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## TECHNICAL SERVICE BULLETIN

NO. 183-001

**SUBJECT:** MATCHED CYLINDERS AND PISTON (A95060)

**AFFECTS:** MODEL 410 CHAIN SAW

In the future, cylinders and pistons for the model 410 engine will be supplied as a matched set only.

After you use up your stock of A93442 cylinders and A93443 pistons, order only matched set A95060.

The latest parts list for the model 410 (17598, Rev. I) shows the matched set as item 25 in figure 3. Item 26, retaining ring, item 27, piston ring and item 28, gasket, are included in the cylinder and piston matched set but may also be ordered separately.

Any orders for individual pistons or for individual cylinders will be filled by supplying the matched set.

A handwritten signature in cursive script that reads "Eddie Turner".

Eddie Turner  
Service Manager  
Forestry Products

bh

DATE 1/83





## TECHNICAL SERVICE BULLETIN

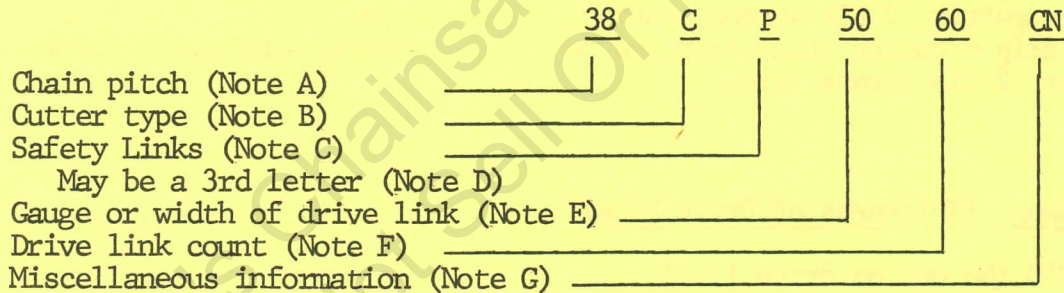
NO. 183-002

**SUBJECT:** 1. 1/2 INCH PITCH SAW CHAIN  
2. IDENTIFYING SAW CHAIN

**AFFECTS:** HOMELITE SAW CHAIN

1. Due to a steadily decreasing demand Homelite will no longer supply 1/2 inch pitch saw chain. A small quantity of chain and repair kits are available at this time. However, supplies are limited and no more will be made available.
2. Because of the many types of chain now available, we feel dealers should be familiar with our catalog numbering system. This system identifies each loop, reel or repair kit.

Example:



Note A Chain Pitch

25	=	1/4"
32	=	.325"
37	=	3/8" Pro-cut
R37	=	3/8" Pro-cut
R375	=	3/8" Pro-cut
375	=	3/8" Pro-cut
38	=	3/8" Standard
40	=	.404
50	=	1/2"

Continued

DATE 1/83

Note B Cutter Type

C = Chipper  
M = Micro chisel or semi-chisel  
AL = Super chisel (square)  
L = Super chisel (round)  
T = Self sharpening

Note C Safety Links

P = Drive link safety  
S = Tie strap safety  
D = Dual depth gauge  
E = Triple depth gauge

Note D Tooth Pattern

- = Full complement (no designation)  
J = Skip  
K = Semi-skip

Definitions of tooth patterns:

1. Full complement = cutter, tie strap, cutter, tie strap, etc.
2. Skip = cutter, 2 tie straps, cutter, 2 tie straps, etc.
3. Semi skip = cutter, tie strap, cutter, 2 tie straps, cutter, tie strap, cutter, 2 tie straps, etc.

Note E Gauge (Thickness of Drive Link)

50 = .050 (No dot on drive link)  
58 = .058 (One dot on drive link)  
63 = .063 (Two dots on drive link)

Note F Chain Length, Drive Link Count or Description

7 = Repair kit  
8 = Joining kits  
26-200 = Loop drive link count  
R-25 = 25 ft. reel  
R-50 = 50 ft. reel  
R-100 = 100 ft. reel

Note G Miscellaneous Information

CN = Coined  
Others may be issued at later dates.

*Eddie Turner*

Eddie Turner  
Service Manager, Forestry Products





## TECHNICAL SERVICE BULLETIN

NO. 183-003**SUBJECT:** REPLACEMENT SPROCKETS FOR POWER TIP AND SPROCKET  
NOSE GUIDE BARS**AFFECTS:** MOST CHAIN SAWS

Many dealers are not aware that the sprockets in our power tip and sprocket nose guide bars may be replaced when they become worn or damaged.

Below is a list of sprocket repair kits that are available through service parts.

<u>Repair Kit #</u>	<u>Rivet #</u>	<u>Chain Pitch</u>	<u>Saw Models</u>	<u>Bar Type</u>
A69682-B	96623	1/4 inch	Early XL series	Power tip
A70239-D	96623	.37 and .375	XL series, 240	Power tip
A69496-A	69486	3/8 inch	150, SEZ-A0, SXL-A0, 360, 330, XL-12	Power tip
A67050	67426	3/8 inch	100 series (early bars...PT16503 etc.)	Power tip
A69921-A	69875	3/8 inch	XL-12, SXL-A0, 330, 360, 450, 550	Sprocket nose
A69922-A	69875	.404 inch	450, 550, 650, 750	Sprocket nose
A17742	96623	.325 inch	240	Power tip

Each kit contains a detailed instruction sheet.

When a sprocket fails in a power tip or sprocket nose bar during the warranty period, use a kit to make the repair. Do not replace the entire bar.

A flat rate of .5 hours will be allowed for the repair. Note the following addition in your Flat Rate Manual.

<u>Job #</u>	<u>Description</u>	<u>Time</u>	<u>Failure Code</u>
K-13	R & I guide bar, replace guide bar sprocket	.5	K1-02

DATE 3-83



## TECHNICAL SERVICE BULLETIN

NO. 183-004

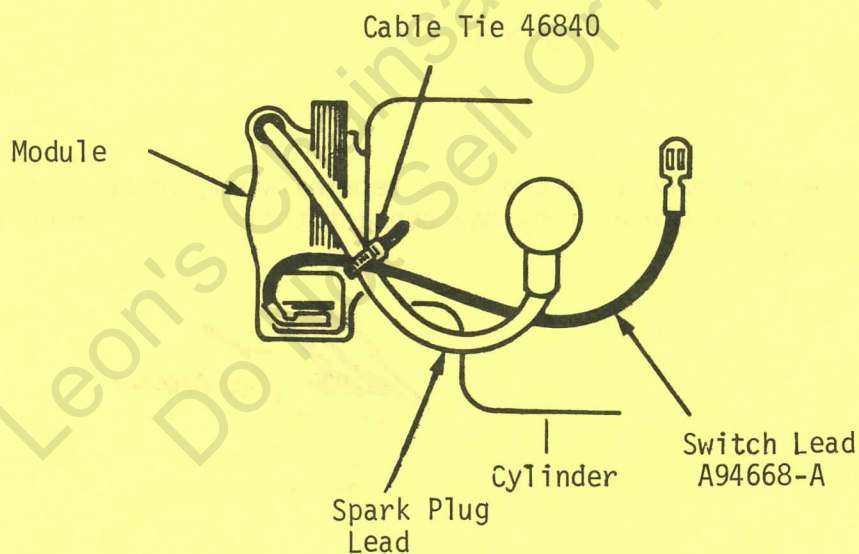
**SUBJECT:** ROUTING OF SWITCH WIRES

**AFFECTS:** 330 CHAIN SAWS

If a 330 should "die out" or "misfire" while cutting (particularly when underbucking), it may be because the muffler is coming into contact with and burning through the switch wires.

When this occurs it is because these wires are not routed properly.

Below is an illustration showing the correct routing of the switch wire #A-94668-A from the module to the switch.

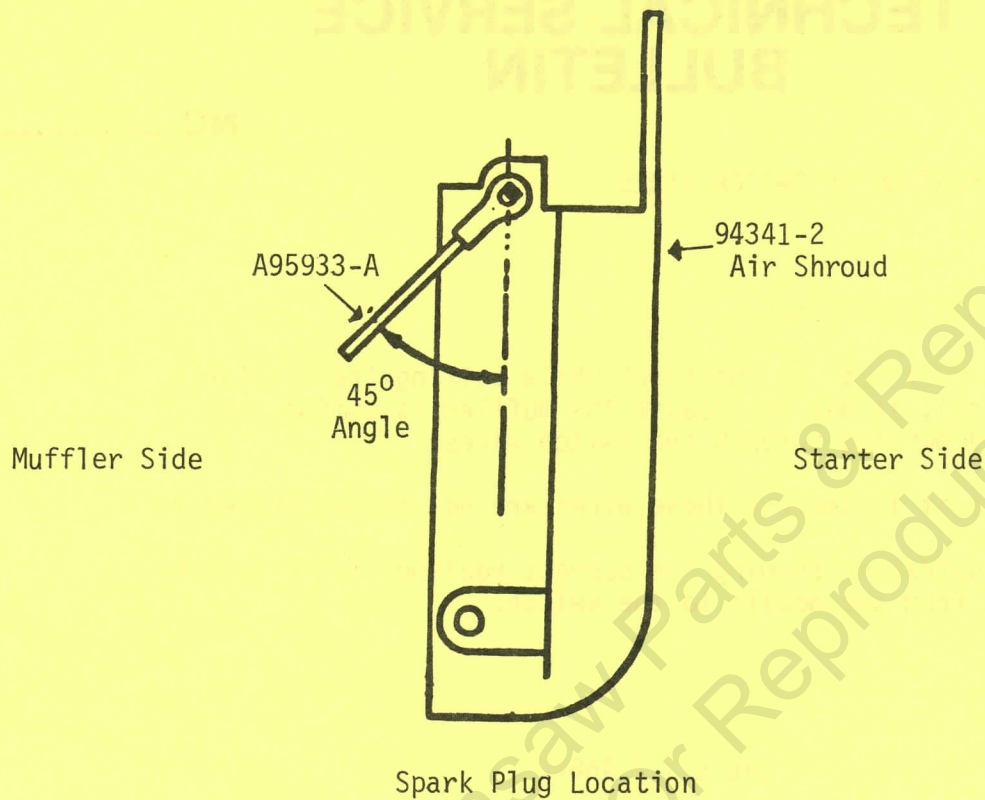


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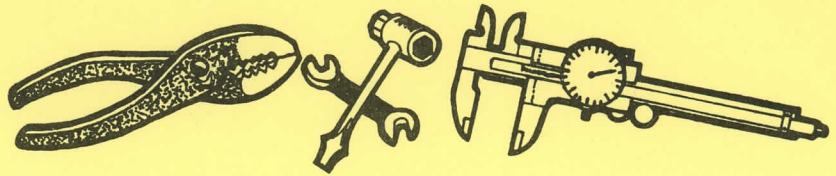
Another illustration indicates the correct position of the switch ground wire #A-95933-A.



