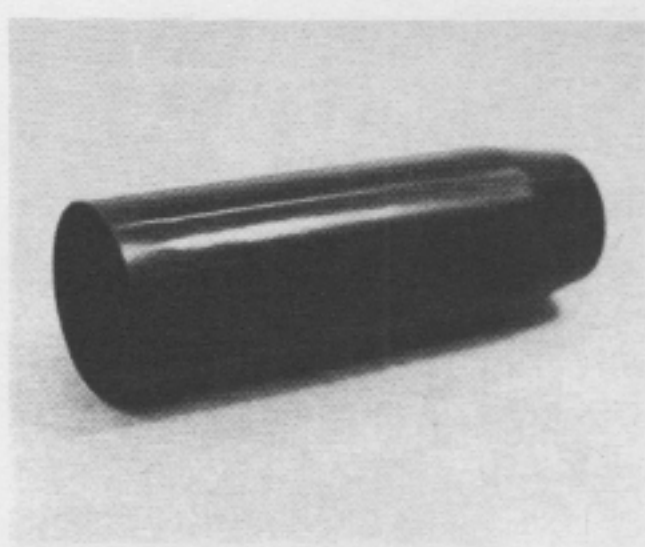


683242 CLUTCH PULLER

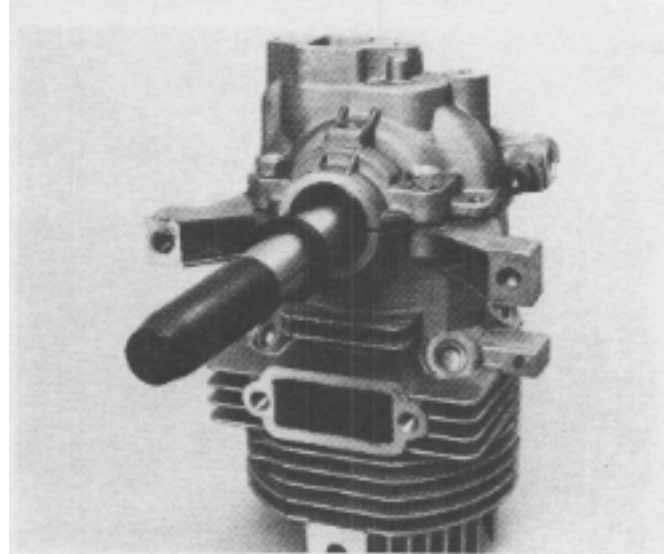


USED TO PULL BRAKE CLUTCH ASSEMBLY.

