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in the "BULLETIN" section of your Service Manual

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TIMELY OPE TIPS FOR THE MONTH - 1984

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INGERSOLL

Ingersoll Equipment Co., Inc.

119 South First Street
Winneconne, Wisconsin 54986-9576
Phone 414 582-4455

January 27, 1984

TIMELY TIPS FOR THE MONTH

ISSUE #119

TIP # 1 - Snow Caster Auger Mounting Bolt Change

TIP # 2 - Foam Precleaner (for Air Cleaner) Oiling Instructions

TIP # 1 - Snow Caster Auger Mounting Bolt Change:

The auger mounting bolts on recent production "N" and "P" series snow casters can loosen during operation. These bolts must be changed and loctite applied to the threads before operation.

UNITS AFFECTED:

MODEL

SERIAL NUMBER

N80 (Red)

All

N84 (Red)

All

P80 (White)

Prior to S/N VV10604

P84 (White)

Prior to S/N ZZ11158

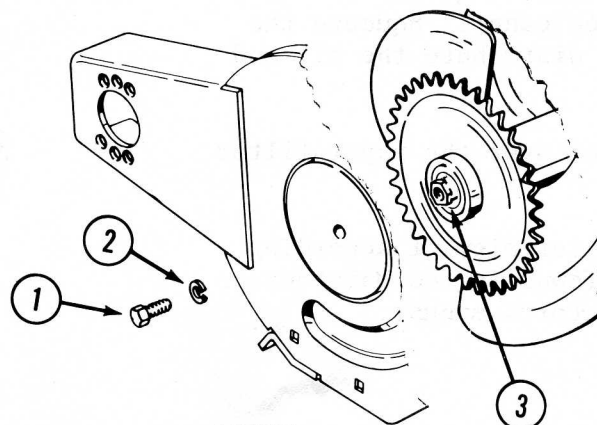
P81 (White)

Prior to S/N TT10326

Dealers are requested to make this change on both affected inventory and customer units immediately since serious damage can result if the auger loosens during operation.

Use the following procedure on BOTH ENDS of the auger:

1. Hold the stub shaft (3) with a thin 3/4" open end (tappet) wrench.
2. Remove and discard the bolt (1) and lockwasher (2).
3. Use a new 3/8" dia. by 1" long N.C. Grade 5 bolt (Case P/N 113-207) and 3/8" flat washer (Case P/N 195-525).
4. Apply Sta-Lok or Loctite (green or red) to the threads.
5. Install the new bolt and flat washer, hold the stub shaft (3) and tighten to a torque of 35 to 42 foot pounds (47 to 57 Nm).



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TIP # 1 - Snow Caster Auger Mounting Bolt Change: (CONTINUED)Reimbursement:

The cost of parts and labor can be recovered by submitting a Service Adjustment Request.

1. Use Account 7491, if sold at retail.
Use Account 7479, if in dealer inventory.
2. Use Prime Part 113-206.
3. Use Service Code 275. Enter under comments: Timely Tips Issue #119.
4. Use Machine Location 95511.
5. Use Job Code 95511A - 0.3 Hours.

TIP # 2 - Foam Precleaner (for Air Cleaner) Oiling Instructions:

The foam precleaner used with the paper air cleaner element must be oiled according to the following instructions to be effective.

Foam precleaners are standard on tractors equipped with Onan engines but they are shipped without oil. Oil the precleaners during set-up and pre-delivery of Model 226, 446, 448, and 648 tractors. Foam precleaners are not standard on tractors equipped with Kohler engines. Dealers are urged to obtain the precleaners (P/N KO237421) from their regular parts source, oil them, and install them during set-up and predelivery of Models 210, 220, 222, 224, and 444.

WASHING AND OILING INSTRUCTIONS FOR AIR CLEANER
PRECLEANER (if used).

Carefully remove the precleaner from the paper filter element.

1. WASH
2. SQUEEZE DRY
3. COAT WITH OIL
4. INSTALL OVER PAPER ELEMENT

Wash the precleaner thoroughly in a solution of detergent and water. Squeeze the precleaner dry and allow it to air dry.

Apply three tablespoons (43 grams) of SAE 30 engine oil to the precleaner. Squeeze the precleaner gently to distribute the oil and remove excess oil.

Install the precleaner over the paper filter element.

Service the paper filter element according to the instructions found in the Maintenance Section of your operator's manual.



INGERSOLL

Ingersoll Equipment Co., Inc.

119 South First Street
Winneconne, Wisconsin 54986-9576
Phone 414 582-4455

February 27, 1984

TIMELY TIPS FOR THE MONTH

ISSUE # 120

- TIP # 1 - 1984 OPE Spring Parts Stock Order Program
- TIP # 2 - K74 Tiller - 15 Tooth Sprocket Standard
- TIP # 3 - Announcement of Service Manual Revision

TIP # 1 - 1984 OPE Spring Parts Stock Order Program:

All U.S. and Canadian dealers should have already received our announcement letter dated February 16th on this subject. The program material and special order form should be in your hands no later than the first week in March. Extra special order forms and program material are being supplied to each servicing Parts Depot for your use in the event you wish to place more than one stock order during the program period beginning March 1, 1984 and ending April 30, 1984. If, for any reason, you have not received your program material and special parts stock order form by March 9th, please contact your Case Parts Depot.

TIP # 2 - K74 Tiller - 15 Tooth Sprocket Standard:

Optional drive sprockets are available for the Models J74 and K74 end drive hydraulic rotary tiller (HYTIL). The 13 tooth sprocket was standard on the Model J74. The 15 tooth sprocket is standard on the Model K74.

The tiller can be matched to the soil conditions and tractor horsepower by selecting the correct sprocket. Use the following chart as your guide. This information has been added to the K74 Rotary Tiller Operator's Manual 9-51672.

13 TOOTH SPROCKETS - P/N C26310

- a. Standard on J74 tillers
- b. For hard to average soil conditions
- c. For lower horsepower tractors (10 or 12 hp)
- d. No load maximum speed is approximately 150 RPM

15 TOOTH SPROCKETS - P/N C26312

- a. Standard on K74 tillers
- b. For average soil conditions
- c. For 14 hp and larger tractors
- d. No load maximum speed is approximately 170 RPM



(OVER)

Exclusive Manufacturer of Case Outdoor Power Equipment

TIP # 2 - K74 Tiller - 15 Tooth Sprocket Standard (CONTINUED):

17 TOOTH SPROCKETS - P/N C26313

- a. Optional
- b. For average to light soil conditions
- c. For 16 hp and larger tractors
- d. No load maximum speed is approximately 190 RPM

Changing sprockets is a sales option. Warranty does not apply. All three sprockets are available from your normal Case service parts source.

TIP # 3 - Announcement of Service Manual Revision:

Six new service manual sections for your Case Compact Tractor Master Service Manual are now available. They are:

<u>DESCRIPTION</u>	<u>FORM NO.</u>
1. Attachment Drive Clutch E-Z Adjust	9-51083
2. 5 Speed Transaxle 108, 110, 116 Tractor	8-55180
3. Onan Engine BF, B43M, B48M, CCKA	9-51392
4. Troubleshooting the Engine	9-51940
5. Electrical System 446, 448, 646, 648 Tractors	9-51720
6. Electrical System Compact Tractors with Starter Generators	9-99773

A new TABLE OF CONTENTS is also included.

HOW TO ORDER:

A. Dealers called on by Ingersoll Equipment Co., Inc. (formerly J I Case Outdoor Power Equipment Division) field service representatives will receive their revision at no charge from their representative on his next regularly scheduled call. DO NOT PLACE AN ORDER.

B. Dealers NOT called on by Ingersoll Equipment Co., Inc. field service representatives can obtain their revision at no charge by:

1. Sending a properly completed form 1740 - Printed Material Requisition to:

INGERSOLL EQUIPMENT CO., INC.
119 S. First Street
Winneconne, Wisconsin 54986
Attention: Service Dept.

2. Specify your Master Service Manual Form Number on your order. SEE EXAMPLES.

Example a: "1984 Revision for Service Manual - 9-99891"
Example b: "1984 Revision for Service Manual - 9-99892"
Example c: "1984 Revision for Service Manual - 9-99893"
Example d: "1984 Revision for Service Manual - 9-51600"

INGERSOLL

Ingersoll Equipment Co., Inc.

119 South First Street
Winneconne, Wisconsin 54986-9576
Phone 414 582-4455

March 27, 1984

TIMELY TIPS FOR THE MONTH

ISSUE # 121

- TIP # 1 - Recommendation to Clean Carbon From Engine Cylinder Heads
- TIP # 2 - 1984 OPE Spring Parts Program Information
- TIP # 3 - Mod 80 RER Pivot Pin for Mower Drive Belt Clutching Arm - Lubrication
- TIP # 4 - Mower Drive Belt Adjustment Reminder
- TIP # 5 - Paint Part Numbers

TIP # 1 - Recommendation to Clean Carbon From Engine Cylinder Heads:

As a part of your "Spring Promotion on Case Parts and Service" we recommend encouraging your customers to have you inspect and, if necessary, clean the carbon from their Case compact tractor engine cylinder head(s). At the same time the condition of the cylinder(s) can be inspected.

Loosened carbon particles are a major cause for piston and cylinder damage, known as carbon cutting, which can result in costly engine overhauls or short block replacements.

Exercise caution when scraping the carbon not to scratch the head combustion chamber and gasket surfaces. Use a tool made of either plastic or wood.

TIP # 2 - 1984 OPE Spring Parts Program Information:

A number of dealers have inquired if they can submit more than one special stock order during the current Spring Parts Stock Order Program. This will confirm dealers may place as many special orders as they wish so long as each order is:

- a. Fifteen (15) lines and \$200.00 net minimum.
- b. Submitted on the Special Order Form.
- c. Submit orders to your normal parts depot. Some orders have been mailed to Winneconne in error.

NOTE: Extra special order forms are available from your OPE Field Service Representative or from Ingersoll Equipment Co., Inc., Winneconne, WI 54986.

Some dealers have also asked if more add-on items can be ordered than there are lines available at the end of the special order form. This can be done by attaching the regular stock order form in duplicate to the back of the special order form. The discounts and net cost computations should be made at the end of the Special Order Form in the spaces provided.

(OVER)



Exclusive Manufacturer of Case Outdoor Power Equipment

TIP # 3 - Mod 80 RER Pivot Pin for Mower Drive Belt Clutching Arm - Lubrication:

Field reports indicate that some clutching arms, P/N C24757, for the mower drive belt, are binding or seizing to the pivot pin.

Model 80's, P.I.N. 14000432 and after, have the pin coated with grease or an anti-seize compound.

The pivot pin on Model 80's prior to P.I.N. 14000432 should be coated with anti-seize compound, Case P/N B17507 or equivalent during pre-delivery inspection.

Customers should be advised to subsequently relubricate this pin at the beginning and end of each season.

TIP # 4 - Mower Drive Belt Adjustment Reminder:

Correct mower drive belt adjustment is essential to insure normal drive belt life.

NOTE: All mower adjustments must be made with the mower lowered to the desired cutting position, attachment drive clutch disengaged and engine shut off.

Check the belt tension before each use and adjust, if necessary, according to the following procedure:

1. Lower the mower to the desired cutting position.
2. Turn the adjustment handle until the gap between the spring coils are equal to the spring wire diameter. Turn the handle counterclockwise to increase tension and clockwise to decrease tension.

TIP # 5 - Paint Part Numbers:

The following paint is available from your regular parts source.

COLOR	WHERE USED	SPRAY PAINT	QUARTS
		(CARTON OF 12) PART NUMBER	(CARTON OF 4) PART NUMBER
Power Tan	648 Loader	B17522	B17520
Power White Gloss	Wheels and White Attachments	B17452	B17409
Black - Semi Gloss	Grills, Engines, 1984 Frames	B17540	B17538

Case Service Parts Supply will ship paint by Truck Freight Only. To avoid excessive freight charges to you, be sure to order paint on your Bi-Weekly Stock Order which qualifies for prepaid freight.

April 26, 1984

TIMELY TIPS FOR THE MONTH

ISSUE # 122

TIP # 1 - Hard Shifting on 1984 Model 108, 110, 116 Tractors

TIP # 2 - Hydraulic PTO Valve Bracket Fit to Fender Mounting Bolts

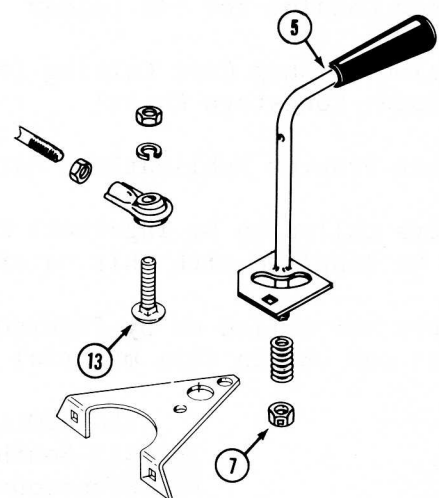
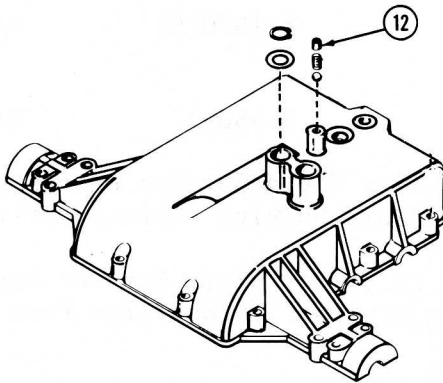
TIP # 3 - New Distribution OPE Parts Catalogs

TIP # 1 - Hard Shifting on 1984 Model 108, 110, 116 Tractors:

Several field reports have been received concerning hard shifting of the Peerless 5-Speed transmission used on 1984 Model 108, 110 and 116 tractors.