NOTE: The on-off switch spade lugs and wire terminals should be positioned as straight as possible or they may contact the cylinder or muffler during operation.

*Eddie Turner*  
Eddie Turner  
Service Manager  
Forestry Products

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## TECHNICAL SERVICE BULLETIN

NO. 183-005

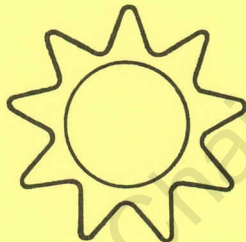
**SUBJECT:** INCORRECT SPROCKETS IN POWER TIP GUIDE BARS

**AFFECTS:** PT12371-F4  
PT14371-F4  
PT16371-F4  
PT18371-F4

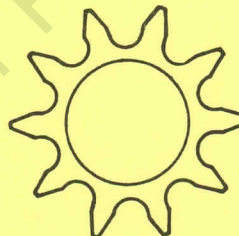
ALSO: XL SERIES CHAIN SAWS  
240 CHAIN SAWS

Some of the guide bars listed above may have the wrong sprocket in the tip. Bars containing the wrong sprocket will not accept the .37 or .375 pitch saw chain.

Correct sprockets may be identified by counting the number of teeth on the sprocket. Correct sprockets will have (9) nine teeth. Incorrect sprockets have (10) ten teeth. See illustrations below.



CORRECT  
9 Teeth



INCORRECT  
10 Teeth

Any guide bars found containing the wrong sprockets are to be returned to the closest factory service center. A warranty claim must accompany the guide bars. Ship them U.P.S. and add the freight charge to the claim. Enter the number of this technical bulletin on the warranty claim in the area under the failure code. This will be the authorization to pay the incurred freight.

Shipments of these bars made after 3-4-83 have been checked.

Eddie Turner  
Service Manager  
Forestry Products

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DATE 03/83





## TECHNICAL SERVICE BULLETIN

NO. 183-006

**SUBJECT:** PRODUCT IMPROVEMENTS FOR 1983

**AFFECTS:** ST-80, ST-100 and ST-120

Listed below are the improvements that have been made to the gasoline trimmer line. All improvements will "back fit" trimmers built before 1983. This list will provide the new part numbers where necessary.

### RECOIL STARTER SYSTEM

1. Starter Rope - The rope will now have a special knot in the pulley end. This will minimize the possibility of the knot coming untied and being pulled through the pulley. This rope will not require the plastic washer 93862-1. The new service rope is number 96648-1. Starter rope is also available in a 250 ft. (75m) reel number 97135.
2. Starter Housing - The starter housing rope eyelets now contain a large powdered metal bushing 96981. This bushing will prevent rope fraying and the rope cannot wear through the bushing to the plastic housing. To install this bushing in older housings, containing the small steel or brass bushing, drill through the existing bushing with a 3/8" (9,5mm) drill bit. Apply an adhesive (Homelite number 70627) to the bushing and press it into the housing. Allow the adhesive to dry. This repair should not be made if the rope has worn a large groove into the plastic housing.

### STRING ADVANCE SYSTEM

1. Weld-not Tube - The flexible weld-not tube used on the ST-80 will now be used on the ST-100 and ST-120. Aluminium tube A96509 is superseded by the flexible tube A96518. This will eliminate the breaking problem sometimes experienced when using the aluminium tube.
2. String Head - A new balanced string head A94233-2 is available to decrease vibration. This new string head is used in conjunction with the flexible weld-not tube.

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DATE 04/83

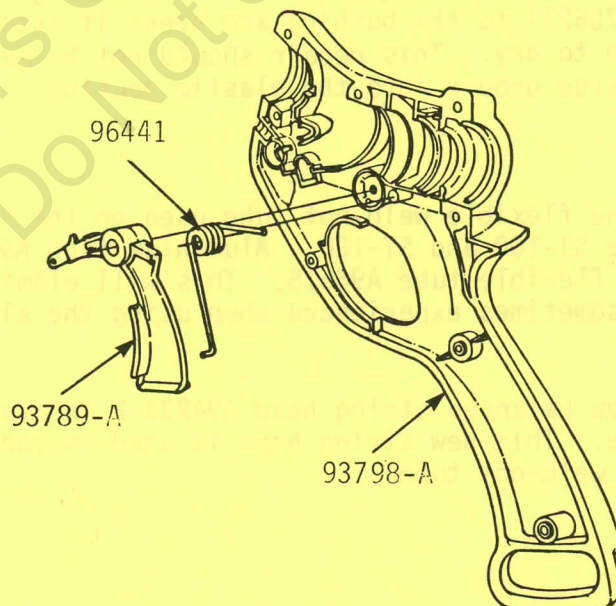
3. Slide and Spring Kit - To assure best performance of the string assembly and to reduce string usage, a new slide and spring kit is available for the ST-100 and ST-120. Part number A97582. The ST-80 requires kit A96199-A and the ST-200 requires kit A95689-A. To achieve the best performance from each model trimmer make sure the correct slide and spring kit is used.
4. Service Replacement String - Replacement string (without the spool) for all trimmers is now available in 50 ft. lengths. This string can be wound onto existing spools which will lower the cost of replacing string to the customer. Below is a list of part numbers for the pre-cut lengths of string. All string is blister packed.

<u>MODEL</u>	<u>PARTS</u>	<u>LENGTH</u>	<u>STRING DIAMETER</u>
*ST-20, 40, 60	DA92707	50' (15m)	.065 (1,65mm)
ST-80	DA92708	50' (15m)	.065 (1,65mm)
ST-100, 120, 200	DA92709	50' (15m)	.080 (2,0mm)

\*The string material for the electric trimmers (ST-20, 40, 60) is different than that for the ST-80. To assure proper string advance on the electric models always use the correct string.

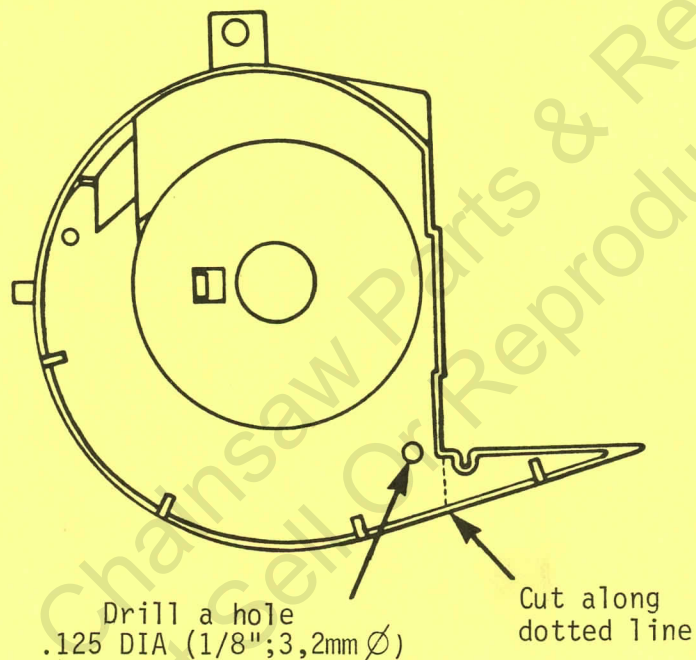
#### OTHER IMPROVEMENTS

1. New Trigger and Spring Assembly - In order to ease acceleration and to improve the throttle interlock, for easier starting, a new trigger requiring a spring and a new right handle is available. See the illustration below for part numbers.



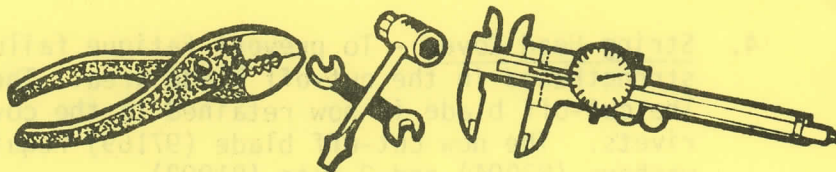


2. Air Cover Modification - When grass packs around the solid state module, the module may over-heat and fail. The air cover has been modified so that grass taken in through the starter housing can be discharged past the module. Currently, this modification is being made to air cover 94693-B. See the illustration below to modify air covers on older trimmers. The 94693-B (not modified) will be supplied through service parts until 94693-C (with modifications) is available.



INSERT CABLE TIE (46840) THROUGH HOLE TO  
SECURE GROUND WIRE TO AIR COVER.

*Eddie Turner*  
Eddie Turner  
Service Manager  
Forestry Products



## TECHNICAL SERVICE BULLETIN

NO. 183-007

**SUBJECT:** PRODUCT IMPROVEMENTS FOR 1983

**AFFECTS:** ST-200

The following is a list of all the improvements that have been made to the ST-200. These will "back-fit" trimmers built before 1983. All 1983 trimmers will have the letter "E" in the serial number. This list will provide the new part numbers where necessary.

### RECOIL STARTER SYSTEM

1. Starter Rope - The rope will now have a special knot in the pulley end. This will minimize the possibility of the knot coming untied and being pulled through the pulley. This rope will not require the plastic washer 93862. The new service rope is number 96648-1. Starter rope is also available in a 250 ft. (75m) reel number 97135.
2. Starter Housing - The starter housing rope eyelets now contain a large powdered metal bushing 96981-1. This bushing will prevent rope fraying and the rope cannot wear through the bushing to the plastic housing. To install this bushing in older housings, containing the small steel or brass bushing, drill through the existing bushing with a 3/8" (9,5mm) drill bit. Apply an adhesive (Homelite number 70627) to the bushing and press it into the housing. Allow the adhesive to dry. This repair should not be made if the rope has worn a large groove into the plastic housing.