COMPLIANT MOWER SERVICE TOOLS



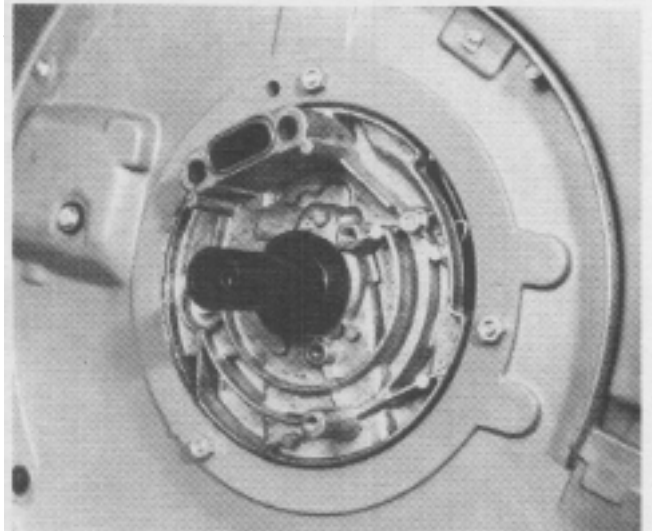
611918 SEAL PROTECTOR



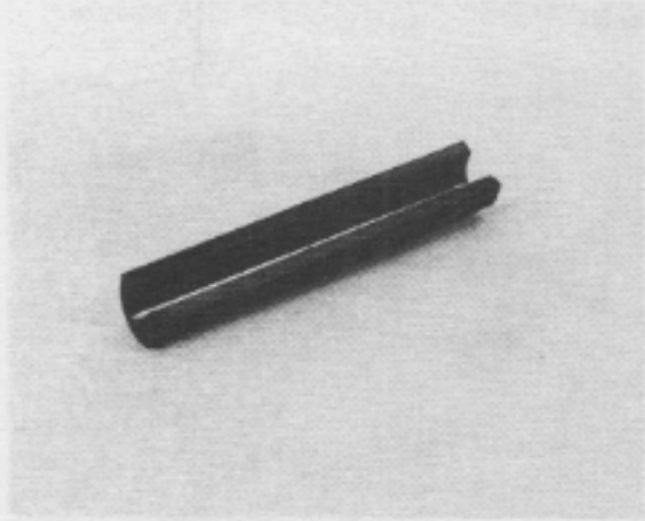
USED TO PROTECT SEALS DURING INSTALLATION