The following areas should be checked during your predelivery inspection to insure that the transmission can be shifted with normal effort.

1. The traction drive belt must fully disengage from the transmission input pulley when the clutch-brake pedal is depressed. Allow time for the belt to "wear in" if new or adjust the belt pulleys as required according to the procedures in the operator's manual.
2. Check the position of nut (7) on control lever (5). Turn it counterclockwise until you can push the travel lever down 1/4" against the spring tension.
3. Apply a small amount of grease to the steering bracket that bolt (13) rides on.
4. Perform this step only after performing Steps 1, 2 and 3 above. Check the position of the detent retaining screw (12) on the 5-speed transmission. The screw should be positioned between flush and one turn below flush.



(OVER)

Exclusive Manufacturer of JI Case Outdoor Power Equipment

TIP # 2 - Hydraulic PTO Valve Bracket Fit to Fender Mounting Bolts:

The mounting brackets of J-17 and L-17 hydraulic PTO's built and shipped through April 6, 1984 will not fit the new fender bolt hole spacing used on tractors beginning with the P.I.N.'s listed below. The upper mounting tab of the P/N C23337 bracket is too short to reach the bolt hole.

<u>MODEL</u>	<u>P.I.N. AND AFTER</u>	<u>MODEL</u>	<u>P.I.N. AND AFTER</u>
220	14034915	226	A11
222	14036535	444	14039666
224	14038212	446	14041531
		448	14044109

When ordering a hydraulic PTO kit for tractors beginning with the above listed P.I.N.'s, request a J-17"X" or L-17"X" from the Ingersoll Distribution Department. Boxes marked with an "X" have the "new" C23337 mounting bracket. The "new" C23337 bracket will also service prior model tractors. SPS inventory is being purged.

"New" P/N C23337 brackets can be ordered from SPS or the Ingersoll Service Office for PTO kits on hand at your dealership which are to be mounted on tractors beginning with the P.I.N.'s listed.

TIP # 3 - New Distribution OPE Parts Catalogs:

The following new Parts Catalogs are available:

	<u>NUMBER</u>	<u>PRICE</u>
1. New Catalog for 1984 Model 108, 110, 116	8-2700	\$2.00
2. New Catalog for 1984 Model 220, 222, 224, 444	8-2740	2.50
3. New Catalog for 1984 Model 226, 446, 448	8-2750	2.50
4. New Catalog for 1984 Model L-47 Mower (44" rear discharge mower for 100 Series)	8-2710	1.00
5. Revised Catalog for Prior Model 108, 110, 118	D1274	2.00
6. Revised Catalog for 648 Loader	8-1421	2.50
7. Revision to Dump Cart Catalog (#8-1870) (includes Conestoga Cover)	8-1870 R1	N/C
8. Compact Tractor Publications Catalog	8-55001	N/C
A. Dealers called on by Ingersoll Equipment Co, Inc. Field Service Representatives will be supplied with this material by their Field Service Representative.		
B. Dealers not called on by Ingersoll Equipment Co., Inc. Field Service Representatives can obtain this material by submitting a properly completed Form 1740 to:		

INGERSOLL EQUIPMENT CO., INC.
119 South First St.
Winneconne, WI. 54986
Attention: Service Department

INGERSOLL

Ingersoll Equipment Co., Inc.

119 South First Street Winneconne, WI 54986-9576 414-582-4455

June 7, 1984

TIMELY TIPS FOR THE MONTH

ISSUE #123

TIP #1 - Travel Control Lever: (A) Indicator Pin Hole Location Change and
(B) New Compression Spring (P/N C27822)

TIP #2 - C25485 Rectifier Part Number Change

TIP #3 - Kohler Engine; Breaker Points and Push Rod Change

TIP #1 - Travel Control Lever: (A) Indicator Pin Hole Location Change and
(B) New Compression Spring (P/N C27822):

A. Insure that the indicator pin on the travel control lever does not bottom out on the bushing in the dash before the locator pin clears the neutral detent. To check, place travel control lever in the forward mid speed position. A 3/32" minimum clearance should exist between the bushing flange and the underside of the locator pin. Perform the following procedure if contact exists making movement of the lever difficult.

1. Remove the existing indicator pin.
2. Use a new 1/8" drill bit and drill a hole immediately above the existing hole.
3. Insert the indicator pin into the new hole.

The revised hole was first used:

<u>MODEL</u>	<u>P.I.N.</u>	<u>MODEL</u>	<u>P.I.N.</u>
220	14054416	444	14059047
222	14055641	446	14060389
224	14056638	448	14062391
226	14057929		

B. A new compression spring (P/N C27822), with less spring force, is now being used to reduce the amount of force needed to depress the travel control lever to clear the neutral detent.

Replace the old (P/N C25595) spring on a complaint basis with the new (P/N C27822) spring. Normal warranty will apply.

Use Machine Location: 65010

Use Job Code: 65010A 0.4 Hours

The P/N C27822 spring was first used:

<u>MODEL</u>	<u>P.I.N.</u>	<u>MODEL</u>	<u>P.I.N.</u>
220	14054468	444	14059120
222	14055809	446	14060612
224	14056693	448	14062518
226	14058031		



(OVER)

Exclusive Manufacturer of JI Case Outdoor Power Equipment

TIP # 1 - Travel Control Lever: (A) Indicator Pin Hole Location Change and
(B) New Compression Spring (P/N C27822): CONTINUED

Use the following procedure to install the travel lever compression spring:

1. Remove the access panel from the dash tower.
2. Remove the link for the control spool from the tab on the travel control lever.
3. Remove the four bolts which hold the steering gear support to the tractor frame rails.
4. Place a short prybar against the attachment lift cross shaft and pry the steering support down and to the rear.
5. Use a large screwdriver (or similar tool) to push up and forward on the nylon washer until the washer and spring can be removed from the travel lever shaft.
6. Install the washer and new spring on the shaft with the straight end coil on the bottom and pointing to the left.
7. Install the nylon washer on the shaft and push up and rearward to seat the washer and shaft with the new spring into the recess in the steering gear support.
8. Reposition steering gear support and install the four bolts. Connect the link to the travel control lever and install the access panel.

TIP # 2 - C25485 Rectifier Part Number Change:

Order Part Number C27509 when requiring the small square rectifier regulator previously identified as C25485. The prior number is obsolete and will not substitute in the SPS system.

Part Number C27509 kit includes the rectifier and an adapter plug for use with early production 15 amp charging systems. The C21945 rectifier used with early production 15 amp charging systems does sub to the C27509 kit.

TIP # 3 - Kohler Engine; Breaker Points and Push Rod Change:

When using breaker points, Part Number C27439 for service replacement, a special hardened push rod, Part Number C27440, must be used.

Failure to use the proper push rod will result in shortened push rod life causing hard starting, erratic engine operation, and/or loss of power.

Engines installed in tractors beginning with the P.I.N.'s listed below have the new, special hardened push rod factory installed.

<u>MODEL</u>	<u>P.I.N. AND AFTER</u>	<u>MODEL</u>	<u>P.I.N. AND AFTER</u>
210	14033834	224	14037977
220	14034750	444	14039474
222	14036299		

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Ingersoll Equipment Co., Inc.

119 South First Street Winneconne, WI 54986-9576 414-582-4455

June 7, 1984

TIMELY TIPS FOR THE MONTH

ISSUE #123

TIP #1 - Travel Control Lever: (A) Indicator Pin Hole Location Change and
(B) New Compression Spring (P/N C27822)

TIP #2 - C25485 Rectifier Part Number Change

TIP #3 - Kohler Engine; Breaker Points and Push Rod Change

TIP #1 - Travel Control Lever: (A) Indicator Pin Hole Location Change and
(B) New Compression Spring (P/N C27822):

A. Insure that the indicator pin on the travel control lever does not bottom out on the bushing in the dash before the locator pin clears the neutral detent. To check, place travel control lever in the forward mid speed position. A 3/32" minimum clearance should exist between the bushing flange and the underside of the locator pin. Perform the following procedure if contact exists making movement of the lever difficult.

1. Remove the existing indicator pin.
2. Use a new 1/8" drill bit and drill a hole immediately above the existing hole.
3. Insert the indicator pin into the new hole.

The revised hole was first used:

<u>MODEL</u>	<u>P.I.N.</u>	<u>MODEL</u>	<u>P.I.N.</u>
220	14054416	444	14059047
222	14055641	446	14060389
224	14056638	448	14062391
226	14057929		

B. A new compression spring (P/N C27822), with less spring force, is now being used to reduce the amount of force needed to depress the travel control lever to clear the neutral detent.

Replace the old (P/N C25595) spring on a complaint basis with the new (P/N C27822) spring. Normal warranty will apply.

Use Machine Location: 65010

Use Job Code: 65010A 0.4 Hours

The P/N C27822 spring was first used:

<u>MODEL</u>	<u>P.I.N.</u>	<u>MODEL</u>	<u>P.I.N.</u>
220	14054468	444	14059120
222	14055809	446	14060612
224	14056693	448	14062518
226	14058031		



(OVER)

Exclusive Manufacturer of JI Case Outdoor Power Equipment

TIP # 1 - Travel Control Lever: (A) Indicator Pin Hole Location Change and
(B) New Compression Spring (P/N C27822): CONTINUED

Use the following procedure to install the travel lever compression spring:

1. Remove the access panel from the dash tower.
2. Remove the link for the control spool from the tab on the travel control lever.
3. Remove the four bolts which hold the steering gear support to the tractor frame rails.
4. Place a short prybar against the attachment lift cross shaft and pry the steering support down and to the rear.
5. Use a large screwdriver (or similar tool) to push up and forward on the nylon washer until the washer and spring can be removed from the travel lever shaft.
6. Install the washer and new spring on the shaft with the straight end coil on the bottom and pointing to the left.
7. Install the nylon washer on the shaft and push up and rearward to seat the washer and shaft with the new spring into the recess in the steering gear support.
8. Reposition steering gear support and install the four bolts. Connect the link to the travel control lever and install the access panel.

TIP # 2 - C25485 Rectifier Part Number Change:

Order Part Number C27509 when requiring the small square rectifier regulator previously identified as C25485. The prior number is obsolete and will not substitute in the SPS system.

Part Number C27509 kit includes the rectifier and an adapter plug for use with early production 15 amp charging systems. The C21945 rectifier used with early production 15 amp charging systems does sub to the C27509 kit.

TIP # 3 - Kohler Engine; Breaker Points and Push Rod Change:

When using breaker points, Part Number C27439 for service replacement, a special hardened push rod, Part Number C27440, must be used.

Failure to use the proper push rod will result in shortened push rod life causing hard starting, erratic engine operation, and/or loss of power.

Engines installed in tractors beginning with the P.I.N.'s listed below have the new, special hardened push rod factory installed.

<u>MODEL</u>	<u>P.I.N. AND AFTER</u>	<u>MODEL</u>	<u>P.I.N. AND AFTER</u>
210	14033834	224	14037977
220	14034750	444	14039474
222	14036299		

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Ingersoll Equipment Co., Inc.

119 South First Street Winneconne, WI 54986-9576 414-582-4455

June 27, 1984

TIMELY TIPS FOR THE MONTH

ISSUE # 124

- TIP # 1 - Announcement of Modification Program MEAE
- TIP # 2 - 60 Inch Mower Spring and Belt Installation
- TIP # 3 - Offset Mower Lift Link for 226 Tractor
- TIP # 4 - New Distribution OPE Parts Catalogs
- TIP # 5 - Parts Catalog Corrections

TIP # 1 - Announcement of Modification Program MEAE:

Service Bulletins have been mailed to all dealers and parts required for the modification have been automatically shipped to affected dealers.

If you have not received Service Bulletin NO. A38-84 - - Steering Shaft, 100, 200, 400 Series Compact Tractor - - Modification Program MEAE, please contact your field service representative or the Ingersoll Equipment Company Service Office.

TIP # 2 - 60 Inch Mower Spring and Belt Installation:

Several reports have been received concerning difficulty installing Model K48, L48 and M48 mower drive belts and spring.

Use the following procedure to install the belt and spring:

1. Turn the adjusting handle as far as possible in the clockwise direction. Do not force the handle! The idler pulley bracket will bottom out before all the threads in the adjustment screw are used up.
2. Put the belt around all the pulleys except the mower drive pulley.
3. Hook the long straight end of the spring into the hole above the left idler pulley.
4. Hook the short end of the spring into the upper/rear hole in the left side plate of the mounting bracket.
5. Carefully rope the belt onto the mower drive pulley.