### STRING ADVANCE SYSTEM

1. Weld-not Tube - The flexible weld-not tube used on the ST-80 will now be used on the ST-200. Aluminium tube A96509 is superseded by the flexible tube A96518. This will eliminate the breaking problem sometimes experienced when using the aluminium tube.
2. String Head - A new balanced string head A94233-2 is available to decrease vibration. This new string head is used in conjunction with the flexible weld-not tube.
3. Service Replacement String - Replacement string (without spool) is now available. A blister pack with 50' (15m) of .080 diameter string, for the ST-200, is part number DA92709.

DATE 04/83



4. String Head Cover - To prevent fatigue failures the string head cover was strengthened in the cut-off blade area. The new part number is A94473-C. The cut-off blade is now retained to the cover with screws instead of rivets. The new cut-off blade (97169) requires 2 screws (80630), 2 lock-washers (83004) and 2 nuts (81002).

#### ENGINE AREA

1. New Carburetor - The carburetor has been improved for better over all performance. To prevent fuel line pinching during assembly the carburetor fuel line fitting angle has been changed, the fuel line length increased by one inch and the air baffle modified to accept these changes. The new carburetor will be in a kit to service units built before this change. Included in kit A97601 are a fuel line and instruction sheet.

<u>OLD PARTS</u>		<u>NEW PARTS</u>
A96949 (HDC-69)	CARBURETOR	A97601 (HDC-69-B)
*95688	REPAIR KIT	97136
*70310-26	FUEL LINE	70310-30
94403	AIR BAFFLE	94403-A

\*These parts are still available.

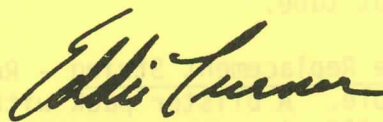
2. New Thrust Washers - To eliminate a squealing noise sometimes heard during the "break in" period the crankshaft thrust washers have been replaced with thrust bearings. The seal spacers have been replaced by retaining rings. The crankcase and cylinder now have grooves to accept the retaining rings. The new parts are listed below.

<u>OLD PARTS</u>		<u>NEW PARTS</u>
A94460-1	CRANKCASE & CYLINDER	A97517-1
*69093-B	THRUST WASHERS	95492
*69407	SEAL SPACERS	68514

\*These parts are still available to service older units and other XL type engines.

#### OTHER IMPROVEMENTS

1. Stronger Brushcutter Gear - The gear in the brushcutter has been strengthened by increasing it's thickness. To do this the large single ball bearing was replaced by two smaller ball bearings. In an effort to offer the best parts possible for servicing the brushcutter, the bearing (56219), the gear (94418-1) and the blade shaft (94416) will be supplied as a complete assembly. The assembly number is A94431-1A.
2. Improved Clutch Drum - The "slip clutch" function of the clutch drum has been eliminated and sleeve bearing was lengthened. These changes will increase the service life of both parts. The new drum must be used in conjunction with the longer sleeve bearing. A drum kit A97241 is available that includes the longer sleeve bearing 97240.



Eddie Turner  
Service Manager  
Forestry Products



## TECHNICAL SERVICE BULLETIN

NO. 183-008

**SUBJECT:** Pistons without a piston ring stop pin

**AFFECTS:** XL family, ST family, HB blowers and P-100 pumps

The above mentioned units are now being produced with pistons that do not have piston ring stop pins. The cylinder exhaust port now has a "bridge" down the center. This bridge will prevent the piston ring from clipping the exhaust port should the ring rotate.

Service parts will continue to supply only pistons with stop pins. These pistons may be used with any type of cylinder regardless of the exhaust port design. Piston rings will be available to service both types of pistons. Piston ring 69312 will service pistons with a stop pin. Piston ring 96935 will service pistons without a stop pin.



Stop Pin  
Removed

Eddie Turner  
Service Manager  
Forestry Products

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DATE 06/83





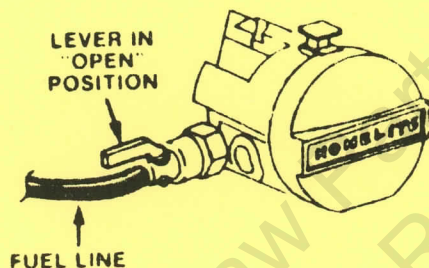
# TECHNICAL SERVICE BULLETIN

NO. 183-009

**SUBJECT:** Fuel Shut Off Valve A-97117

**AFFECTS:** ST-80, ST-100, ST-120 (Lot # E119 and above)

A new fuel shut off valve A-97117 (pictured below) is being incorporated into the above mentioned string trimmers.



In order to use this valve the fuel lines have been shortened. Fuel line 93157-24 (6", 152mm) is replaced by fuel line 94772-22 (5½", 140mm) on the ST-80 and ST-100. Fuel line 93157-27 (6 ¾", 171mm) is replaced by fuel line 94772-25 (6¼", 158mm) on the ST-120.

The ST-120 fuel line insulating sleeve 95098 (4¼", 114mm) can be shortened to 3 ¾" (95mm) for use with the new fuel valve. A new fuel line insulating sleeve 97173 (3 ¾", 95mm) is available for use on the ST-80, ST-100 and ST-120.

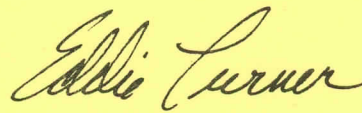
Eddie Turner  
Service Manager  
Forestry Products

ph

**SUBJECT:** CHANGE OF SPARK PLUG TYPE**AFFECTS:** 360-A0

It has been reported that, occasionally, the spark plug on the 360-A0 will loosen in the cylinder. As a result, the ground electrode of the spark plug may break off and do considerable damage to the engine. To prevent this, the type of spark plug used in the 360 has been changed. The "tapered seat" spark plug 65130-S (DJ-6J) is replaced by spark plug 63547-S (C-J6).

Spark plug 63547-S is a "gasket seat" type. This plug is currently used in the SXL-A0.



Eddie Turner  
Service Manager  
Forestry Products

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# TECHNICAL SERVICE BULLETIN

NO. 183-011

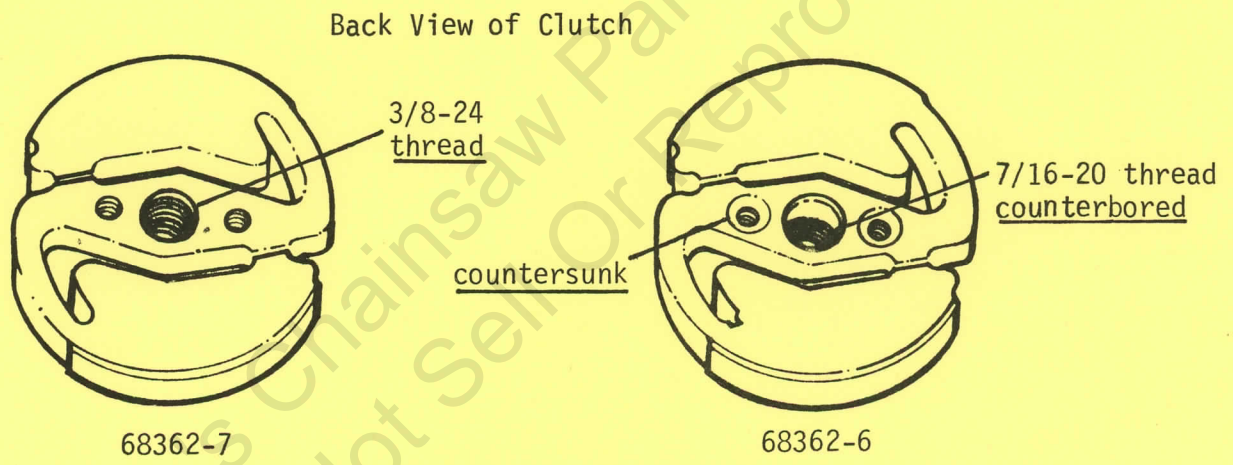
**SUBJECT:** PACKAGING ERROR

**AFFECTS:** CLUTCHES 68362-7 and 68362-6

Some packages marked 68362-7 contain clutches part number 68362-6. The 68362-7 is for the 150 and SEZ-A0. The 68362-6 is for the 240.

Identify the clutches in your stock and correct part numbers on the packages accordingly.

Use the illustrations and descriptions below to identify each clutch.



**Description:**

68362-7  
 Center hole 3/8 - 24 thread tapped all the way through  
 Clutch cover holes 10 - 32 thread tapped all the way through

68362-6  
 Center hole 7/16 - 20 thread counterbored  
 Clutch cover holes 10 - 32 thread countersunk

*Eddie*  
 Eddie Turner  
 Service Manager  
 Forestry Products

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**SUBJECT:** IGNITION TEST**AFFECTS:** 360, 550, 750, DM-50 and DM50-1

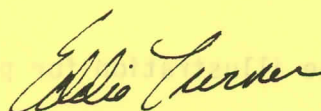
The current ignition test lamp A24994 will no longer be available. An alternative method for testing the ignition system on the above mentioned models is explained in the following paragraphs.

In order to make a test apparatus, the following material will be required:

- 1 - Test spark plug JA-313164
- 3 - Pieces of insulated wire 12" to 15" in length
- 1 - Solderless ring tongue terminal eyelet
- 2 - Medium sized alligator clips
- 1 - 10-24 X 3/8" screw

Refer to the illustration during assembly. Strip about 1/2" of the insulation off each end of the wires. Connect two wires with the "eyelet". After doing this attach an alligator clip to one of the remaining two wire ends. Attach the other clip to one end of the third wire.