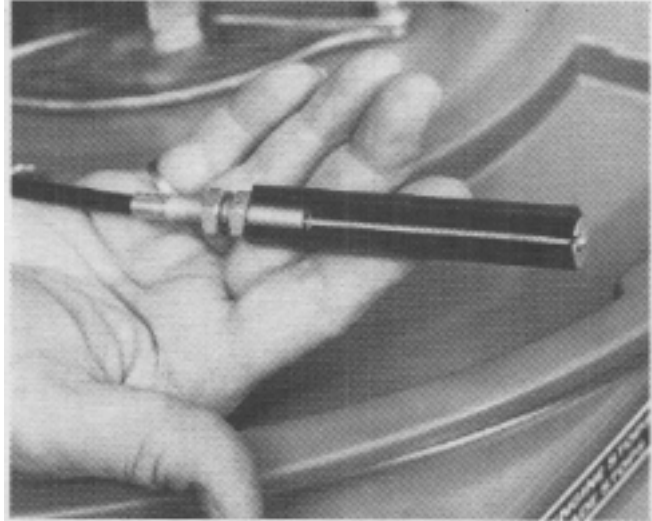
611591 MOUNTING PLATE LOCATOR



USED TO ALIGN ENGINE ON MOUNTING PLATE

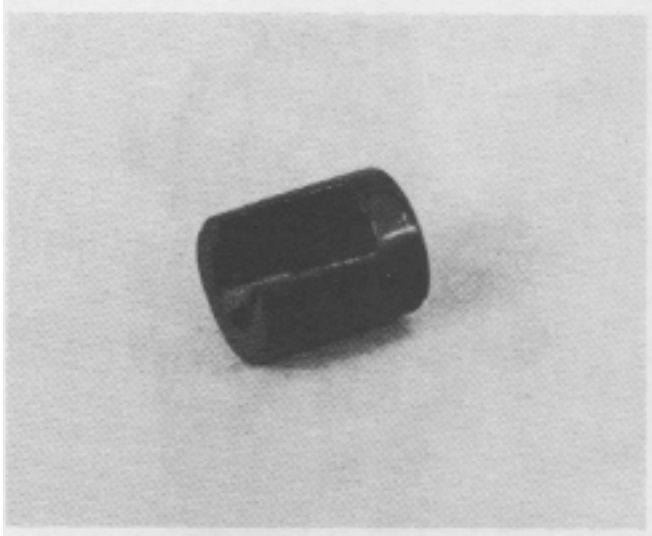


611703
CONTROL CABLE GAUGE

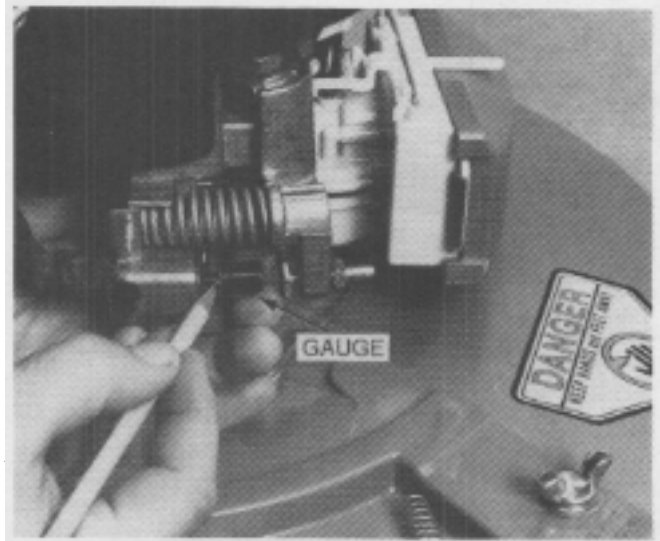


USED TO ADJUST CONTROL CABLE

COMPLIANT MOWER SERVICE TOOLS

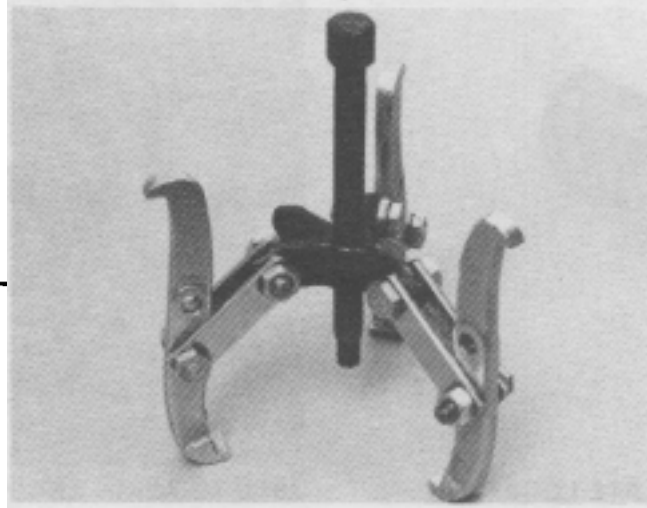


611702 BRAKE SWITCH ADJUSTING GAUGE

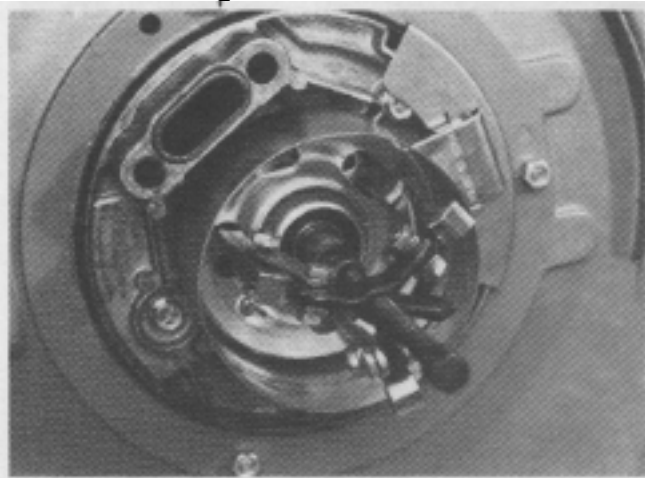


USED TO ADJUST BRAKE SWITCH

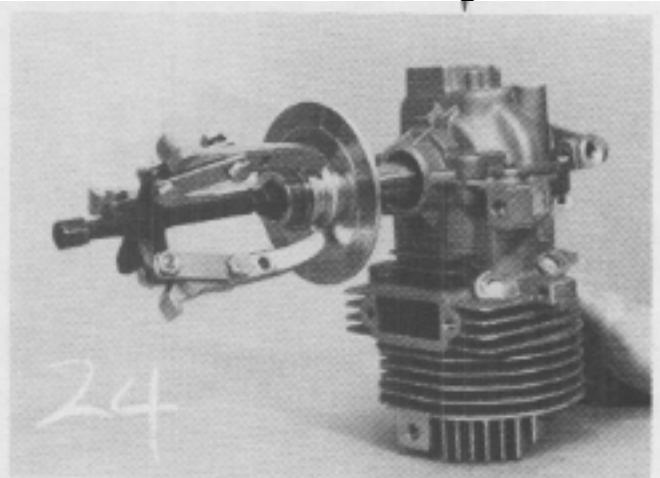
**3-JAW PULLER AVAILABLE FROM
OWATONNA TOOL CO., OWATONNA MN.**



OTC NO. STD-80



Used to remove bearing, ramp and arm assembly from crankshaft.



Used to remove clutch plate from crankshaft if "BBC" assembly separates.