At this time, the distance between the spring coils will exceed the "one wire diameter" specified on the decal. This distance will diminish as the belt stretches.

(OVER)



Exclusive Manufacturer of JI Case Outdoor Power Equipment

TIP # 3 - Offset Mower Lift Link for 226 Tractor:

The Model 226 tractor requires an offset mower lift link for the right hand side to clear the oil pan on the Onan engine. This link is packed with the tractor along with the left hand link and mower drive belt.

The part number of this offset right hand lift link is C27225.

TIP # 5 - New Distribution OPE Parts Catalogs:

The following new Parts Catalogs are available:

	<u>NUMBER</u>	<u>PRICE</u>
1. Revised Catalog for 1978 through 1983 - Models 220, 222, 224, 444	B1375	\$2.50
2. Revised Catalog for 1980 through 1983 - Model 446, 448	8-1241	\$2.50
A. Dealers called on by Ingersoll Equipment Company, Inc. field service representatives will be supplied with this material by their field service representative.		
B. Dealers not called on by Ingersoll Equipment Company, Inc. field service representatives can obtain this material by submitting a properly completed Form 1740 to:		

INGERSOLL EQUIPMENT COMPANY, INC.
119 South First St.
Winneconne, WI. 54986
Attn: Service Department

TIP # 5 - Parts Catalog Corrections:

1. Catalog #8-2750 for 1984 Model 226, 446, 448, Page 25, Reference #1 should be C27152 clutch assembly plus C26166 arm.
2. Catalog #8-2741 for 1984 Model 220, 222, 224, 444, Page 24, Reference #9 Add "Reference 9" to the curved baffle illustrated.
3. Catalog #8-2700 for Model 108, 110, 116 tractors:
 - a. Page 37, Reference #2 should be:
Use C12110 bearing if wheel is equipped with bearing.
Use C24503 bushing if wheel is equipped with bushing.
The new wheel assembly C24429 will service the old.
 - b. Page 51, Reference #13 should be: P/N C24800.
4. Catalog 8-2740 for Model 220, 222, 224, 444 tractors, Page 59, Reference #21 should be: P/N C24800

Please mark the above corrections in your parts catalog immediately.

July 30, 1984

TIMELY TIPS FOR THE MONTH

ISSUE # 125

TIP # 1 - Pulley Puller Grooves Are Now Provided in Mower Spindle Pulleys

TIP # 2 - Onan Engine Head Gasket

TIP # 3 - New Starter Solenoid - Part Number C27523

TIP # 4 - 108, 110, 116 Key Switch Terminal Identification

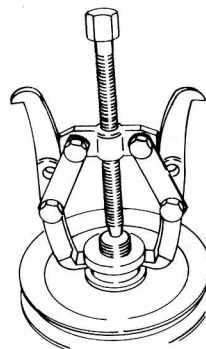
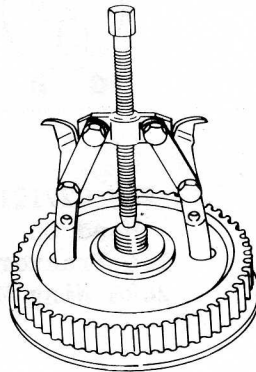
TIP # 1 - Pulley Puller Grooves Are Now Provided in Mower Spindle Pulleys:

Beginning with the mower model and serial numbers listed below, a pulley puller groove is provided in the hub of the mower spindle pulleys. Holes have also been added to the sprockets on the 60" mower for this purpose.

The groove allows the use of a small 2 or 3 jaw puller to remove the pulley without damage. See illustrations.

Always coat the spindle shafts with anti-seize compound before reassembly.

<u>MODEL</u>	<u>SERIAL NUMBER & AFTER</u>	<u>MODEL</u>	<u>SERIAL NUMBER & AFTER</u>
L40	AB11839	L47	RR11031
L44	BC12602	M48	MN10400
L45	CD11096	2480 Wing	KL20001
L46	DE12234	2486 Wing	LM15001



TIP # 2 - Onan Engine Head Gasket:

The Part Number C26201 head gasket for Onan Model B43 (16 HP) used on Model 226 and 446 tractors, and B48 (18 HP) used on 448 tractors and 648 loaders, is again available at SPS.

Please mark your parts catalogs accordingly.



(OVER)

Exclusive Manufacturer of JI/Case Outdoor Power Equipment

TIP # 3 - New Starter Solenoid - Part Number C27523:

A new starter solenoid, Part Number C27523, is being used beginning with the models and Product Identification Numbers listed below. This solenoid is not interchangeable with the previous solenoid Part Number C26525.

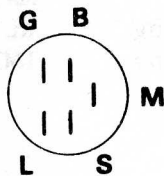
Please mark your parts catalogs accordingly.

<u>MODEL</u>	<u>P.I.N. AND AFTER</u>	<u>MODEL</u>	<u>P.I.N. AND AFTER</u>
80	14049205	224	14056610
108	14050449	226	14057822
110	14051185	444	14059000
116	14052196	446	14060238
210	14053477	448	14062271
220	14054346	648	14063850
222	14055580		

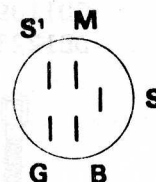
TIP # 4 - 108, 110, 116 Keyswitch Terminal Identification:

The keyswitch used on the Model 116 tractor is different from that used on the 108 and 110. The operator's manual and parts catalog for the 108, 110, and 116 tractors show the terminal identification for only one switch.

Use the following information as a guide when replacing a switch.



P/N C24145
Used On
108, 110 Tractors
2480 Wing Mower



P/N C27121
Used On
116 Tractors
2486 Wing Mower

Part Number C27121 Switch used on Model 116 tractor is shown in 108, 110, 116 Operator's Manual 9-9780 and 9-9781, Page 25.

Part Number C24145 Switch used on Model 108, 110 tractor is shown in 108, 110, 116 Parts Catalog 8-2700, Page 50.

Please mark your manuals according to the information provided.

NOTE: The switch terminal identification in the wing mower operator's manual is correct.

INGERSOLL

Ingersoll Equipment Co., Inc.

119 South First Street Winneconne, WI 54986-9576 414-582-4455

September 7, 1984

TIMELY TIPS FOR THE MONTH

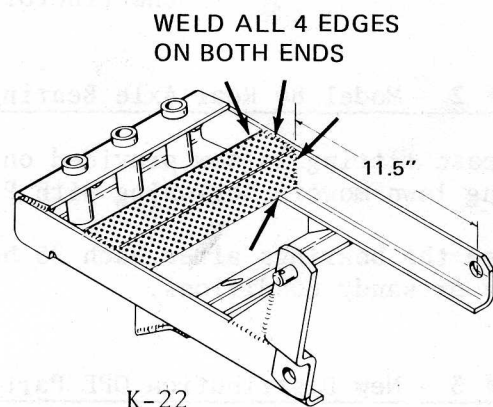
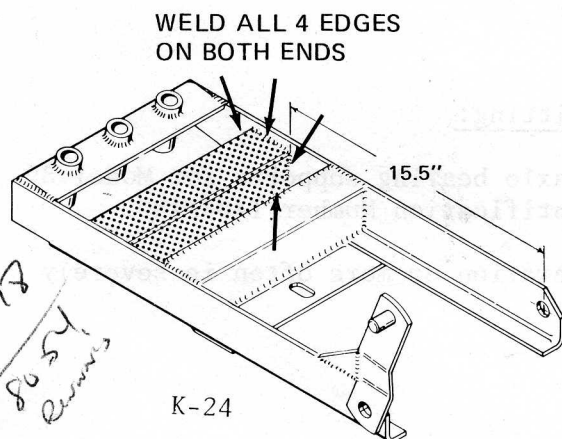
ISSUE # 126

- TIP # 1 - Sleeve Hitch Reinforcement, Part Number C27986
- TIP # 2 - Model 80 Rear Axle Bearing Grease Fitting
- TIP # 3 - New Distribution OPE Parts Catalogs

TIP # 1 - Sleeve Hitch Reinforcement, Part Number C27986:

The sleeve hitch reinforcement, Part Number C27986, must be added to all K-22 and K-24 sleeve hitches before installing the J-74, K-74, L-74 or L-75 end drive rotary tiller. This reinforcement must also be installed on K-22 and K-24 hitches which have end drive tillers installed in dealer stock or sold at retail. The Part Number C27986 reinforcement is currently available through SPS for this purpose.

The reinforcement must be welded in position as shown in the illustrations.



All sleeve hitches leaving the factory as of September 10, 1984 have the reinforcement installed.

REIMBURSEMENT:

The cost of parts and labor can be recovered by submitting a Service Adjustment Request:

1. Use Account No. 7491 if sold at retail. Use Account No. 7479 if in dealer stock.

(OVER)



Exclusive Manufacturer of JI/Case Outdoor Power Equipment

TIP # 1 - Sleeve Hitch Reinforcement, Part Number C27986: CONTINUED:

2. Use GT PARTS in place of Product ID.

NOTE: Any number of sleeve hitches in dealer stock can be listed on each SAR. Only one sleeve hitch sold at retail can be listed on each SAR.

3. Use Prime Part: C23707 for J-22 or K-22 hitch.

Use Prime Part: C22218 for J-24 or K-24 hitch.

4. Use Service Code 275 (enter Timely Tip Issue Number 126 in "Comments" section of SAR).

5. Use Machine Location: 96131.

6. Use Job Code: (a) 96131 BW 0.5 hours
if done before hitch is mounted

- (b) 96131 B 0.3 hours

and

96131 BW 0.5 hours
if hitch is already mounted and must be removed from
the tractor

TIP # 2 - Model 80 Rear Axle Bearing Grease Fitting:

A grease fitting is now provided on the rear axle bearing supports for Model 80 riding lawn mowers beginning with Product Identification Number 14049480.

Grease the bearings after each 25 hours of operation or more often in severely dusty or sandy conditions.

TIP # 3 - New Distribution OPE Parts Catalogs:

The following new Parts Catalog is available:

	<u>NUMBER</u>	<u>PRICE</u>
1. Revised Catalog for Model 80 riding lawn mower, M-91 Bagger and M-92 thatcher	D1300	\$2.50
A. Dealers called on by Ingersoll Equipment Company, Inc. field service representatives will be supplied with this material by their field service representative.		
B. Dealers not called on by Ingersoll Equipment Company, Inc. field service representatives can obtain this material by submitting a properly completed Form 1740 to:		

INGERSOLL EQUIPMENT COMPANY, INC.
119 South First Street
Winneconne, WI. 54986
Attn: Service Department

INGERSOLL

Ingersoll Equipment Co., Inc.

119 South First Street Winneconne, WI 54986-9576 414-582-4455

September 28, 1984

TIMELY TIPS FOR THE MONTH

ISSUE # 127

- TIP # 1 - Repair Kit for Model N90 and P90 Lawn Sweepers
- TIP # 2 - Onan Engine Vapor Lock Modification Kit, P/N C28031
- TIP # 3 - Ordering Procedure for J I Case and Ingersoll Outdoor Power Equipment Technical Publications
- TIP # 4 - Control Valve Outlet Section for D100 Backhoe

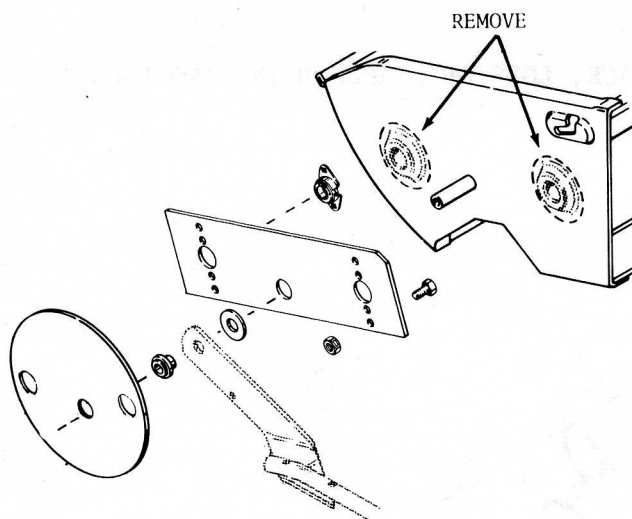
TIP # 1 - Repair Kit for Model N90 and P90 Lawn Sweepers:

Repair Kit, Part Number C28036, is now available to repair N90 and P90 lawn sweeper housings damaged as a result of brush bearing failure. Installation instructions are included with the kit. Installation time is one hour once the housing is removed and two hours total time.

The P/N C28036 kit must be ordered from Ingersoll Equipment Co., Inc., 119 South First Street, Winneconne, WI 54986, Attention: Service Department.

Dealer Net Price \$20.93
Suggested List Price \$29.90

KIT PARTS LIST



PART NUMBER	DESCRIPTION	QTY
C28035	Plate - Sweeper Repair	2
C23602	Bearing - Side Flange	4
113-1	Bolt - 1/4 20 x 1/2 Hex	17
131-1102	Nut - 1/4 20 Lock	17
C25178	Washer	4
C27740	Bearing - Frame Pivot	2
C14201	Washer	2
C27741	Shield - Drive Wheel, LH	1
C27742	Shield - Drive Wheel, RH	1
138-2071	Pin - Spirol H.D. 3/16 x 15/16	8

The kit includes a repair plate for each side which is bolted in place after the bosses for the fixed bearings are cut away. Also included are self-aligning bearings, improved dust shields which pilot on the sweeper axles, both brush shafts bearings, and the required hardware.