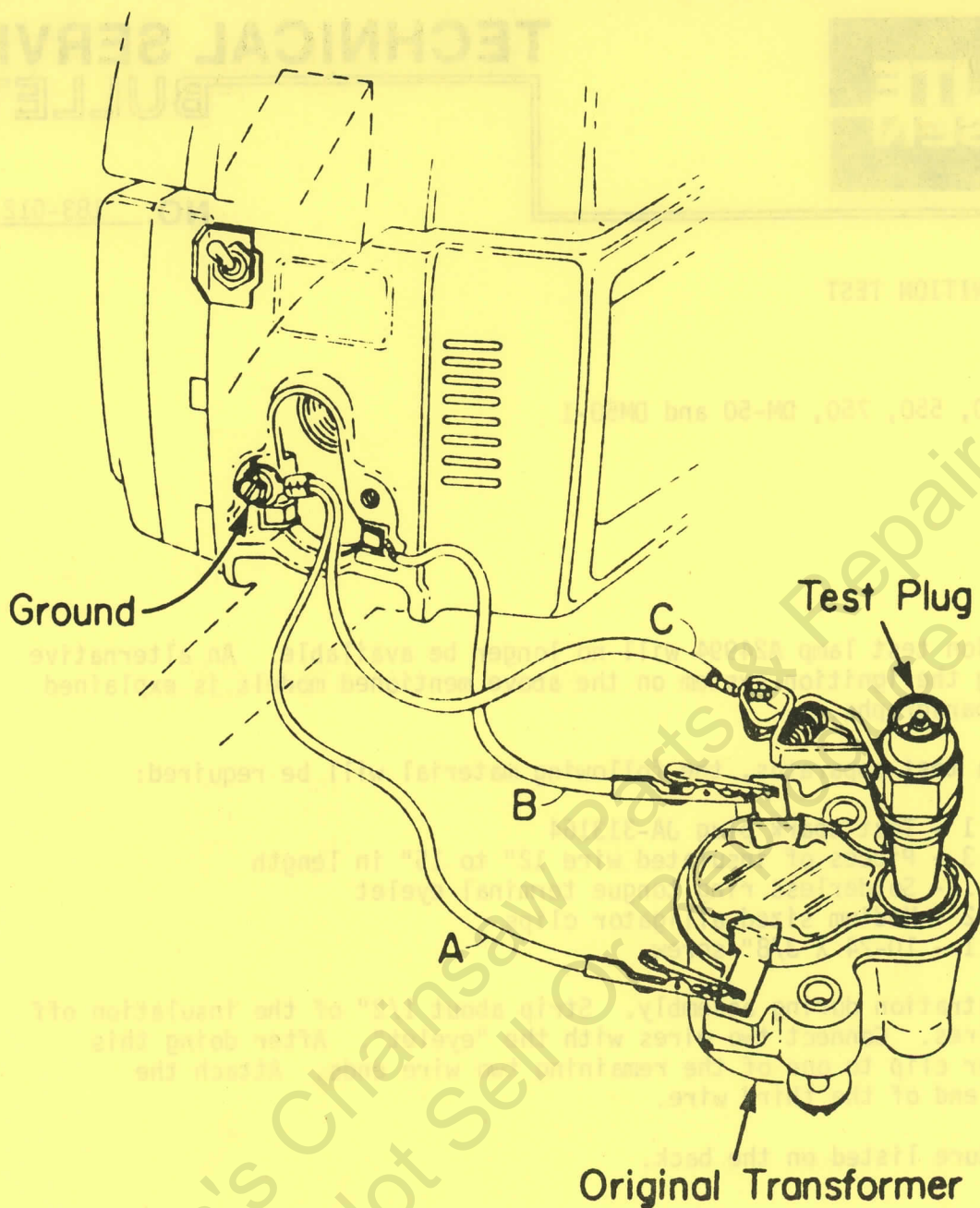
Follow test procedure listed on the back.



Eddie Turner  
Service Manager  
Forestry Products

ph





#### TEST PROCEDURE

1. Refer to the illustration for proper wire hook ups.
2. Note that wire "B" is placed underneath the receptacle tab.
3. If the type of test plug shown is not available make one by breaking the ground electrode off of a new spark plug. Skin more insulation off the test lead and wrap it around the plug threads.
4. Push the switch to the run position and pull the starter rope briskly.
5. If a spark is seen replace the test plug with the original plug and retest.
6. If no spark is seen with the test plug substitute a new transformer for the original and retest.
7. After completing step 6 and still no spark is evident, suspect a bad module, loose connections or a faulty switch.

**SUBJECT:** INCORRECT THROTTLE CABLE ADJUSTMENT**AFFECTS:** ST-80, ST-100, ST-120

It is important that the throttle cable be properly adjusted and should be checked when servicing one of the above mentioned trimmers.

If the cable is out of adjustment, the trimmer will not reach maximum speed and the string will not advance. Also, it may stall and "die-out" at wide open throttle.

With the trigger fully depressed remove the air filter cover and observe the carburetor venturi. A properly adjusted cable stops the throttle shutter in the center of the venturi. See Figure A. A cable that is not adjusted properly allows the shutter to travel past center which creates first, maximum R.P.M.'s and then reduced R.P.M.'s. See Figure B.

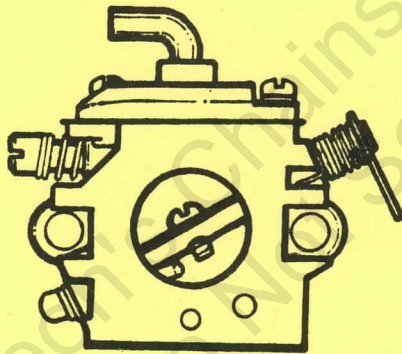


Figure A

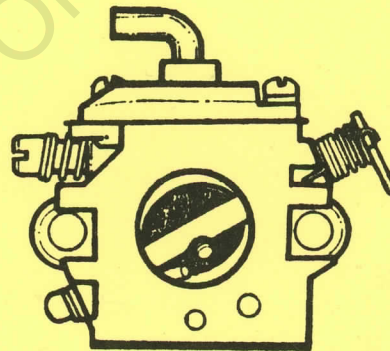


Figure B

Eddie Turner  
Service Manager  
Forestry Products



**SUBJECT:** MUFFLER CAP 93348-1A**AFFECTS:** 410 CHAIN SAW

A special muffler cap (See Figure 2) was designed to meet the lower noise levels required by the French government. Some of these caps were placed on saws that were shipped within the United States.

If a new 410 sounds muffled or has low power it may contain the wrong muffler cap. The correct cap is pictured below in Figure one.

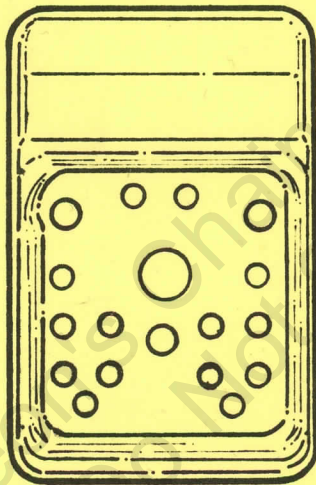


Figure 1

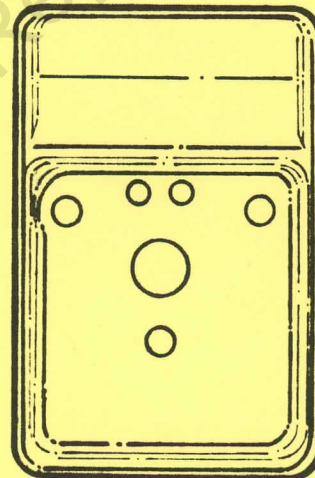


Figure 2

The cap shown in Figure 2 is to be used in France only.

Eddie Turner  
Service Manager  
Forestry Products

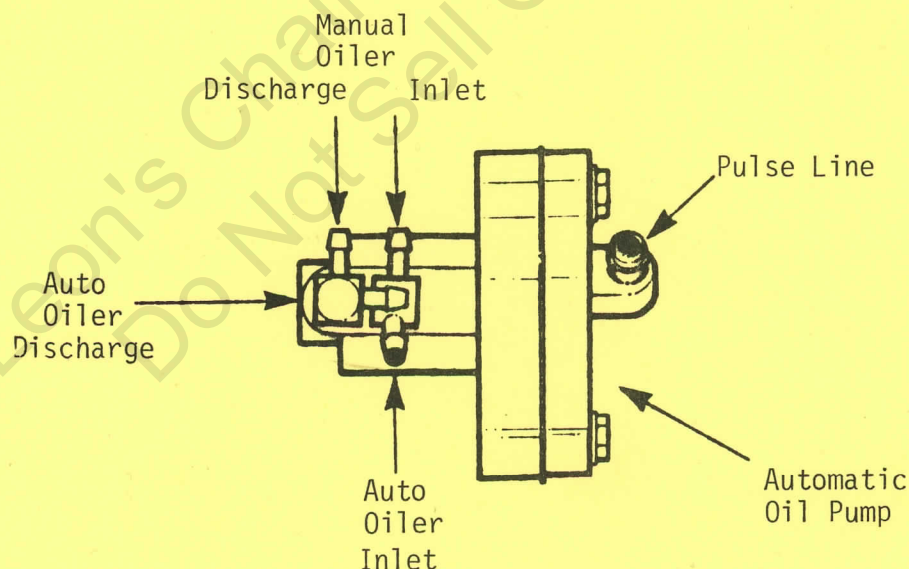
ph

**SUBJECT:** MANUAL OIL PUMP WILL NOT WORK**AFFECTS:** 245 CHAIN SAW UT10638  
SERIAL NUMBER OE2630000 and BELOW

If the manual oil pump on a new 245 does not work, suspect that the oil lines are crossed.

Remove the two manual pump lines from the automatic oiler. Place a small amount of oil on the end of each line. Depress the manual pump button several times. The oil will be blown out of the discharge line.

Place this line onto the manual oiler discharge fitting of the automatic oil pump. Place the other line onto the inlet fitting. See Figure below.

*Eddie Turner*

Eddie Turner  
Service Manager  
Forestry Products

ph

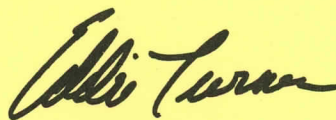


**SUBJECT:** NEW THRUST WASHERS**AFFECTS:** ST-80, ST-100, ST-120, ST-200  
HB-280, HB-480, HB-680

To eliminate a squealing noise sometimes heard during the "break in" period, the crankshaft thrust washers have been redesigned. The seal spacers have been replaced by retaining rings. The crankcase and cylinder now have grooves to accept the retaining rings. The new parts are listed below:

	<u>OLD PARTS</u>		<u>NEW PARTS</u>
ST-80	A-95332-3 * 69093-B * 69407	Crankcase & Cylinder Thrust Washers Seal Spacers	A-97528-2 95492 68514
ST-100, ST-120 HB-280, HB-480	A-96906-2 * 69093-B * 69407	Crankcase & Cylinder Thrust Washers Seal Spacers	A-97529-2 95492 68514
ST-200	A-94460-1 * 69093-B * 69407	Crankcase & Cylinder Thrust Washers Seal Spacers	A-97517-1 95492 68514
HB-680	A-95730 69093-B 69407	Crankcase & Cylinder Thrust Washers Seal Spacers	A-97530 95492 68514

\*These parts are still available to service older units and other XL type engines.