SERVICE SHOP AIDS - SECTION 14



384884

Loc Quic Primer is used to clean and degrease threads on fasteners before applying adhesives on screws, bolts, nuts, etc.

Ultra Lok is an adhesive used on all fasteners under the deck.



388517



384848

Screw-Loc is an adhesive used on fasteners above the deck.

For complete removal and cleaning of old sealant and gaskets.

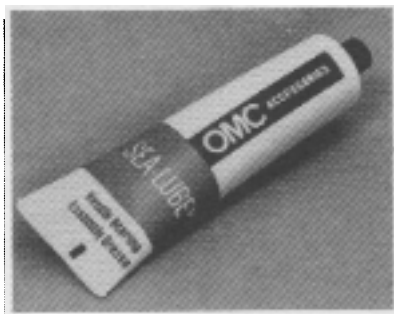


390928



SAFETY WARNING

Will burn if it comes into contact with skin.



378642

Special grease to hold individual needle bearings in place during assembly of connecting rod onto crankshaft. It provides sufficient lubrication of the bearings during initial start up after overhauling.

Crankcase sealant to seal "F" series crankcases completely to prevent possible leaks. 50 cc's will seal many crankcases coming in for repair. It will not harden and set up while in the tube with the cap on.



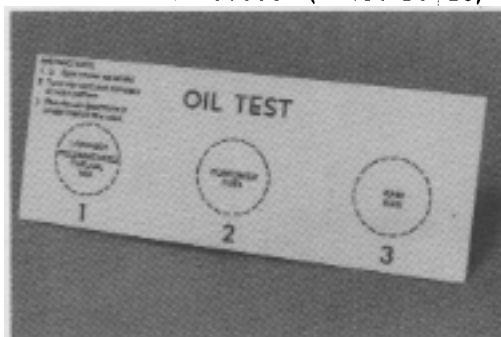
609790
50 cc's



610377
6 cc's

Same as above except in a smaller tube.

LAWN-BOY OIL TEST CARDS
PART NO. E00064 (PKG. OF 10)



Easy to use when demonstrating to customer the proper fuel/lubricant mixture.

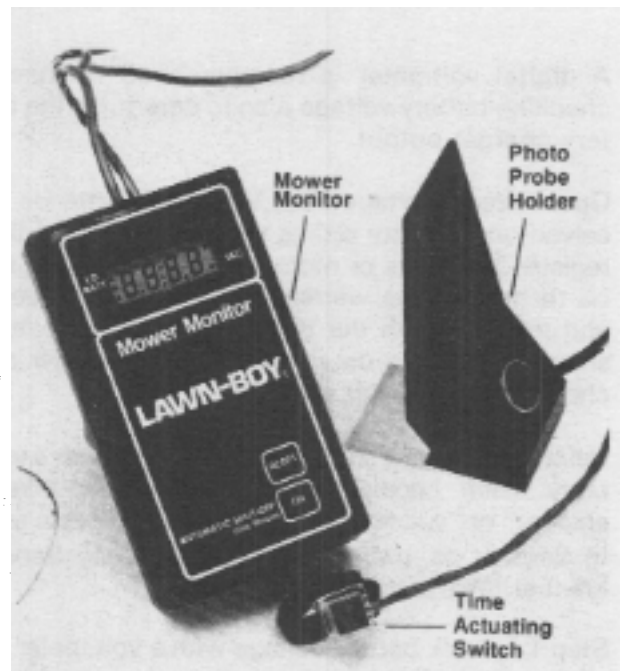
Occasionally it is necessary to provide visual evidence that an insufficient amount of lubricant was mixed in the fuel. Using this card will help to determine if the mixture was or was not correct.

TEST PROCEDURES: Determine what kind of oil and gas the customer was using. It then becomes necessary to correctly mix the same kind of oil and gas in the recommended ratio. (32:1 or 16:1)

Place a sample of the customer's mixture in #2 circle and a sample of the correct mixture in #3 circle. Place a sample of straight gasoline in #1 circle. Gasoline evaporates very quickly. When gasoline in #1 has evaporated, it will also have evaporated from #2 and #3. The circle with the darkest appearance will have more oil than the other. This test should be made in the presence of the customer to eliminate doubts of the results.

Use as an aid for selling Lawn-Boy Lubricant.