This article is for informational purposes only.



(OVER)

Exclusive Manufacturer of JI Case Outdoor Power Equipment

TIP # 2 - Onan Engine Vapor Lock Modification Kit, P/N C28031:

A copy of Ingersoll Service Bulletin No. 84-1 and the Installation Instructions for the P/N C28031 Modification Kit are enclosed with this Timely Tips.

TIP # 3 - Ordering Procedure for J I Case and Ingersoll Outdoor Power Equipment Technical Publications:

Effective immediately all operator's manuals, parts catalogs, and service manuals for Outdoor Power Equipment, Garden Tractors and Attachments must be ordered from Ingersoll Equipment Co., Inc. Please refer to enclosed letter dated September 17, 1984 to All J I Case and Ingersoll Equipment Co., Inc. Dealers for proper ordering procedure.

TIP # 4 - Control Valve Outlet Section for D100 Backhoe:

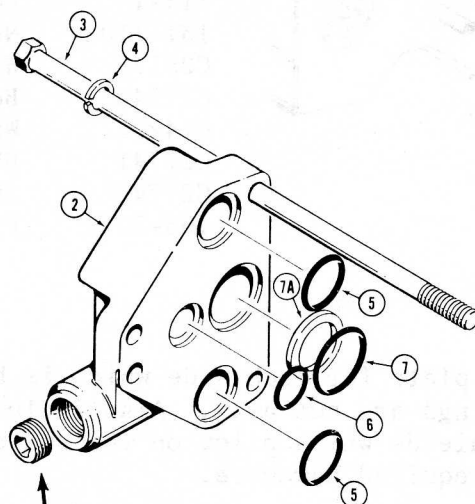
Inspect the H52803 control valve outlet section ordered from parts for the presence of a 221-1842 plug.

- A. The plug must be removed when the control valve outlet section is installed on an early production 644 or 646 backhoe without power beyond. That is, with only two hoses connecting the tractor and backhoe.

IMPORTANT: FAILURE TO REMOVE THIS PLUG WILL CAUSE THE HYDRAULIC PUMP TO FAIL.

- B. The plug must be in place when the control valve outlet section is installed on a 644, 646 or 648 backhoe with power beyond, That is, with three hoses connecting the tractor and backhoe.

IMPORTANT: IF THIS PLUG IS NOT IN PLACE, LOSS OF LOADER DRIVE AND BUCKET POWER WILL RESULT.



221-1842 "POWER BEYOND" PLUG

INGERSOLL

Ingersoll Equipment Co., Inc.

119 South First Street Winneconne, WI 54986-9576 414-582-4455

October 29, 1984

TIMELY TIPS FOR THE MONTH

ISSUE # 128

TIP # 1 - Snowcaster Update for 100 Series Tractors

TIP # 2 - Correction to Ingersoll Service Bulletin No. 84-1, Vapor Lock Symptoms

TIP # 3 - New Ingersoll Parts Catalog Distribution

TIP # 1 - Snowcaster Update for 100 Series Tractors:

Several inquiries have been received concerning changing K81, L81 and M81 snowcasters so they will fit on 1984 model year and later 108, 110, and 116 tractors.

This change can be made, at your option, using the following procedure.

Two parts are required:

<u>QUANTITY</u>	<u>PART NUMBER</u>	<u>DESCRIPTION</u>	<u>DEALER NET</u>
1	C27088	Lift Plate	\$ 5.65
1	C27085	Lift Arm	12.93

ORDER FROM: INGERSOLL EQUIPMENT CO., INC.
119 South First St.
Winneconne, WI 54986

Attention: Service Department

1. Remove the existing lift plate from the right hand adapter plate.
2. Attach the snowcaster to the tractor. Do not install the drive belt.
3. Block under the snowcaster cutting edge so it is about 4-1/2 inches off the ground.
4. Mark the location for the new lift plate according to the measurements shown on the illustration. Clean the paint from the area to be welded.
5. Hold the new lift plate in position and double check the location by temporarily installing the new lift arm.
6. Tack weld the new lift plate.
7. Insure proper position and complete welding.
8. Repaint as required.

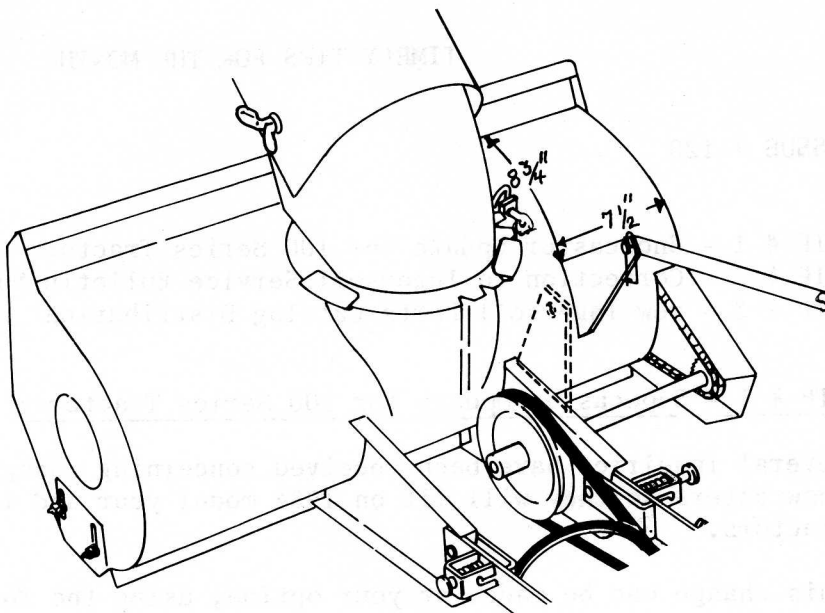


(OVER)

Exclusive Manufacturer of JI Case Outdoor Power Equipment

TIP # 1 - Snowcaster Update for 100 Series Tractors: CONTINUED

PLATE TO BE WELDED
PARALLEL TO END OF
HOUSING PERPENDICULAR
TO SURFACE OF HOUSING.
FRONT EDGE OF PLATE TO
BE LOCATED AT 8-3/4"
DIMENSION.

TIP # 2 - Correction to Ingersoll Service Bulletin No. 84-1, Vapor Lock Symptoms:

Refer to Ingersoll Service Bulletin No. 84-1, "Machines Involved". The P.I.N. range for Model 226 should be:

226 P.I.N. 14057825 through P.I.N. 14058175

Please mark this information on your copy of Ingersoll Service Bulletin No. 84-1.

TIP # 3 - New Ingersoll Parts Catalog Distribution:

The following new Parts Catalogs are available:

	<u>NUMBER</u>	<u>PRICE</u>
1. Revised Catalog for Rotary Mowers J45, K45, L45, M45, J48, K48, L48, M48	8-1301	\$1.00
2. Revision for 210 tractor catalog A1374	Rev. 1	N/C

- A. Dealers called on by Ingersoll Equipment Company, Inc. field service representatives will be supplied with this material by their field service representative.
- B. Dealers not called on by Ingersoll Equipment Company, Inc. field service representatives can obtain this material by submitting a properly completed Printed Materials Requisition to:

Ingersoll Equipment Company, Inc.
119 South First Street
Winneconne, WI 54986

ATTENTION: LITERATURE DEPARTMENT

INGERSOLL

Ingersoll Equipment Co., Inc.

119 South First Street Winneconne, WI 54986-9576 414-582-4455

November 29, 1984

TIMELY TIPS FOR THE MONTH

ISSUE # 129

- TIP # 1 - Lawn Sweeper Repair Kit - Additional Information
- TIP # 2 - Onan B43M and B48M Engine Air Baffle Change
- TIP # 3 - Holding Valve Model Number Change M9 to N9
- TIP # 4 - New Ingersoll Parts Catalog Distribution
- TIP # 5 - Correction to Timely Tip Issue 123, Tip #2

TIP # 1 - Lawn Sweeper Repair Kit - Additional Information:

Reed Lawn and Leisure of Palatine, Illinois has submitted this procedure for removing the bosses for the old bearings.

1. Disassemble the sweeper according to the instructions supplied with the C28036 Sweeper Repair Kit.
2. Drive a 3/4" diameter wood dowel into the bearing holes.
3. Use a 1/2" drill with a 2-1/2" diameter metal cutting hole saw and cut out the boss. Use plenty of cutting oil while sawing.
4. Complete the repair of the sweeper according to the instructions supplied with the C28036 Sweeper Repair Kit.

TIP # 2 - Onan B43M and B48M Engine Air Baffle Change:

Onan has made a running change to the cylinder block on all "B" series engines. This change will affect the reinstallation of the right hand (as installed in the Case tractor) air baffle.

When using a new B series block or installing an old style right hand air baffle in your inventory on a new style B block engine, it will be necessary to modify the sheet metal as shown on the attached template.

This announcement is for information purposes only.

TIP # 3 - Holding Valve Model Number Change M9 to N9:

The M9 holding valve for models:

444 - P.I.N. 9766840 and after

446 - P.I.N. 9770165 and after

448 - P.I.N. 9774000 and after



Exclusive Manufacturer of JI Case Outdoor Power Equipment

(OVER)

TIP # 3 - Holding Valve Model Number Change M9 to N9: (CONTINUED)

has been superceded by the Model N9 holding valve.

The tubing on the N9 has been simplified to provide easier installation.

The operator's manual that describes the installation of the N9 is Form Number 9-51134.

If you require this operator's manual, please submit a properly completed printed material requisition to Ingersoll Equipment Company, Inc., 119 South First Street, Winneconne, WI 54986 Attention: Literature Department. A copy will be furnished at no charge upon receipt of your request.

TIP # 4 - New Ingersoll Parts Catalog Distribution:

The following new parts catalogs are available:

	<u>NUMBER</u>	<u>PRICE</u>
1. Revised catalog for Model 220 through 444 tractors	B1278	\$2.50
2. New catalog for Model 2480 and 2486 wing mower	8-2950	\$2.00
A. Dealers called on by Ingersoll Equipment Company, Inc. field service representatives will be supplied with this material by their field service representative.		
B. Dealers not called on by Ingersoll Equipment Company, Inc. field service representatives can obtain this material by submitting a properly completed Printed Materials Requisition to:		

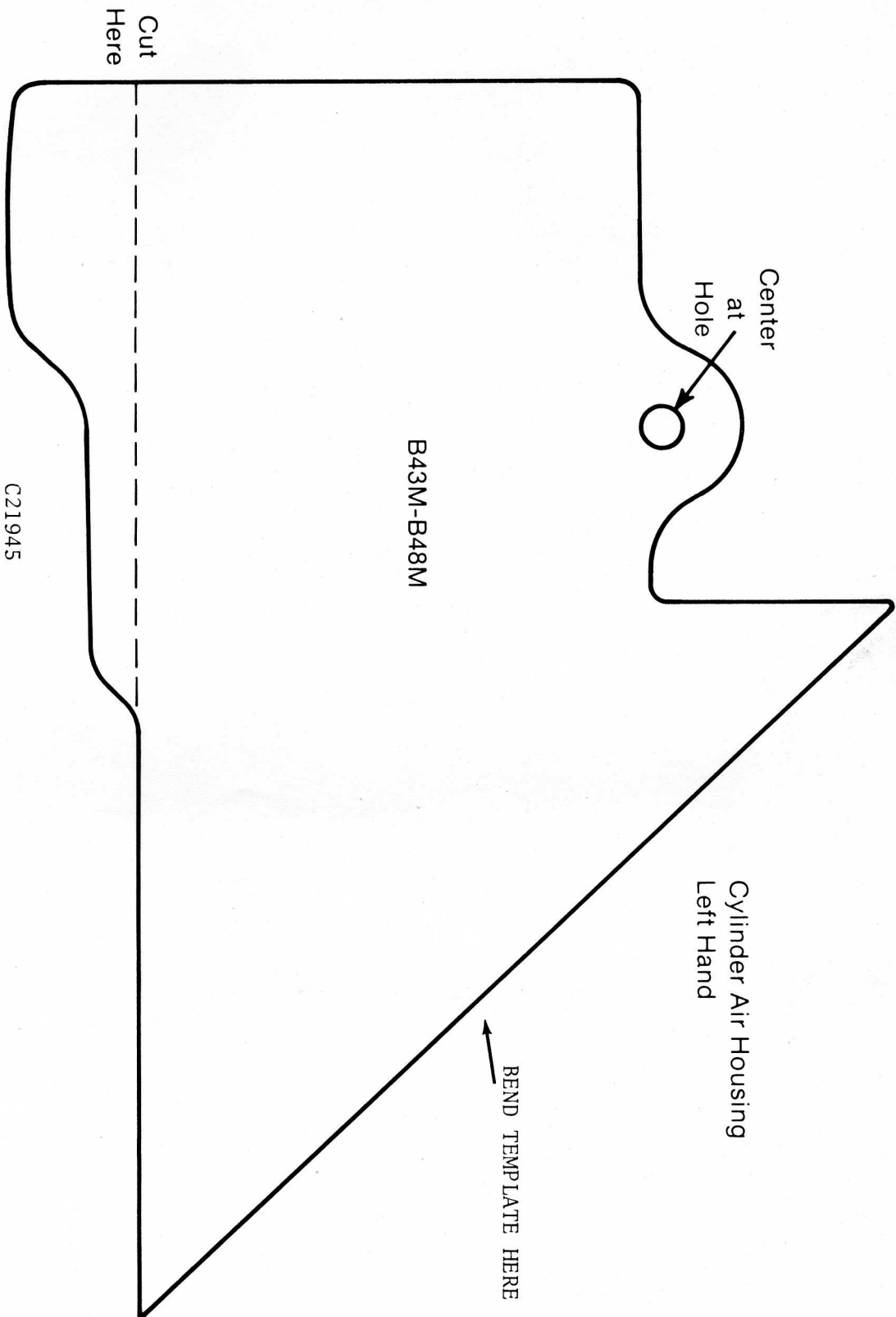
Ingersoll Equipment Company, Inc.
119 South First Street
Winneconne, WI 54986

Attention: Literature Department

TIP # 5 - Correction to Timely Tip Issue 123, Tip #2:

Order Part Number C27509 when requiring the small square rectifier regulator previously identified as C25485. The prior number is obsolete and will not substitute in the SPS system.