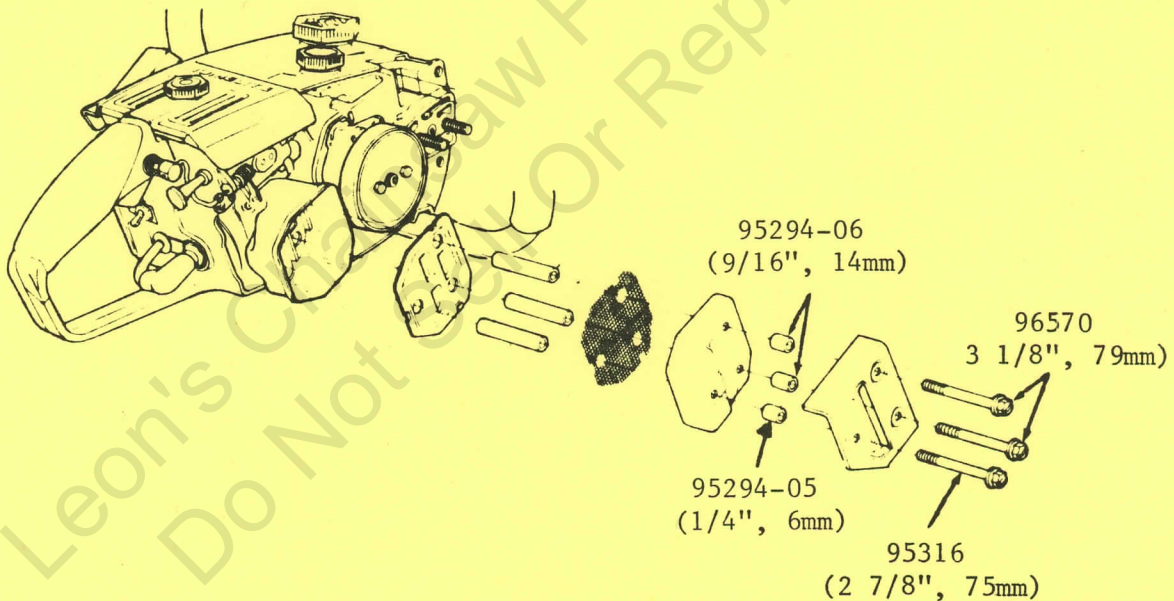
Eddie Turner  
Service Manager  
Forestry Products

ph

**SUBJECT:** NEW MUFFLER SPACERS**AFFECTS:** SEZ-A0 ABOVE SERIAL NUMBER OE0200000

In order to decrease the temperature of the muffler deflector, the distance between the muffler deflector and the muffler cap was increased. This was done by lengthening the two existing spacers and adding a third spacer.

The illustration below indicates the part numbers of the new spacers and longer screws necessary for this change.



Eddie Turner  
Service Manager  
Forestry Products



**SUBJECT:** U-HAUL RENTAL SAW (UT 10645)**AFFECTS:** SERVICING DEALERS

Homelite has produced a special rental saw (UT 10645) for the U-Haul rental system. These units are not for resale and are marked "Property of U-Haul". They are orange in color and similar to the S/XL-A0.

If a unit is brought in for repair or warranty service, it must have a U-Haul purchase order with it.

DO NOT accept any of these units for repair or warranty work without a U-Haul purchase order. Warranty on these units is in effect for 90 days after the saw is placed in rental service. If you perform a warranty repair, place the purchase order number on the claim in Box #4, on the line "owner's signature".

Any warranty claim sent in without the U-Haul purchase order, will not be processed.

If you have a question as to the status of a particular unit, please contact the local U-Haul office.

Thank you,



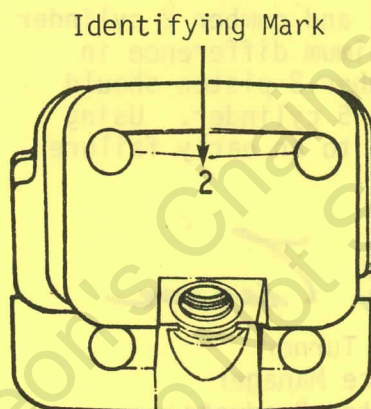
Bob Donahue  
Manager Technical Service

ph

**SUBJECT:** SERVICE PISTONS**AFFECTS:** 410 CHAIN SAW SERIAL NO. OD3190000 & ABOVE

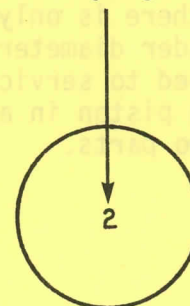
As stated in a previous bulletin, the cylinder and piston for the 410 are now being matched for maximum performance. In order to service the piston only on saws with matched components, we now have available three different size pistons.

The bore size is measured on each cylinder. The cylinders are then sorted by size into five different categories. Each cylinder is marked according to its category (see illustration #1), number 1 being the smallest and number 5 being the largest.



Cylinder  
Ill. #1

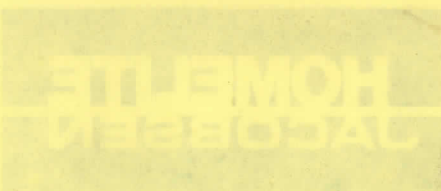
Identifying Mark



Piston  
Ill. #2

Pistons are also measured and marked accordingly. See Illustration #2. The following chart will indicate which piston to use when servicing a 410.





PISTON		CYLINDER	CYLINDER SIZE
ID MARK		ID MARK	
②	A-97794-2	1	1.9370 - 1.9375
		2	1.9375 - 1.9380
③	A-97794-3	3	1.9380 - 1.9385
④	A-97794-4	4	1.9385 - 1.9390
		5	1.9390 - 1.9395

Note the cylinder diameters in the right hand column. A number 2 piston will service a number 1 and number 2 cylinder because there is only .001 (.025mm) maximum difference in the cylinder diameters. However, a number 2 piston should not be used to service a number 3, 4 or 5 cylinder. Using the wrong piston in a cylinder may lead to an early failure of the two parts.

Eddie Turner  
 Service Manager  
 Forestry Products

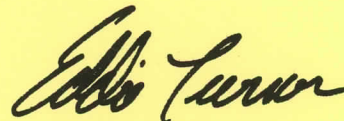
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**SUBJECT:** MAGNESIUM STARTER HOUSING A-65222-1**AFFECTS:** SEZ-A0

A quantity of magnesium starter housings are still available for the SEZ-A0. These housings will service saws built before the introduction of the plastic starter housing.

Also, all parts associated with this housing (pulley, recoil spring, spring cover, etc.) are still available. Refer to the latest SEZ-A0 parts list, 24522-A Revision 3, for the numbers of the above mentioned parts.



Eddie Turner  
Service Manager  
Forestry Products

ph

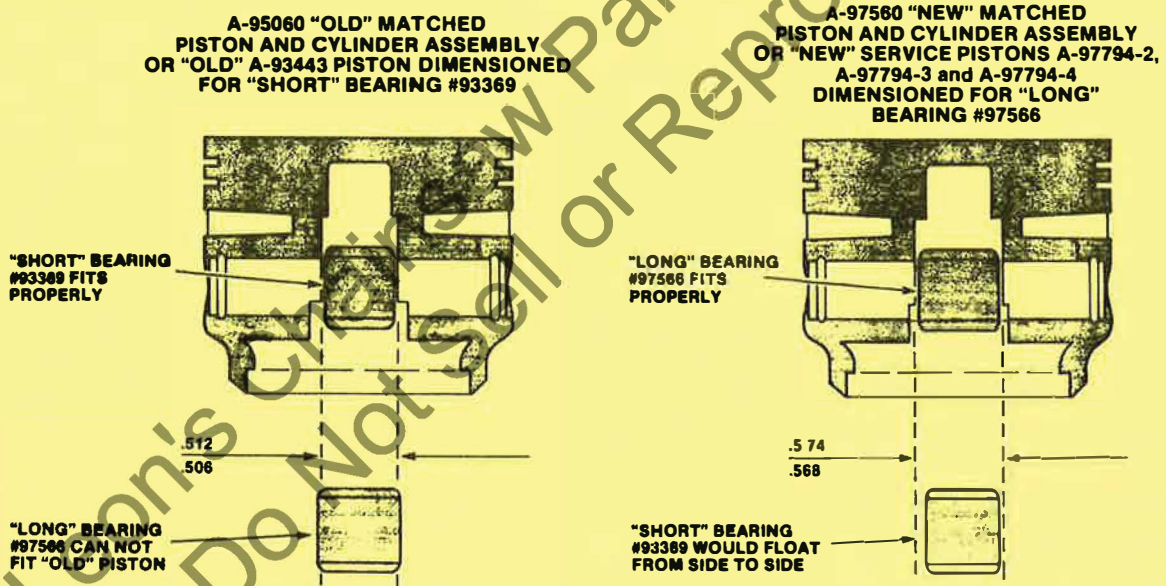


**SUBJECT:** IMPROVED MODEL

**AFFECTS:** 410 CHAIN SAWS UT-10486-B, UT-10587-B and UT-10597-B

An improved version of the 410 chain saw is now available. Listed below are details of the improvements and part numbers for servicing the new and old saws.

1. New Piston Pin Bearing - A new longer piston pin bearing is being used to increase bearing life. See below for details and part numbers.

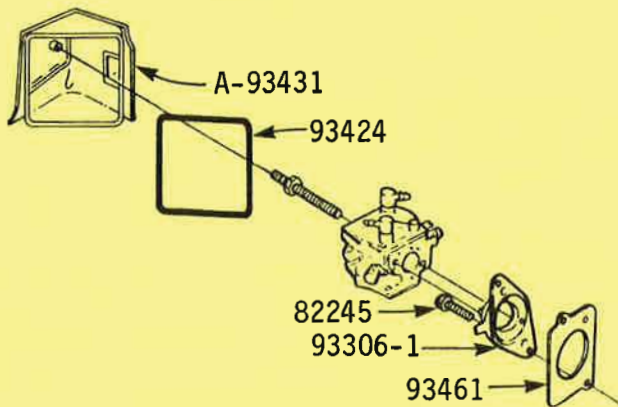


The new crankshaft assembly A-97567 will have the longer bearing 97566 pressed into the connecting rod. A short bearing 93369 will be packed with the assembly. When servicing an older saw, remove the long bearing and install the short one using the service tool provided.