LAWN-BOY MOWER MONITOR



Blade r.p.m.

3200

Large easy to read LCD shows blade RPM and blade stoppage time.

0.9

Blade stop time



ET-301 Mower Monitor on compliant mower checking blade stoppage time.

The ET-301 Monitor Tester is a highly accurate diagnostic instrument used to check blade stoppage time and blade r.p.m. on 1983 compliant mowers. This battery powered, hand held unit is easy to use. Special tools and additional mower support fixtures are not needed. Simply place photo probe holder alongside the mower deck, attach actuating switch to handle assembly and start mower. The ET-301 can also be used to check shaft or fan speeds, pulley speeds and electric start engine cranking speeds. Unit comes complete with batteries, reflective tape and detailed operating instructions.

Lawn-Boy mower monitors can be used with 2-cycle and 4-cycle powered mowers—manual restart, electric restart and blade brake clutch systems.

LAWN-BOY MOWER MONITORS ARE SOLD AND SERVICED BY THE OWATONNA TOOL COMPANY.
ALL ORDER FORMS ARE TO BE ACCUMULATED BY LAWN-BOY DISTRIBUTORS FOR MAILING TO LAWN-BOY.

A digital voltmeter is recommended for use in checking battery voltage also to determine the battery charger output.

Open circuit voltage (O.C.V.) of all batteries received on warranty claims will be checked. If they register 11.0 volts or more when received and can be recharged, the warranty claim will be rejected and returned with the battery. If possible, battery should be placed on an electric start mower and checked for cranking ability.

Before returning a battery to the factory with a warranty claim because it "won't hold or take a charge," or "will not crank the engine," please refer to Section 13, page 18 of the Lawn-Boy Service Manual for the testing procedures.

Step 1 - Check battery voltage with a volt meter before charging.



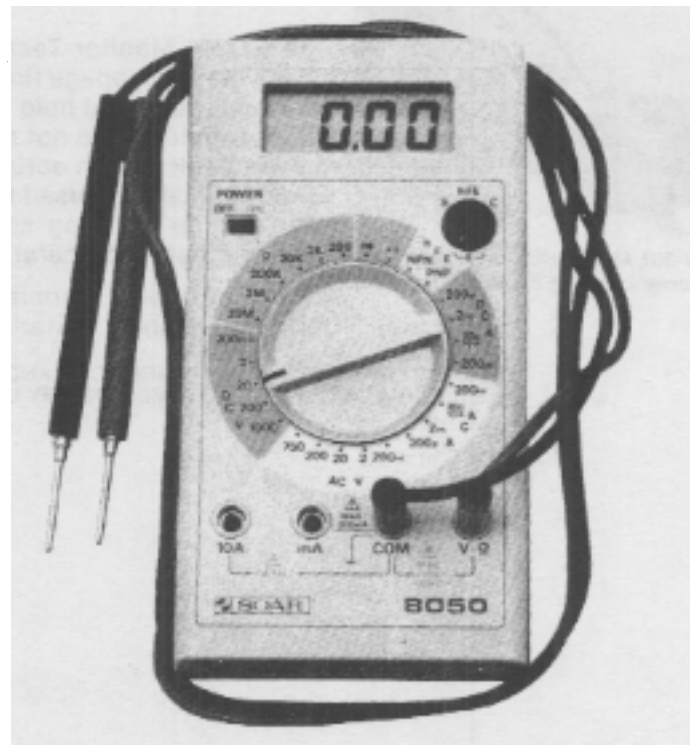
Step 2 - If the meter indicates an open circuit voltage (O.C.V.) of 11.0 volts or more, connect it to the Lawn-Boy charger for a period of 24 to 48 hours.

Step 3 - Disconnect charger and let battery set for a minimum of 24 hours.

If battery voltage is 12.3 volts or higher after completion of this procedure, it should be returned to the customer for continued use. If possible, place it on an electric start mower and check for cranking ability.

If possible, the customer's battery charger should be checked. It should produce between 8 and 12 volts on a volt meter.

The Digital Multi Meter illustrated is available from the Lawn-Boy Service Department. It will check AC and DC voltage, AC and DC current, resistance, check diodes, amperes and continuity.



MODEL 8050 SOAR DIGITAL MULTI METER