Part Number C27509 kit includes the rectifier and an instruction sheet. The C21945 rectifier used with early production 15 amp charging systems does sub to the C27509, C25486 connector, and C26670 ground wire.



THIS ILLUSTRATION IS TIMELY TIP # 2 CONTINUED

NOTE: Insert this INDEX immediately behind the INDEX for 1984 in the "BULLETIN" section of your Service Manual.

INDEX

TIMELY OPE TIPS FOR THE MONTH - 1985

<u>ISSUE NO.</u>	<u>DATE</u>	<u>TIP NO.</u>	<u>SUBJECT</u>
130	2/6/85	1	Ingersoll Parts Price List
		2	Use of Ingersoll Dealer Codes
		3	Woodsplitter Assembly Caution (Model J, K, L 34)
		4	Overall Dimensions for Tractor Cabs
		5	How to Use Jumper Cables and a Booster Battery
131	2/28/85	1	Ingersoll Equipment Co., Inc. Parts Micro Fiche Now Available
		2	Onan Engine Vapor Lock Modification
132	3/29/85	1	Product Related Accident Reporting
		2	80 Riding Mower Pivot for Mower Drive Product Improvement
		3	Ink Roller for Addressograph Imprinter
		4	Tip to Read Product Identification Number Plates
		5	Loader-Backhoe Seat to Steering Wheel Clearance
		6	Fuel Line Inspection and Routing
		7	Blocking Raised Loader Lift Arms When Servicing
133	4/29/85	1	Mower Spindle Spacer Inspection
		2	Reminder - Onan Engine Vapor Lock Modification Kit, P/N C28031
		3	IMPORTANT Parts Catalog Correction
		4	Printed Material Ordering Procedure - Ingersoll Publications Catalog
		5	Ingersoll Binder Now Available
		6	Ingersoll IRES (Warranty Policy) Manual Now Available
134	6/28/85	1	Cross Reference Guide
		2	Use of Ingersoll Dealer Codes - REMINDER
		3	Current Production Solenoid (P/N C27523) and Connector (P/N C27549)
		4	Snap Ring Part Numbers for Wheel Spindles and King Pins
		5	Correction to Parts Price & Sub List - No. 85-1

<u>ISSUE NO.</u>	<u>DATE</u>	<u>TIP NO.</u>	<u>SUBJECT</u>
135	7/31/85	1	Ingersoll Parts Micro Fiche Available for Immediate Shipment
		2	New Parts Catalog Availability
		3	Parts Catalog/Fiche Corrections
136	9/4/85	1	Armstrong Tire Warranty
		2	Onan BF Engine Overhaul Tip
		3	Kohler Engine Replacement
137	10/31/85	1	YT - N43 Mower to Rear Wheel Clearance
		2	New Parts Catalogs/Revisions Available
		3	Fuel Pump Vacuum Line Freeze - B & S Twin Cylinder Engine
		4	Onan BF Engine Overhaul Tip
138	12/30/85	1	Fuel Pump Vacuum Line Freeze - B & S Twin Cylinder Engine
		2	Air Cleaner Part Numbers for 1986 Model 226, 446, 448 and 648 Tractors
		3	Onan Engine Valve Clearance Specification Change
		4	Parts Catalog/Fiche Corrections
		5	Model 448 - 648 Heat Exchanger Back Pressure
		6	IMPORTANT NOTICE - Model 111YT Air Filter

INGERSOLL

Ingersoll Equipment Co., Inc.

119 South First Street Winneconne, WI 54986-9576 414-582-4455

February 28, 1985

TIMELY TIPS FOR THE MONTH

ISSUE # 131

TIP # 1 - Ingersoll Equipment Co., Inc. Parts Micro Fiche Now Available

TIP # 2 - Onan Engine Vapor Lock Modification

TIP # 1 - Ingersoll Equipment Co., Inc. Parts Micro Fiche Now Available:

Parts micro fiche for all Ingersoll, Case and Colt compact tractors and attachments in 24 X magnification are now available from Ingersoll Equipment Co., Inc.

COST: (a) Base Set \$20.00 (includes first year updates)
(b) Annual Update Charge 10.00

CONTENTS: Parts micro fiche for Ingersoll, Case and Colt compact tractors and attachments.

Parts Price List and Parts Substitution List will be provided in the first revision. Continue to use your Case paper price and substitution lists until you receive this revision.

ORDERING PROCEDURE:

Mail a properly completed Printed Material Requisition (Case or Ingersoll) to:

INGERSOLL EQUIPMENT CO., INC.
119 South First Street
Winneconne, WI 54986
Attention: Service Department/Micro Fiche

NOTE: Dealers with Case compact tractor micro fiche.

We recommend that you purchase the new Ingersoll Base Set with 24 X magnification so future revisions will be easy to index and use. Micro fiche with 24 X magnification will appear extra large and easy to read when used on a reader with 42 X magnification.

You can, if you desire, order only the annual updates. Annual updates are available only with 24 X magnification and will be numbered to correspond to the Ingersoll Base set, not the Case Base set.

If you desire only the annual updates you still must place an order as we are compiling a new user list.



(OVER)

Exclusive Manufacturer of JI Case Outdoor Power Equipment

TIP # 1 - Ingersoll Equipment Co., Inc. Parts Micro Fiche Now Available: CONTINUED

If you require a micro fiche reader, please refer to the attached specification sheet and order form. Readers are available directly from Data Film, NOT Ingersoll Equipment Co., Inc.

TIP # 2 - Onan Engine Vapor Lock Modification:

Refer to Timely Tip Issue 127, Tip #2, and Service Bulletin 84-1, issued on 10/1/84.

The following additional information is provided by Onan:

Field reports indicate that some customers may complain of poor angle and/or high temperature performance.

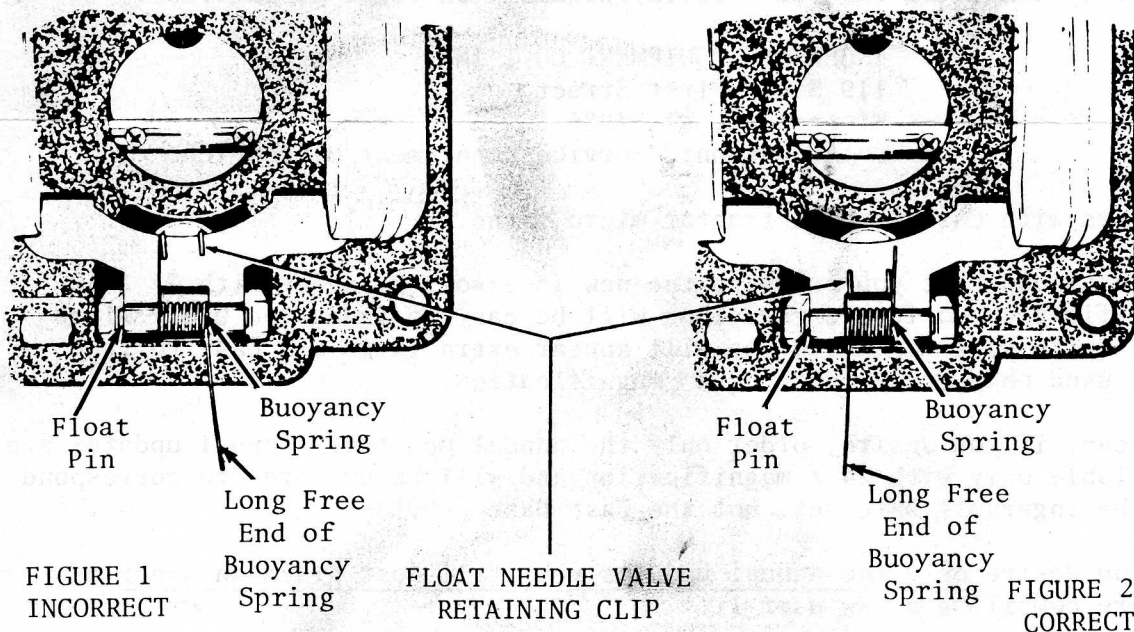
The Part Number, C27506, float kit includes a brass float, buoyancy spring and Onan Instruction Sheet #292.

This brass float was to correct float swelling problems when methanol/ethanol blended fuels were used.

Originally, the float buoyancy spring was installed as illustrated in Figure #1. Engineering has determined that reversing the buoyancy spring as illustrated in Figure #2 increases angle and high temperature performance.

NOTE: Figure #1, has the float needle valve retaining clip illustrated incorrectly. Figure #2, has the needle valve retaining clip illustrated correctly.

The instructions provided with Ingersoll Service Bulletin 84-1 and the Part Number C28031 Vapor Lock Modification Kit are correct.



INGERSOLL

Ingersoll Equipment Co., Inc.

119 South First Street Winneconne, WI 54986-9576 414-582-4455

March 29, 1985

TIMELY TIPS FOR THE MONTH

ISSUE #132

- TIP # 1 - Product Related Accident Reporting
- TIP # 2 - 80 Riding Mower Pivot for Mower Drive Product Improvement
- TIP # 3 - Ink Roller for Addressograph Imprinter
- TIP # 4 - Tip to Read Product Identification Number Plates
- TIP # 5 - Loader-Backhoe Seat to Steering Wheel Clearance
- TIP # 6 - Fuel Line Inspection and Routing
- TIP # 7 - Blocking Raised Loader Lift Arms When Servicing

TIP # 1 - Product Related Accident Reporting:

TO ALL INGERSOLL EQUIPMENT CO., INC. DEALERS ONLY. Attached to this issue of Timely Tips is an important letter concerning Proper Reporting of Product Related Accidents.

Please carefully read this letter and keep it filed with your Timely Tips for future reference.

TIP # 2 - 80 Riding Mower Pivot for Mower Drive Product Improvement:

Beginning with Model 80 Riding Mower, P.I.N. 14049688, the pivot point for the mower drive belt clutching arm has two oil impregnated bronze bushings.

Refer to Timely Tips Issue #121, Tip #3 for lubrication instructions for this pivot point on units prior to P.I.N. 14049688.

TIP # 3 - Ink Roller for Addressograph Imprinter:

Ingersoll Equipment Co., Inc. Owner Warranty Registration Forms and Service Adjustment Request Forms do not have the carbon flap over the first copy.

Dealers who have an addressograph imprinter can use them with Ingersoll forms if they desire by installing an ink roller.

The ink roller is available from: GO-RITE
Business Systems, Inc.
Box 5036
Rockford, IL 61125
Phone: 815-398-7151

Order Part Number 12-506-51
Cost \$8.40 plus tax and shipping



(OVER)

Exclusive Manufacturer of JI Case Outdoor Power Equipment

TIP # 4 - Tip to Read Product Identification Number Plates:

The readability of the tractor P.I.N. plate can be enhanced by rubbing the stamped numbers with a black grease pencil and then wiping off the surface of the plate.

TIP # 5 - Loader-Backhoe Seat to Steering Wheel Clearance:

A slight interference between the seat and steering wheel when trying to raise the seat may exist on some Model 648 Loader-Backhoes.

Use the following procedure to reduce the possibility of interference:

1. Loosen the bolts which secure the P/N C23733 tube assembly for the seat post to the rear seat support.
2. Pull the tube assembly as far to rear as permitted by the oversized holes.
3. Tighten the bolts.
4. Elongate the holes if necessary to provide additional clearance.

TIP # 6 - Fuel Line Inspection and Routing:

Always inspect fuel lines for proper routing and possible deteriorated condition when a tractor is in for service. Replace a fuel line that appears to be deteriorated. Make sure that the fuel line is routed away from hot surfaces on the engine or exhaust system.