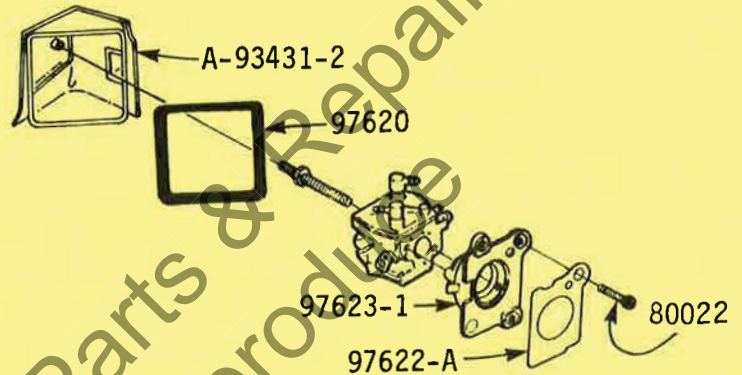
IMPORTANT: Read the instructions, provided with each assembly, carefully. Use the tools provided. Proper matching of parts is necessary to avoid engine damage.

2. Improved Sealing of Carburetor Chamber - In order to substantially reduce the amount of sawdust entering the carburetor chamber, two major changes were made. The cover sealing gasket was enlarged and an extra fastener and a gasket were added to the carburetor adapter. See illustrations for details and part numbers.

OLD DESIGN



NEW DESIGN



When assembling the new gasket 97620 to the carburetor cover note that the two "cut-out" corners are to be placed at the top of the cover. See Illustration.



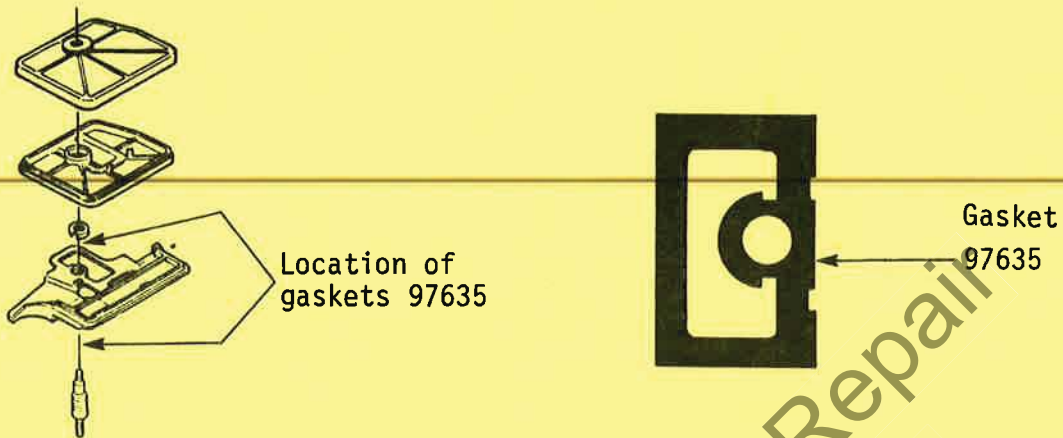
Shaded areas indicate "cut-out" corners.

97620


A bead of cement 22788 should be used to retain the gasket to the cover.



Also added for better sealing are two gaskets 97635. These gaskets are located above and below the air filter support 93364. See Illustrations.



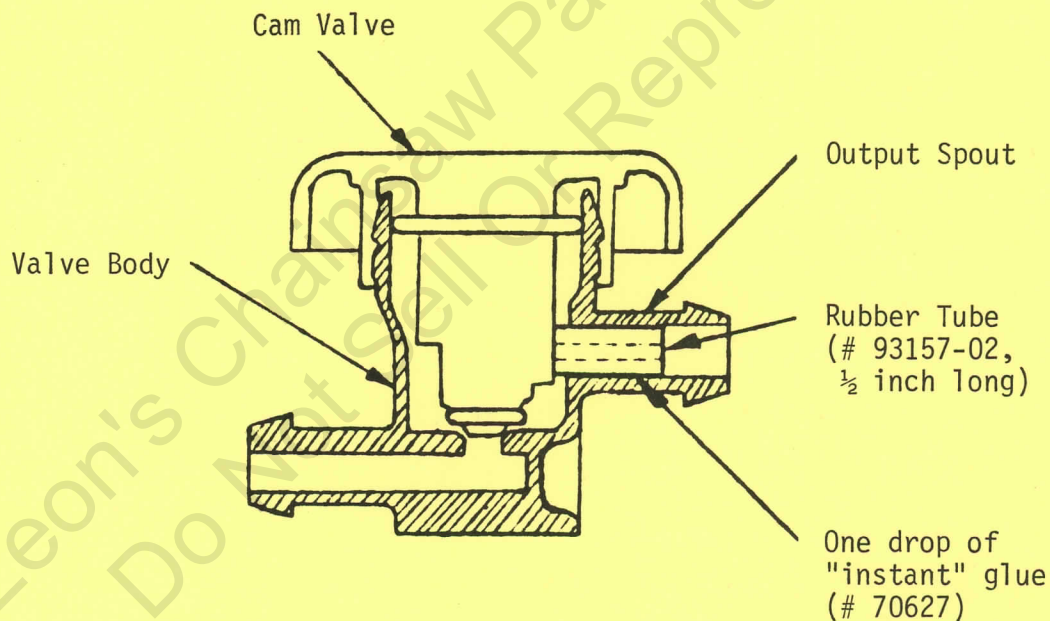
3. Improved Starter Rope - A new starter rope 97500 is available to service all 410 chain saws. This new rope has a smaller core and a larger jacket. This makes the rope stronger and more flexible. A more flexible rope returns easier and wears longer.
4. Improved Bumper Spike Retention - Two new bumper spike screws 97636 are being used with two plastic sealing washers 97633 for better retention of the bumper spike. The plastic washers collapse and fill the pocket in the casting as the nuts are tightened.
5. Other Improvements - The cylinder exhaust port has been redesigned to reduce the noise level of the saw. Also, the piston ring gaps are staggered for a slight power improvement.

  
Eddie Turner  
Service Manager  
Forestry Products

ph

**SUBJECT:** FLUID CONTROL VALVE A-95766**AFFECTS:** HB680 BACK-PACK BLOWER

We have had reports that the fluid tank on our HB680 empties too fast for certain applications. Enclosed is a cross section picture of the control valve with a piece of tubing (part number 93157-02) in the output spout. A tank of fluid will last twice as long by installing this tube in the valve. Be sure to install the rubber tube as described below.



With the cam valve in place, align the number 1 on the valve cap with the output spout. Insert the rubber tube until seated. Apply one small drop of "instant" glue (part number 70627) between the rubber tube and the inner wall of the output spout.

*Rick Mason*

Rick Mason  
Service Manager  
Construction Equipment

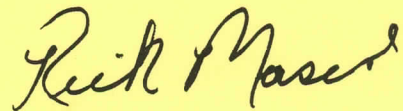


**SUBJECT:** PLUGS AND PLUG COVERS**AFFECTS:** VCH-178 and VCH-250

On the above vibrators, the male plug, # 62162 has been superseded to # 48849. There is also a new rubber cover # 48850. This is the only cover that will fit the # 48849 male plug due to the size of the plug.

Please add these new part numbers to your parts list.

<u>OLD NUMBERS</u>		<u>NEW NUMBERS</u>	
62162	male plug	48849	male plug
36775	cover	48850	cover



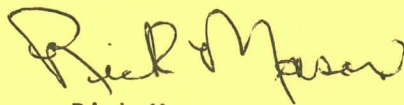
Rick Mason  
Service Manager  
Construction Equipment

ph

**SUBJECT:** SERVICE ENGINE**AFFECTS:** PCA 20

Briggs and Stratton has discontinued the large frame 4 hp engine used on the PCA 20 asphalt compactor.

In the past, Homelite has serviced the PCA 20 with a complete engine, part number A-51398-S. We will have a limited number of these engines in stock for service. When the stock is exhausted the unit must be serviced with a short block. The short block part number is 29925, and is available only through Briggs and Stratton.



Rick Mason  
Service Manager  
Construction Equipment

ph





## TECHNICAL SERVICE BULLETIN

NO. 383-001

**SUBJECT:** BRIGGS AND STRATTON ENGINES FOR JACOBSEN LAWN MOWERS

### AFFECTS:

The following Briggs and Stratton engines to service the lawnmower listed below have been added to our service parts stock as a convenience to our dealers and customers. These part numbers do not appear in the illustrated parts lists for the units.

JA13067-6 fits	Model 92905 Model 42179	Type 1851-01 Super Bagger	3.5 HP electric start
JA14201-2 fits	Model 93508 UT 30018 UT 30016 Model 42306 Model 32194	Type 0265-01 T20P Turbo-Vac T20 Turbo-Vac Turbo-Vac Turbo-Vac	3.5 manual start
JA14205-1 fits	Model 110908 Model 42232 Model 42240	Type 0428-01 Super Bagger Super Bagger	4 HP manual start
JA14216-5 fits	Model 93502 UT 31005 UT 31004 UT 31003	Type 0266-01 21 LK pp Lawn King 21 LK Lawn King 20 LK pp Lawn King	3.5 manual start
JA14216-4 fits	Model 92502 UT 31002 UT 31001	Type 1061-01 18 LK Lawn King 20 LK Lawn King	3.5 HP manual start
JA14214-8 fits	Model 93508 UT 30003 UT 30001 Model 42238 Model 32154	Type 0263-01 Super Bagger Super Bagger Super Bagger Super Bagger	3.5 HP
JA14215-3 fits	Model 92908 UT 30013 UT 30011	Type 1871-01 Twin Blade Mulcher Twin Blade Mulcher	

(CONTINUED)

DATE 2/83

The following Kohler engines are available from service parts stock

JA13061-9	Model K241 AQS	Spec 46740-D	10 HP
fits	UT 34000	GT 10G	
JA13062-0	Model K301 AQS	Spec 47606-D	12 HP
fits	UT 34001	GT 12G	
	UT 34002	GT 12H	
JA13062-1	Model K321 AQS	Spec 60244-D	14 HP
	UT 34003	GT 14H	
JA13059-7	Model K341 AQS	Spec 71147-A	16 HP
	UT 34004	GT 16H	

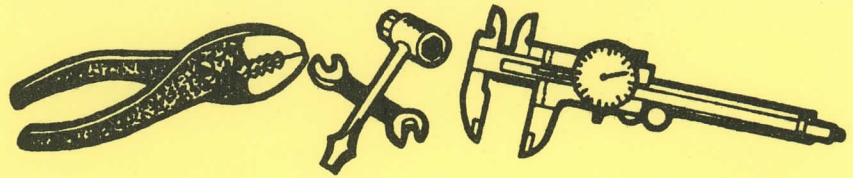
BB/1fb



Bill Borachok

Leon's Chainsaw Parts & Repair  
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# TECHNICAL SERVICE BULLETIN

NO. 383-002**SUBJECT:** Imerial Snow Blowers - New Parts**AFFECTS:** "UT" Designated Units - UT 35004(A), 35005(A), and 35006(A)

The above noted units are similar to Jacobsen model 52638, 52640, and 52642 as found in Section 7A of the Master Parts Manual. Those significant parts which are different on the UT designated units are listed below.

PAGES D7 & D8

Wheel & Tire (2)	JA14213-8
Wheel Spacer (2)	JA37586-1
Axle Bearing (2)	JA35361-3
Axle & Gear	JA18184-3
Impeller Rod Bellcrank	JA37584-9
Bellcrank Pivot Brkt.	JA37585-0
Bellcrank Bolt	JA37543-1
Bellcrank Bolt Nut	JA44381-0
Bellcrank Bolt Nut	JA44471-8
Hex Shaft Brg. Retainer	JA37549-3

PAGES D9 & D10

Front Chute Adj. Rod	JA37587-3
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PAGES D11 & D12

Chute Adj. Crank	JA37587-2
Eyebolt	JA35216-7
Elec. Wiring Harness	JA37587-1
Speed Control Mtg. Brkt.	JA37587-4
Brkt. Mtg. Screw (2)	JA40401-6
Brkt. Mtg. Nut (2)	JA44470-8
Speed Control Mtg. Spring	JA35195-6
Grip Mounting Nut(2)	JA44551-6
Panel (UT 35004(A))	JA11778-1
Panel (UT 35005(A))	JA11778-3
Panel (UT 35006(A))	JA11778-2

Pete Watson

Technical Service Advisor, Lawn &amp; Garden

DATE 2/83





## TECHNICAL SERVICE BULLETIN

NO. 383-003**SUBJECT:** Gear Reducer Assemblies for 1983 Compliance Mowers.**AFFECTS:** 1983 Compliance Mowers

The following list indicates the part numbers for the gear reducer assembly for the 1983 line of compliance lawn mowers.

LK20P	Lawn King	JA99027-4
LK21P	Lawn King	JA99027-5
S21P	Super Bagger	JA99027-1
T20P	Turbo-Vac	JA99027-3
M20P	Mulcher	JA99027-2

These gear reducers incorporate a friction cone clutching device and require the use of type F automatic transmission fluid instead of the JA547157 gearbox lubricant. Do not use the JA547157 gearbox lubricant in these gear reducers. The Type "F" automatic transmission fluid is readily available locally and will not be supplied by Homelite.

The new gear reducer also uses a worm gear of a new material. The new worm gear is interchangeable with the one used in previous gear reducers. Our service stock of old worm gears was purged and any worm gear being supplied now is of the new material.

The friction clutch components from the new gear reducer will not fit in the old gear reducer boxes. The axle, the length of the clutch assembly, the clutch fork, the clutch lever, the gearbox and cover have all been changed.

If a customer has worn out a gear reducer and would like the new style gear reducer assembly installed you must order the proper gear reducer for the type mower (Lawn King, Super Bagger, Turbo-Vac, Mulcher) and a gear reducer installation kit. The following are the part numbers for the gear reducer installation kits.

LK20P	Lawn King	JA99026-5
LK21P	Lawn King	JA99026-6
S21P	Super Bagger	JA99026-1
T20P	Turbo-Vac	JA99026-7
M20P	Mulcher	JA99026-8

(Continued)

DATE 2/4/83

The components for the old style gear reducers will be made no longer available as supplies are used up. The new gear reducer assemblies have been priced so that the installation of the new gear reducer assembly will approximate the cost to the customer of having his old gear reducer rebuilt.

*Bill Borachok*  
 Bill Borachok

SUBJECT: Gear Reducer Assemblies for 1983 Compliance Models

The following indicates the part numbers for the gear reducer assembly for the 1983 line of compliance gear motors.

JAWR027-4	Low King	1K30F
JAWR027-2	Low King	1K31F
JAWR027-1	Super Bagger	231F
JAWR027-3	Turbo-Vac	T30F
JAWR027-5	Butcher	H30F

These gear reducers incorporate a new cone clamping device and require the use of type 7 automatic transmission fluid instead of the JAWR027 gear oil. Do not use the old gear oil in these gear reducers. The type "T" automatic transmission fluid is readily available locally and will not be supplied by Homelite.

The new gear reducer also uses a new gear material. The new gear is interchangeable with the old gear. Old gear being supplied service stock of old work gear was being used and now being supplied now is of the new material.

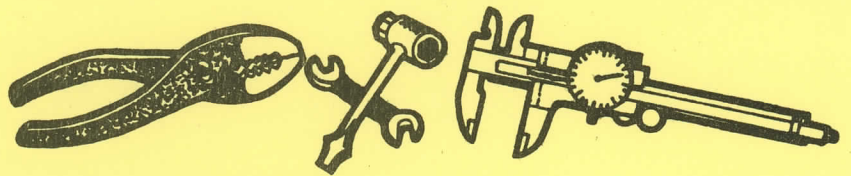
The friction clutch components from the new gear reducer do not fit in the old gear reducer boxes. The axle, the length of the clutch lever, the clutch fork, the clutch lever, the gear and cover are all changed.

If a customer has worn out a gear reducer and would like the new gear reducer assembly installed you must order the proper gear reducer (type motor: Low King, Super Bagger, Turbo-Vac, Butcher) and a gear reducer installation kit. The following are the part numbers for the gear reducer installation kit.

JAWR028-2	Low King	CL30F
JAWR028-1	Super Bagger	CL31F
JAWR028-3	Turbo-Vac	CL32F
JAWR028-4	Butcher	CL33F

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## TECHNICAL SERVICE BULLETIN

NO. 383-004

**SUBJECT:** Batteries

**AFFECTS:** S21E (UT30042); S21P4E (UT 30041) Compliance Mowers

The batteries on the compliance electric start walk behind rotary mowers are supplied by Briggs & Stratton Corp. and will be warrantied by them through their servicing dealer organization.

The battery carries a one (1) year limited warranty and must be returned by the dealer to Briggs & Stratton when warranty is performed.

The batteries returned will be tested by Briggs & Stratton and if found not to be defective, will be returned to the servicing dealer.

The battery is a six volt battery and if evidence indicates that the battery was charged with a charger other than six volts, 1.5 amp max, the warranty will be rejected. If a battery is charged with a charger other than six volts, 1.5 amp, the case of the battery will be swollen or bulged out.

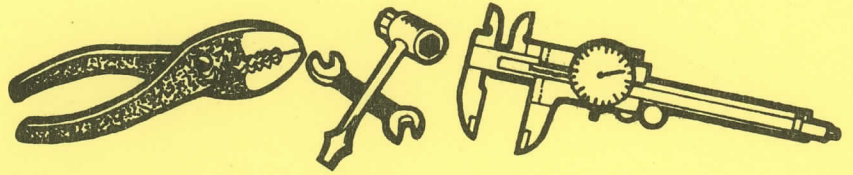
Briggs & Stratton has introduced a battery tester (PN19257) for checking the battery and charger. This tester is available through their normal distribution system.

Homelite/Jacobsen is not authorized to accept any warranties for these batteries or work performed on Briggs & Stratton engines.

Bill Borachok  
Project Manager  
Lawn & Garden

DATE 3/83





## TECHNICAL SERVICE BULLETIN

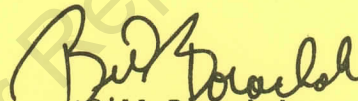
NO. 383-005

**SUBJECT:** 34" Mower Deck for LT Tractors

**AFFECTS:** JA114071 Deck

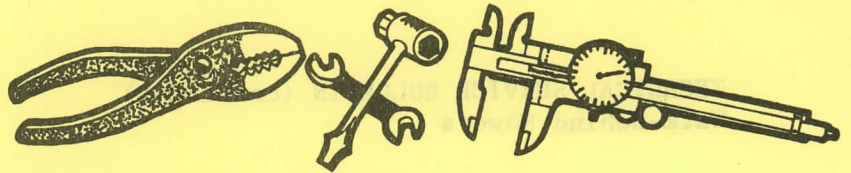
The service deck for the 34" mower for the LT lawn tractor is no longer available. If a customer requires a replacement part, he must purchase the complete mower assembly, UT36002A.

The UT36002A deck contains many improvements in the blade spindle arrangement and is closely related to the deck on the new LTX tractors.

  
Bill Borachok  
Project Manager  
Lawn and Garden

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DATE 3/83



## TECHNICAL SERVICE BULLETIN

NO. 383-006

**SUBJECT:** Change & Update to Illustrated Parts Lists: Walk-Behind Mowers

**AFFECTS:** 1983 Models: 18" & 20" Lawn King - Parts List #JA-99018-2  
21" Lawn King - Parts List #JA-99018-3  
20" Turbo-Vac - Parts List #JA-99018-6  
20" Twin Blade Mulcher - Parts List #JA-99024-2  
21" Super Bagger - Parts List #JA-99018-4

Revisions to the above listed Illustrated Parts Lists for the 1983 model mowers are called to your attention. Please correct your parts list as noted below.

### 18" & 20" LAWN KING

Figure 1, Item 22: Mulcher Baffle JA-39736-8 is not applicable to the 18" model. Remove this reference from the LK18 column.  
Item 53: Gear reducer part number JA-99404-0 is superseded. Change the part number to JA-99027-4.

#### ADD

Figure 2, Item 28: Bolt, JA-40011-6; secures traction cable upper anchor point to start control for the LK20P.

Figure 3, Item 22: Gasket part number JA-37574-8 is incorrect. Change part number to JA-37594-8.