TIP # 7 - Blocking Raised Loader Lift Arms When Servicing:

If it becomes necessary to work on the loader tractor with the lift arms in the raised position, it is essential that the lift arms are supported by an overhead chainfall, or that the cylinders be blocked so that in the event the pressure is lost in the cylinders, the lift arms will not drop and cause injury.

Supports can be made of 1-1/4" x 1-1/4" angle iron 18" long and secured to the piston rod with a hose clamp about 2" from each end. The clamps should be padded with rubber hose to keep them from scoring the piston rods.

INGERSOLL

Ingersoll Equipment Co., Inc.

119 South First Street Winneconne, WI 54986-9576 414-582-4455

April 29, 1985

TIMELY TIPS FOR THE MONTH

ISSUE #133

- TIP # 1 - Mower Spindle Spacer Inspection
- TIP # 2 - Reminder - Onan Engine Vapor Lock Modification Kit, P/N C28031
- TIP # 3 - IMPORTANT Parts Catalog Correction
- TIP # 4 - Printed Material Ordering Procedure - Ingersoll Publications Catalog
- TIP # 5 - Ingersoll Binder Now Available
- TIP # 6 - Ingersoll IRES (Warranty Policy) Manual Now Available

TIP # 1 - Mower Spindle Spacer Inspection:

The P/N C10810 mower spindle spacer must be checked for correct length if premature mower spindle bearing failure is encountered.

The minimum length for this spacer is 1.823 inches (46.31 mm). A spacer that is too short will cause improper seating of the bearing races.

All U.S. dealers are being asked to return spacers that are found to be shorter than the minimum specification. Return to:

INGERSOLL EQUIPMENT CO., INC.
119 S. First St.
Winneconne, WI 54986
Attention: Warranty Department

IMPORTANT: Be sure to enclose the blue packing slip copy of the SAR with the spacer.

TIP # 2 - Reminder - Onan Engine Vapor Lock Modification Kit, P/N C28031:

Refer to Timely Tip Issue #127 dated September 28, 1984 and the Service Bulletin #84-1 attached to it.

Vapor lock symptoms Models 226, 446, 448 with Onan engines.

If vapor lock symptoms occur on above models, install the C28031 kit in accordance with the instructions provided in the kit.

Additional copies of the Service Bulletin are available from the Ingersoll Equipment Co., Inc. Service Department.

(OVER)



Exclusive Manufacturer of JI Case Outdoor Power Equipment

TIP # 3 - IMPORTANT Parts Catalog Correction:

Refer to Parts Catalog C1181 for Model 220, 222, 442, and 444 tractors, Page 25, Line 12.

The part number should be C24851.

Please mark this correction in your parts catalog/micro fiche immediately.

TIP # 4 - Printed Material Ordering Procedure - Ingersoll Publications Catalog:

Ingersoll Equipment parts catalogs, operator's manuals, service manuals and advertising literature can be ordered by sending a properly completed Printed Material Requisition (Ingersoll Form 03027 or Case Form 1740) to:

INGERSOLL SERVICE PARTS
3600 Moser Street
Oshkosh, WI 54903

We seek your full cooperation to refrain from placing literature orders by telephone. It is important for all dealers that the Ingersoll Service Parts telephone lines be left open for emergency parts orders.

A new publications catalog, Form No. 8-55002, is included with this issue of the Timely Tips for your reference and convenience.

TIP # 5 - Ingersoll Binder Now Available:

A three inch wide, 3 post binder is now available from Ingersoll Publications. The cost is \$10.00 each. They can be ordered by sending a properly completed Printed Material Requisition (Ingersoll Form 03027 or Case Form 1740) to the address listed in Tip #4 above.

TIP # 6 - Ingersoll IRES (Warranty Policy) Manual Now Available:

The new Ingersoll Registration and Evaluation System (Warranty Policy) manual, Form Number 8-55460, is now available and is included with this issue of Timely Tips for your reference and convenience.

Please read this manual carefully.

Insert this section in your Marketing Manual under the "Service/Warranty" tab.

Dealers who have Case "CARES" manuals may want to put this into their CARES manual.

Additional copies can be obtained by submitting a properly completed Printed Material Requisition (Ingersoll Form 03027 or Case Form 1740) to the address listed in Tip #4 above.

INGERSOLL

Ingersoll Equipment Co., Inc.

119 South First Street Winneconne, WI 54986-9576 414-582-4455

June 28, 1985

TIMELY TIPS FOR THE MONTH

ISSUE # 134

- TIP # 1 - Cross Reference Guide
- TIP # 2 - Use of Ingersoll Dealer Codes - REMINDER
- TIP # 3 - Current Production Solenoid (P/N C27523) and Connector (P/N C27549)
- TIP # 4 - Snap Ring Part Numbers for Wheel Spindles and King Pins
- TIP # 5 - Correction to Parts Price & Sub List - No. 85-1

TIP # 1 - Cross Reference Guide:

A Cross Reference Guide for Ingersoll, Case and Colt tractors and attachments is enclosed with this months Timely Tips.

The Cross Reference Guide will aid you in determining the attachment that probably was sold with the tractor and the micro fiche number or parts catalog number for that model tractor and/or attachment.

The Cross Reference Guide has been printed on handy 4" x 6" cards so they can fit in your micro fiche file or an inexpensive receipt box if you don't have micro fiche.

Additional sets are available from the Ingersoll Equipment Co., Inc. Service Dept.

TIP # 2 - Use of Ingersoll Dealer Codes - REMINDER:

All dealers who have contracted with Ingersoll Equipment Co., Inc. have an Ingersoll dealer code. The code for dealers with only one location is seven digits.

EXAMPLE: 04 15XXX

The code for dealers with more than one location is seven digits and an alpha suffix:

EXAMPLE: 04 15XXX A - First Location
04 15XXX B - Second Location

IMPORTANT: This Ingersoll dealer code MUST be used on all Owner Warranty Registration Forms and all Service Adjustment Request Forms that are submitted.

Using an old or incorrect dealer code will delay the registration for warranty and the processing of your warranty credits.



(OVER)

Exclusive Manufacturer of JI Case Outdoor Power Equipment

TIP # 3 - Current Production Solenoid (P/N C27523) and Connector (P/N C27549):

Beginning with the serial numbers listed below the current solenoid (P/N C27523) and it's connector (P/N C27549) were put into production. They are not directly interchangeable with the earlier style solenoid.

<u>MODEL</u>	<u>PRODUCT IDENTIFICATION NUMBER</u>
80	14049205
108	14050449
110	14051185
116	14052196
210	14053477
220	14054346
222	14055580
224	14056610
226	14057822
444	14059000
446	14060238
448	14062271
648	14063850

TIP # 4 - Snap Ring Part Numbers for Wheel Spindles and King Pins:

Snap ring part numbers for wheel spindles and king pins are:

<u>PART NUMBER</u>	<u>DESCRIPTION</u>
C27902	Snap Ring - 400 Series King Pins
C28232	Snap Ring - 200 Series King Pins, 200 and 400 Series Wheel Spindles

TIP # 5 - Correction to Parts Price & Sub List - No. 85-1:

Refer to the Blue Substitution Section, Page 1.

B17451 Power Red Semi Gloss Paint should sub to C28484 Power Red Gloss.

Please mark this correction in your book.

INGERSOLL

Ingersoll Equipment Co., Inc.

119 South First Street Winneconne, WI 54986-9576 414-582-4455

October 31, 1985

TIMELY TIPS FOR THE MONTH

ISSUE # 137

- TIP # 1 - YT - N43 Mower to Rear Wheel Clearance
- TIP # 2 - New Parts Catalogs/Revisions Available
- TIP # 3 - Fuel Pump Vacuum Line Freeze - B & S Twin Cylinder Engine
- TIP # 4 - Onan BF Engine Overhaul Tip

TIP # 1 - YT - N43 Mower to Rear Wheel Clearance:

Perform the following check during setup and pre-delivery of a Model N43 (38" side discharge mower) on a Model 108, 111, 114 or 116 YT:

- a. Place the mower in the lowest cutting height position
- b. Raise the mower into transport
- c. Check for interference between the rear of the mower deck and the front of the right rear wheel

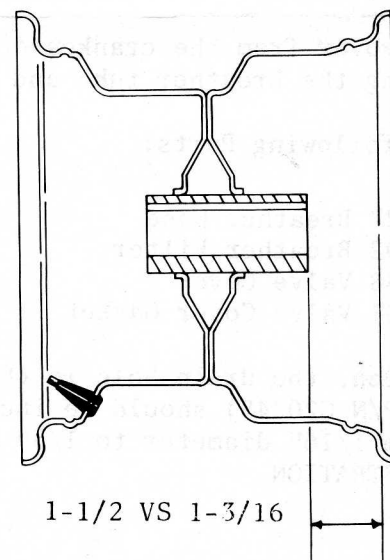
If interference exists, the increased offset right rear wheel must be installed on this tractor. Contact Irv Voyer at the factory with the tractor model and P.I.N. You will be shipped the new rear wheel on an exchange basis. Return one of the original rear wheels prepaid via UPS (or parcel post) and submit the freight receipt on your next Service Adjustment Request for reimbursement.

NOTE: The Model N43 mower is the only attachment so affected.

Increased offset rear wheels were shipped with product beginning on or about Oct. 1, 1985 and beginning with the following Product Identification Numbers;

<u>MODEL</u>	<u>P.I.N.</u>
108	14065377
111	14080139
114	14080739
116	14066917

Increased offset rear wheels that may be in your inventory can be identified by measuring the hub as shown in the diagram. The indicated dimension on an increased offset wheel is 1-1/2 inches (the prior wheel measures a nominal 1-3/16").



(OVER)



Ingersoll . . . the new name to say for Case garden tractors.

TIP # 2 - New Parts Catalogs/Revisions Available:

The following parts catalog revisions are available:	CATALOG #	PRICE
Revision #1 for Parts Catalog 8-2740 220, 222, 224, 444	R1 8-2740	N/C
Revision #1 for Parts Catalog 8-2750 226, 446, 448	R1 8-2750	N/C

You can obtain these parts catalogs by submitting a properly completed Printed Material Requisition (Ingersoll Form #03027 or Case Form #1740) to:

INGERSOLL SERVICE PARTS
3600 Moser Street
Oshkosh, WI 54903

NOTE: Ingersoll Micro Fiche Users:

Micro fiche revisions have already been sent automatically.

TIP # 3 - Fuel Pump Vacuum Line Freeze - B & S Twin Cylinder Engine:

In some situations, condensation can form in the vacuum line to the fuel pump and freeze in cold weather preventing the fuel pump from working.

A fuel pump repair kit is available from the Briggs and Stratton Service Office only. This kit can be obtained by calling Briggs and Stratton, Mr. Lyle Shackle, Phone Number 414-259-8884 and ask for Pump Repair Kit, Part Number 398616.

NOTE: This part number is available only from the B & S Service Office as stated. It is NOT available from the Briggs and Stratton Parts Department or Ingersoll Service Parts.

TIP # 4 - Onan BF Engine Overhaul Tip:

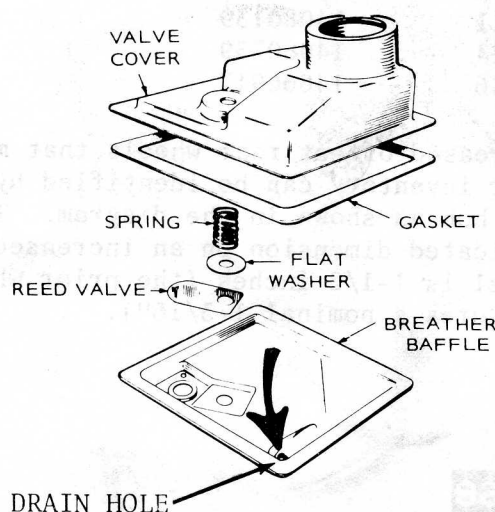
The Onan Model BF engine was used on early production 446 tractors.

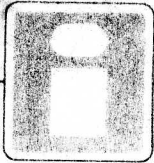
Oil carryover from the crankcase breather into the air cleaner can be reduced by installing the breather tube and filter currently used on the 446 tractor.

Use the following Parts:

1. C24927 Breather Hose
2. C20492 Breather Filter
3. C24948 Valve Cover
4. C20251 Valve Cover Gasket

In addition, the drain hole in the breather baffle (P/N C20245) should be increased in size from 1/16" diameter to 1/8" diameter. SEE ILLUSTRATION.





Ingersoll Equipment Co., Inc.

119 South First Street Winneconne, WI 54986-9576 414-582-4455

Ingersoll

December 30, 1985

TIMELY TIPS FOR THE MONTH

ISSUE #138

- TIP # 1 - Fuel Pump Vacuum Line Freeze - B & S Twin Cylinder Engine
- TIP # 2 - Air Cleaner Part Numbers for 1986 Model 226, 446, 448 and 648 Tractors
- TIP # 3 - Onan Engine Valve Clearance Specification Change
- TIP # 4 - Parts Catalog/Fiche Corrections
- TIP # 5 - Model 448 - 648 Heat Exchanger Back Pressure
- TIP # 6 - IMPORTANT NOTICE - Model 111YT Air Filter

TIP # 1 - Fuel Pump Vacuum Line Freeze - B & S Twin Cylinder Engine:

Refer to Issue #137, Tip #3, An incorrect telephone number was listed in this tip.