### 21" LAWN KING

Figure 1, Item 52: Gear reducer part number JA-99405-0 is superseded. Change the part number to JA-99027-5.

Figure 2, Item 28: Bolt part number JA-99247-1 is incorrect. Change the part number to JA-40011-6.

### 20" TURBO-VAC

Figure 1, Item 58: Gear reducer part number JA-99401-0 is superseded. Change the part number to JA-99027-3.

### 21" SUPER BAGGER

Figure 1, Item 63: Gear reducer part number JA-99403-0 is superseded. Change the part number to JA-99027-1.  
Item 54: Wheel & Tire part number JA-50139-2 is incorrect. Change the part number to JA50139-6.

DATE 4/83

TECHNICAL SERVICE BULLETIN (continued)  
Walk-Behind Mowers

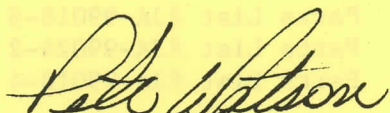
Item 39: Drag Flap part number JA-95925-7 is incorrect.  
Change part number to JA-35925-7.

ADD Item 71: Bolt, JA-40887-6; engine mounting bolts.

Figure 2, Item 27: Electric start control part number JA-99247-3 is incorrect.  
Change part number to JA-99247-2.

20" TWIN BLADE MULCHER

Figure 1, Item 40: Gear reducer part number JA-99402-0 is superseded. Change  
part number to JA-99027-2.



Pete Watson  
Technical Service Advisor  
Lawn and Garden

bbp

Leon's Chainsaw Parts & Repair  
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**SUBJECT:** WARRANTY REPLACEMENT OF GEAR REDUCERS**AFFECTS:** ALL SELF-PROPELLED WALK BEHIND MOWERS

In reviewing the Jacobsen Flat Rate Manual we have found that the replacement of the Gear Reducer was not included. Because of this oversight we have been accepting the complete rebuild job number and time since July, 1982.

We have listed below the new Flat Rate job number and the time to be reported on your warranty claims.

ALL CLAIMS RECEIVED AFTER JUNE 30, 1983 WILL HAVE THE TIME ADJUSTED ACCORDINGLY.

**I. SUPER BAGGER**

<u>JOB NUMBER</u>	<u>DESCRIPTION</u>	<u>TIME</u>
WC43	Gear Reducer - Replace R & I drive belt and belt cover. R & I Gear Reducer and transfer all other parts as necessary.	.7

**II. MULCHER**

<u>JOB NUMBER</u>	<u>DESCRIPTION</u>	<u>TIME</u>
WC43	Gear Reducer - Replace R & I drive belt and belt cover. R & I Gear Reducer and transfer all other parts as necessary.	.7

**III. LAWN KING**

<u>JOB NUMBER</u>	<u>DESCRIPTION</u>	<u>TIME</u>
WC43	Gear Reducer - Replace R & I drive belt. R & I Gear Reducer and transfer all other parts as necessary.	.7

Continued



IV. TURBO VAC

JOB NUMBER

DESCRIPTION

TIME

WC43

Gear Reducer - Replace  
R & I drive belt and belt cover.  
R & I Gear Reducer and transfer  
all other parts as necessary.

.7

Thank you very much for your cooperation in this matter.

  
T. Robert Donahey  
Manager Technical Service

ds

Leon's Chainsaw Parts & Repair  
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TIME

JOB NUMBER

DESCRIPTION

TIME

JOB NUMBER

DATE

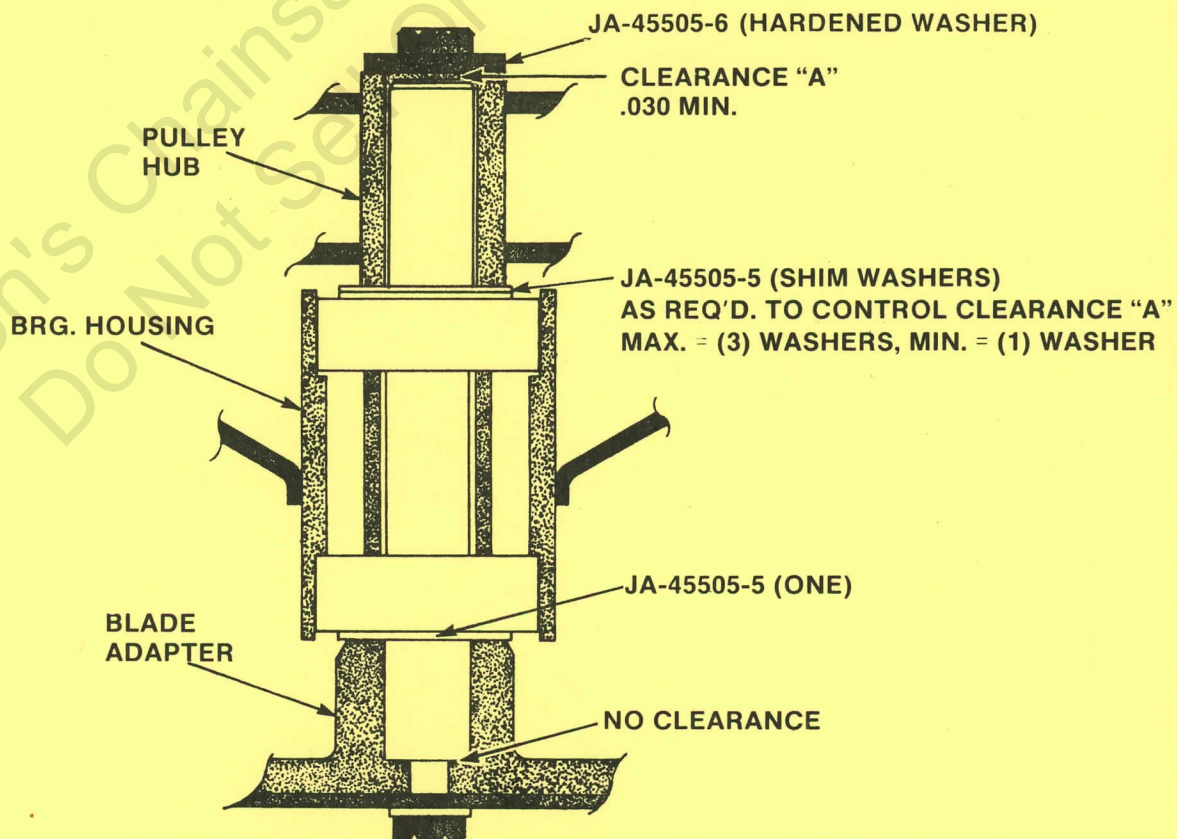
**SUBJECT:** Center Arbor Failure**AFFECTS:** UT36037 42" Mower

Manufacturing tolerances have allowed some center arbors to be produced with loose pulleys. To correct the problem shim washers have been added between the pulley and the bearing. The washer on top of the pulley has also been changed to a hardened washer.

Proper assembly procedure **MUST** be followed when installing a new center arbor.

**Assembly procedures**

1. Install blade adapter and key on arbor shaft and secure with lockwasher and bolt. Tighten bolt to 35-40 ft. lbs. Check for presence of one shim washer.
2. Install 2 shim washers on upper arbor shaft.
3. File any burrs that may be on the pulley hub. Install pulley on arbor shaft.
4. Check to see that the arbor shaft is at least .030" below the pulley hub. If shaft is above pulley hub add another shim washer.
5. Install key and secure pulley to shaft with lockwasher, bolt and hardened washer. Tighten bolt to 35-40 ft. lbs.







# TECHNICAL SERVICE BULLETIN

NO. 383-009

**SUBJECT:** Safety Standards

**AFFECTS:** All Servicing Lawn & Garden Dealers

Enclosed is "a special report for the Service Dealer" which was published for the Engine Service Association, Inc. of Milwaukee, Wisconsin for distribution to their association members. You may have received one from them already. However, the topic deserves the additional emphasis.

The report covers the dealers' concerns with the Consumer Product Safety Commission's Safety Standards for walk-behind mowers and highlights some of the requirements in the standard.

We recommend you read this report as it is in the best interest of the Servicing Dealer.

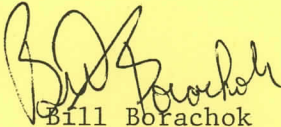
Lars Johnson  
Manager, Service Administration

LJ/lfb

NO. 383-010**SUBJECT:** Electric Start Failure**AFFECTS:** Sno Burst Snowthrower (Sno 320 UT 35001, 51610, 51611, and 320E UT 35002, 51617)

The JA58414 electric start kit has been discontinued and is replaced by JA99024-6 electric start kit. The new electric start kit has improved gears to eliminate the gear failure problem. The new kit also has an improved console panel to eliminate the breaking around the key switch.

A new kit, JA99050-5, has been released for rebuilding a starter that has failed the gears. This new kit consists of the starter motor and the spindle shaft assembly. This kit has the same improved gears as the JA99024-6 electric start.



Bill Borachok  
Project Manager  
Lawn & Garden

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**SUBJECT:** Gear Reducer Assemblies and Parts**AFFECTS:** All Self-Propelled Mowers

The new cone clutch gear reducer assemblies used on the 1983 self-propelled mowers have proven to be greatly superior to the old dog clutch reducers. We have decided to make the old reducer assemblies no longer available as well as the components that go into the old reducer. The reducers have been coded into the computer so that if you order an old reducer, you will automatically receive the new reducer. When installing this new gear reducer on mowers, you will need the proper installation kit.

The following chart shows the superseding part numbers:

	<u>Old Reducer Part Nos.</u>		<u>Latest Part Numbers Gear Reducer</u>	<u>Part Number Installation Kit</u>
Super Bagger	JA142049	JA99027-1	JA99043-5	JA99026-1
Turbo-Vac	JA142011	JA99027-3	JA99043-7	JA99026-7
Mulcher	JA142048	JA99027-2	JA99043-6	JA99026-8
LK20P	JA142173	JA99027-4	JA99043-8	JA99026-5
LK21P	JA142177	JA99027-5	JA99043-9	JA99026-6

The JA336587 helical gear and the JA336586 clutch sleeve have also been made no longer available. The new reducers and installation kits have been priced such that the cost to install a complete gear reducer assembly is approximately the same as the cost to rebuild an old reducer assembly.

We thank you for your cooperation in this matter.



Bill Borachok  
Project Manager  
Lawn & Garden

bbp