The correct telephone number is: 414-357-8884.

TIP # 2 - Air Cleaner Part Numbers for 1986 Model 226, 446, 448, and 648 Tractors:

1986 Model 226, 446, 448 and 648 tractors with the larger diameter air cleaners are serviced with the following part numbers.

C22424 Air Filter Element

C22581 Foam Pre-Cleaner

TIP # 3 - Onan Engine Valve Clearance Specification Change:

The new valve clearance specifications for all Model 226, 446, 448 and 648 tractors are:

Intake Valve .005 inch (0.13 mm)

Exhaust Valve .013 inch (0.33 mm)

Valve tappets should be adjusted to the above specification during routine scheduled maintenance.

This announcement is for informational purposes only.

(OVER)



Ingersoll . . . the new name to say for Case garden tractors.

TIP #4 - Parts Catalog/Fiche Corrections:

Onan engine flywheel key part number should be 126-13, change description to (3/16" x 5/8").

<u>CAT. NO.</u>	<u>PAGE NO.</u>	<u>FICHE NO.</u>	<u>GR D NO.</u>	<u>REFERENCE NO.</u>
1259	89	32 (3-85)	G12	20
C1279	9	27 (3-85)	A10	1
A1281	11	34 (3-85)	A12	20
A1298	9	28 (3-85)	A10	1
A1298	9B	28 (3-85)	A12	1
1376	9	29 (3-85)	A10	1
8-1241	9	30 (3-85)	A10	1
8-1421	9	38 (3-85)	A10	1
8-2750	5	31 (9-85)	A6	1

CAUTION: Using the improper key can damage the flywheel and create an unsafe operating condition.

TIP #5 - Model 448 - 648 Heat Exchanger Back Pressure:

The heat exchanger (P/N C25376) used on Model 448 tractors and 648 loaders provides more cooling capacity than heat exchangers used on other models. This heat exchanger also has slightly more back pressure.

Several reports of the return line blowing off the oil cooler inlet have been received. This has occurred when the tractor was started in severely cold weather and with the summer grade oil in the hydraulic system.

Be sure to remind customers to change the oil in the hydraulic system to SAE 5W-20 when severely cold winter temperatures are expected. This information is found in both the tractor operator's manual and on the decal next to the fill cap for the hydraulic oil reservoir.

TIP #6 - IMPORTANT NOTICE - Model 111YT Air Filter:

The 11 horsepower Briggs & Stratton IC series engine used in our Model 111YT tractor has a REVERSE FLOW air filter element.

That is, unfiltered air is drawn up into the inside of the filter element and passes through from the inside out.

Therefore, dirt collects on the inside (not the outside as in most cases) of the filter element. The element cover plate must be removed for inspection.

Refer to the tractor operator's manual for the correct inspection and servicing procedure.



Ingersoll Equipment Co., Inc.

119 South First Street Winneconne, WI 54986-9576 414-582-4455

Ingersoll

March 3, 1986

TIMELY TIPS FOR THE MONTH

ISSUE # 139

- TIP # 1 - Retrofit "Sandwich" Style Travel Control Locator/Neutral Start Switch
- TIP # 2 - Retrofit - Single Piece/Mono-Block Travel Control/Holding Valve
- TIP # 3 - Competitive Warranty Survey, 1986

TIP # 1 - Retrofit "Sandwich" Style Travel Control Locator/Neutral Start Switch:

A new "sandwich" style travel control locator/neutral start switch, P/N C29646, has been adopted as a running change in the 1986 model Hydriv tractors beginning with the P.I.N.'s listed below. This new travel control locator can be retrofitted on certain models. Refer to the P.I.N.'s below and the instructions which follow:

IMPORTANT: To install the new travel control locator, the tractor must be equipped with a holding valve.

MODEL	C29646 CAN BE RETOFITTED	C29646 CAN BE RETROFITTED IF C29638 RESERVOIR INSTALLED	C29646 STANDARD EQUIPMENT
220	All Prior to 14068672	thru 14068704	14068705 and after
222	All Prior to 14069604	thru 14069634	14069635 and after
224	All Prior to 14070707	thru 14070732	14070733 and after
226	All Prior to 14071775	thru 14071841	14071842 and after
444	All Prior to 14072835	thru 14072849	14072850 and after
446	All Prior to 14074178	thru 14074255	14074256 and after
448	All Prior to 14075830	thru 14075931	14075932 and after

1. Drain and remove the hydraulic reservoir.
2. Remove and discard the old travel control locator/neutral start switch.
3. Use the template provided to make holes in the dash for the new travel control locator/neutral start switch.
4. Remove the screws from the new switch using care not to allow the pieces to slip out of the channel.
5. Use your thumb and forefinger to support the pieces within the assembly as you guide the travel lever pin between the detent blocks. Move the travel control lever handle as necessary to permit installation.
6. Install the screws through the dash tower to secure the new switch.
7. Connect the wire to the attachment drive clutch neutral start micro switch.
8. Install and fill the reservoir.
9. Carefully start and run the tractor and check the neutral adjustment at the travel control valve. Readjust if necessary.

NOTE: This article is for informational purposes only.

(OVER)



Ingersoll . . . the new name to say for Case garden tractors.

TIP # 2 - Retrofit - Single Piece/Mono-Block Travel Control/Holding Valve:

The new, single piece, travel control/holding valve can be retrofitted in accordance with the following chart.

FOR MODELS: 220 P.I.N. 9649062 and after
222 P.I.N. 9647203 and after
224 A11
226 A11

PART NUMBERS REQUIRED:

<u>QUANTITY</u>	<u>P/N</u>	<u>DESCRIPTION</u>
1	C29689	Valve (Mounting holes in tractor frame must be moved straight rearward 5/8")
1	C29655	Tube - valve to motor
1	C29656	Tube - valve to motor
2	218-5107	Elbow fittings (Remove from motor - use on new valve)
2	218-5062	Straight fittings (Remove from old valve, use on motor)
1	*C29646	Travel control locator - (Neutral start switch)

FOR MODELS: 444 P.I.N. 9766840 and after
446 P.I.N. 9770165 and after
448 P.I.N. 9774000 and after

1	C29689	Valve (Mounting holes in tractor frame must be moved straight rearward 5/8")
1	C29657	Tube - valve to motor
1	C29658	Tube - valve to motor
2	218-5107	Elbow fittings (**Remove from motor-use on new valve)
2	218-5062	Straight fittings (Remove from old valve, use on motor)
1	*C29646	Travel control locator (Neutral start switch)

*Refer to special instructions in this issue, Tip #1 - for C29646 "Sandwich" Style travel control locator/neutral start switch.

**On 400 series tractors, the 90 degree leg of the upper elbow must be cut off because it will not rotate without separating the frame and transaxle. Therefore, one new elbow must be purchased.

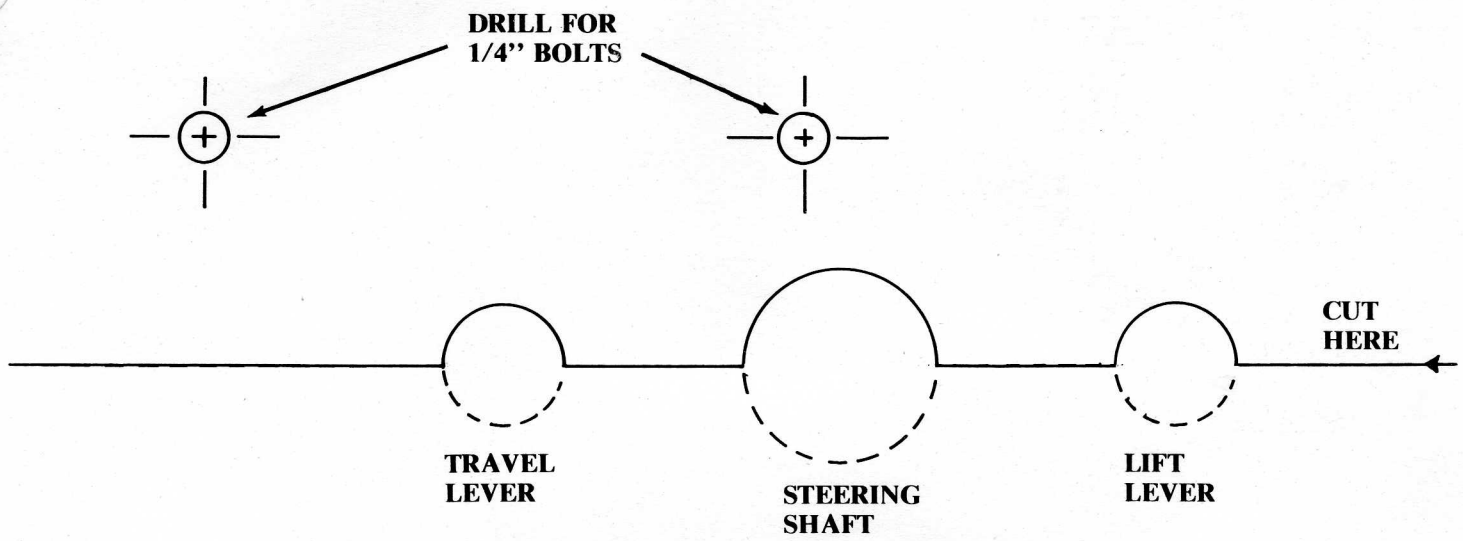
NOTE: This article is for informational purposes only.

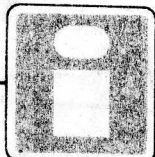
TIP # 3 - Competitive Warranty Survey, 1986:

Enclosed is a copy of the 1986 Competitive Warranty Survey originally prepared by Bolens Corporation based on data submitted by the listed manufacturers. You will note that Ingersoll compares well against competition, in particular, commercial coverage. This survey can be a useful selling tool.

ENCLOSURES

ATTACHMENT TO TIMELY TIPS #139, TIP #1





Ingersoll Equipment Co., Inc.

119 South First Street Winneconne, WI 54986-9576 414-582-4455

ROUTING				
DEALER PRINCIPAL	SERVICE MANAGER	PARTS MANAGER	MECHANICS	REFERENCE FILE

Ingersoll

April 2, 1986

TIMELY TIPS FOR THE MONTH

ISSUE #140

- TIP # 1 - YT - N43 Mower to rear Wheel Clearance
- TIP # 2 - 1986 Model 226, 446, and 448 Wire Harness Check
- TIP # 3 - Retrofit Cover Kits for Model N42 and N43 Mowers
- TIP # 4 - New Parts Catalog Availability
- TIP # 5 - N42 Mower - Spring Mounting Tab Interference
- TIP # 6 - Attachment Drive Clutch Adjusting Wrench, P/N C29772, Now Available From Ingersoll Service Parts
- TIP # 7 - Battery Activation Procedure

TIP # 1 - YT - N43 Mower to Rear Wheel Clearance:

NOTE: This information supercedes Issue #137, TIP #1.

Interference can exist between the rear edge of the N43 mower deck and the right rear tire when the mower is raised into the "transport" position. Use the following procedure to insure proper clearance:

1. The lowest cutting height is not to be used.
 - a. Early Production Mowers: Use a small bolt to block the lowest hole.
 - b. Intermediate Production Mowers: A protrusion has been provided in the height selector bracket to prevent the height selector lever from engaging the lowest hole.
 - c. Future Production Mowers: The lowest hole will be eliminated.
2. Check and adjust tire pressure to 8 PSI.
3. Check to insure that the correct rear wheel is used on the right hand side.
 - a. Measure from the center of the drawbar hole to the inside edge of the wheel rim. The proper dimension is 8-1/4".

If the dimension is less than 8-1/4", check your stock for a wheel with the increased offset and install it on the right hand side. See illustration.

(OVER)



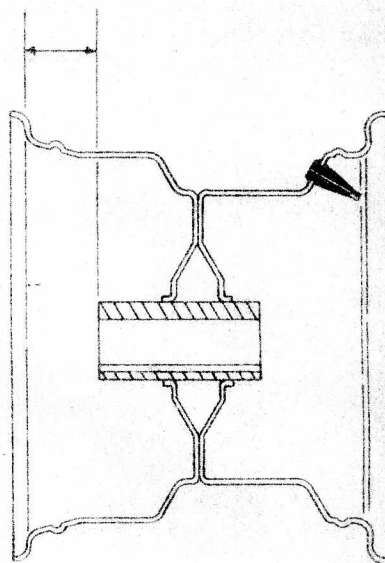
Exclusive Manufacturer of "Case Outdoor Power Equipment"

4/2/86

TIP # 1 - YT - N43 Mower to Rear Wheel Clearance: (CONTINUED):

Wheels with the increased offset have been shipped with the product beginning on or about October 1, 1985 and beginning with the following P.I.N.'s.

<u>MODEL</u>	<u>P.I.N.</u>	
108	14065377	Wheel with increased offset 1-1/2"
111	14080139	
114	14080739	Prior wheel 1-3/16"
116	14066917	



The wheel with the reduced offset can be used on the left side or on any tractor not using a N43 mower.

If you have no wheels in stock with the increased offset, contact Irv Voyer at the factory with the tractor model and P.I.N. You will be shipped a new rear wheel on an exchange basis. Return the original wheel via UPS or parcel post and submit the freight receipt on your next Service Adjustment Request for reimbursement.

TIP # 2 - 1986 Model 226, 446, and 448 Wire Harness Check:

During the predelivery inspection of all 1986 Model 226, 446, and 448 tractors, insure that the wiring harness which passes over the left cylinder baffle is not stretched too tight or pinched between the bottom of the heat shield and the pump mounting bracket.

If the wiring harness is too tight, or pinched, it can rub through causing a grounded circuit which will cause the fuse to blow.

To gain slack, loosen the bolts securing the heat shield at the front of the reservoir and pull some wire through. Position the wire so it can not be pinched between the heat shield and pump mounting bracket.

TIP # 3 - Retrofit Cover Kits for Model N42 and N43 Mowers:

Belt and pulley covers are available from Ingersoll Service Parts which permit mounting Model N42 and N43 mowers on prior Model 110 and 116 tractors (without the continuous footrests).

<u>PART NUMBER</u>	<u>MOWER MODEL</u>	<u>NET</u>
C29671	N42 Mower	\$15.30
C29674	N43 Mower	15.30

This announcement is for informational purposes only.

TIP # 4 - New Parts Catalog Availability:

The following new parts catalogs are now available:

	<u>CATALOG #</u>	<u>PRICE</u>
1. New Catalog for 1986 Model 108, 111, 114 & 116 Yard Tractors	8-2990	\$2.50
2. New Catalog for 1986 Model 80XC, 80XE, and 80XM Riding Lawn Mowers Including M91 and B95 Bagger and M92 Thatcher	8-2970	2.50
3. New Catalog for 1986 100 Series Attachments, Including N42 and N43 Mowers, L52 Utility Blade, R82 Snowcaster and B97 Bagger	8-2980	1.50

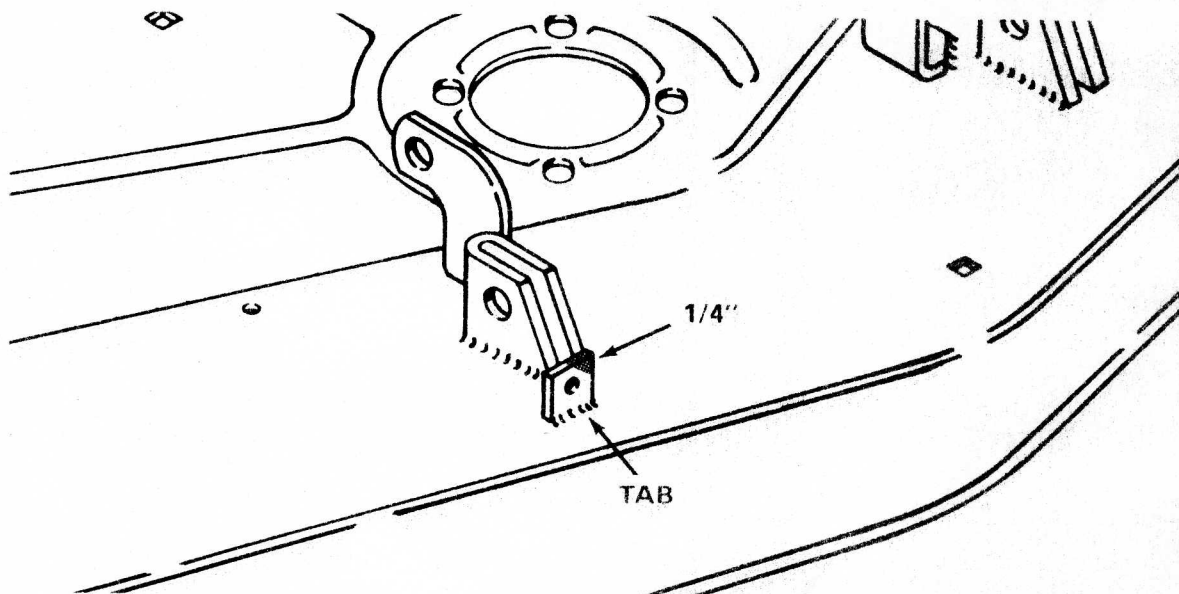
Please fill out and submit the attached postcard in order to receive any of these catalogs listed above.

NOTE: Ingersoll Micro Fiche Users:

Micro fiche revisions will be sent automatically as soon as they are available.

TIP # 5 - N42 Mower - Spring Mounting Tab Interference:

On Model N42 mowers prior to S/N BL10730, interference can exist between the right hand leveler plate and the tab on the deck for the drive belt spring.



To insure clearance for the leveler plate, grind approximately 1/4" from the inside corner of the tab before attempting to install the mounting bracket to the mower deck.

4/2/86

TIP # 6 - Attachment Drive Clutch Adjusting Wrench, P/N C29772, Now Available
From Ingersoll Service Parts:

The attachment drive clutch adjusting wrench is now available from Ingersoll Service Parts.

Part Number C29772

Net \$9.97 List \$14.24

Prices have been reduced to help insure that you will have the proper tool for clutch adjustment. Extra wrenches should be stocked to sell to your customers who want to adjust their own clutches. The clutch adjustment procedure is found in the tractor operator's manual.

TIP # 7 - Battery Activation Procedure:

To properly activate a dry charged battery, follow this procedure:

1. Remove the battery from the tractor.
2. Remove vent caps and carefully fill each cell with electrolyte to the top of the plates. Allow the battery to stand for a few minutes and recheck the level of the electrolyte in each cell. If necessary, add additional electrolyte. (Caution: Do not over fill beyond covering plates as electrolyte expands during charging and could overflow). Examine the caps to make sure the vents are open.

3. Boost charge, at a rate NOT TO EXCEED 5 AMPS for 4 to 5 hours and a specific gravity check confirms that the battery is fully charged.

IMPORTANT: All batteries must be fully charged before installation. If a specific gravity check indicates the battery is below full charge, boost charging is required. The charge rate must not exceed 5 amps and the electrolyte temperature must not exceed 125° F.

4. After boost charging, allow the battery to stand for a few minutes and recheck the electrolyte level in each cell. Fill each cell to the level indicator with additional electrolyte...NOT WATER.
5. After the battery is activated, keep it serviced and fully charged.
6. After a battery has been activated and placed into service, add only water that has a minimum mineral content. Minerals are detrimental to the service life of a battery. Under no circumstances should battery electrolyte be added after the battery has been activated and put in service. Fill to level indicator only - DO NOT overfill.

Dealers having newly activated P/N C27969 batteries which fail to hold a charge should retain the batteries for 90 days after the Service Adjustment Request is submitted.

Please do not dump the electrolyte and store in a suitable area.



Ingersoll Equipment Co., Inc.

119 South First Street Winneconne, WI 54986-9576 414-582-4455

Ingersoll

April 28, 1986

TIMELY TIPS FOR THE MONTH

ISSUE #141

- TIP # 1 - Yard Tractor - Change in Ground Speed
- TIP # 2 - 80 Riding Lawnmower Differential Assembly Procedure
- TIP # 3 - Front Axle Pivot Pin Lube Fitting for Loader-Backhoes
- TIP # 4 - Loader Travel Control Linkage Change

- Enclosure #1 - Mower Blade Length Chart
- Enclosure #2 - Drive Belt Update Chart

TIP # 1 - Yard Tractor - Change in Ground Speed:

The transmission input pulley has been increased in diameter to reduce speed and make the ground speed more suitable for mowing and bagging.

This change is effective with the following model and product identification numbers.

<u>MODEL</u>	<u>P.I.N.</u>	<u>PRODUCTION DATE</u>
108	14084847	3/18/86
111	14085811	3/18/86
114	14087760	3/18/86
116	14089591	3/18/86

The following part number changes resulted:

<u>PART NUMBER</u>	<u>DESCRIPTION</u>
C29699	Transmission Drive Belt
C29700	Transmission Belt Guide
C29701	Transmission Input Pulley

TIP # 2 - 80 Riding Lawnmower Differential Assembly Procedure:

VERY IMPORTANT: Whenever installing the sprocket on an 80 riding lawnmower differential, hold the bolt heads and tighten the nuts to a torque of 17 - 20 ft lbs (23 - 28 NM).

Failure to hold the bolt heads will cause the bolts to loosen resulting in premature differential failure.

Add this information to your Model 80 Riding Lawnmower Service Manual Section - Number 9-51051.



(OVER)

Exclusive Manufacturer of JI Case Outdoor Power Equipment

TIP #3 - Front Axle Pivot Pin Lube Fitting for Loader-Backhoes:

A right angle lube fitting is provided on the front axle pivot pin on Model 648 loader-backhoes beginning with P.I.N. 14045712.

The right angle lube fitting permits greasing the front axle pivot pin without removing the front counterweight.

A right angle lube fitting can be added to units prior to the above P.I.N. by using the following procedure:

1. Remove the front counterweight in accordance with the procedures listed in the backhoe operator's manual.
2. Remove the existing grease fitting.
3. The pin is case hardened and must be annealed before drilling and tapping. Anneal the end of the pin by heating it red hot and then letting it air cool.
4. Drill and tap the hole to 1/8" NPT.
5. Install a P/N 219-55 lube fitting.

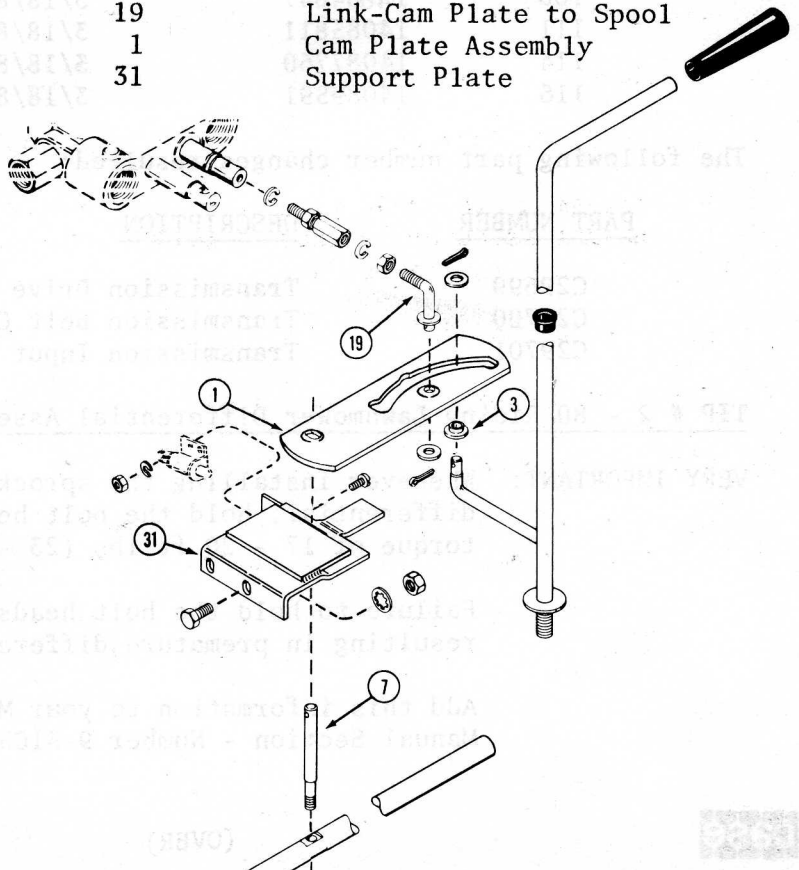
This announcement is for informational purposes only.

TIP # 4 - Loader Travel Control Linkage Change:

A running change in the 646/648 travel control linkage was effective with 648 P.I.N. 14098394. Use the following parts when repairing worn travel control linkage.

<u>PART NUMBER</u>	<u>QUANTITY</u>	<u>REFERENCE #</u>	<u>DESCRIPTION</u>
C23514	1	3	Cam Follower
C26424	1	7	Control pin
*C29803	1	19	Link-Cam Plate to Spool
*C29801	1	1	Cam Plate Assembly
*C29765	1	31	Support Plate

*Indicates improved parts.





Ingersoll Equipment Co., Inc.

119 South First Street Winneconne, WI 54986-9576 414-582-4455

Ingersoll

April 28, 1986

TIMELY TIPS FOR THE MONTH

ISSUE #141

- TIP # 1 - Yard Tractor - Change in Ground Speed
- TIP # 2 - 80 Riding Lawnmower Differential Assembly Procedure
- TIP # 3 - Front Axle Pivot Pin Lube Fitting for Loader-Backhoes
- TIP # 4 - Loader Travel Control Linkage Change

Enclosure #1 - Mower Blade Length Chart

Enclosure #2 - Drive Belt Update Chart

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Failure to hold the bolt heads will cause the bolts to loosen resulting in premature differential failure.

Add this information to your Model 80 Riding Lawnmower Service Manual Section - Number 9-51051.



(OVER)

Exclusive Manufacturer of JI/Case Outdoor Power Equipment

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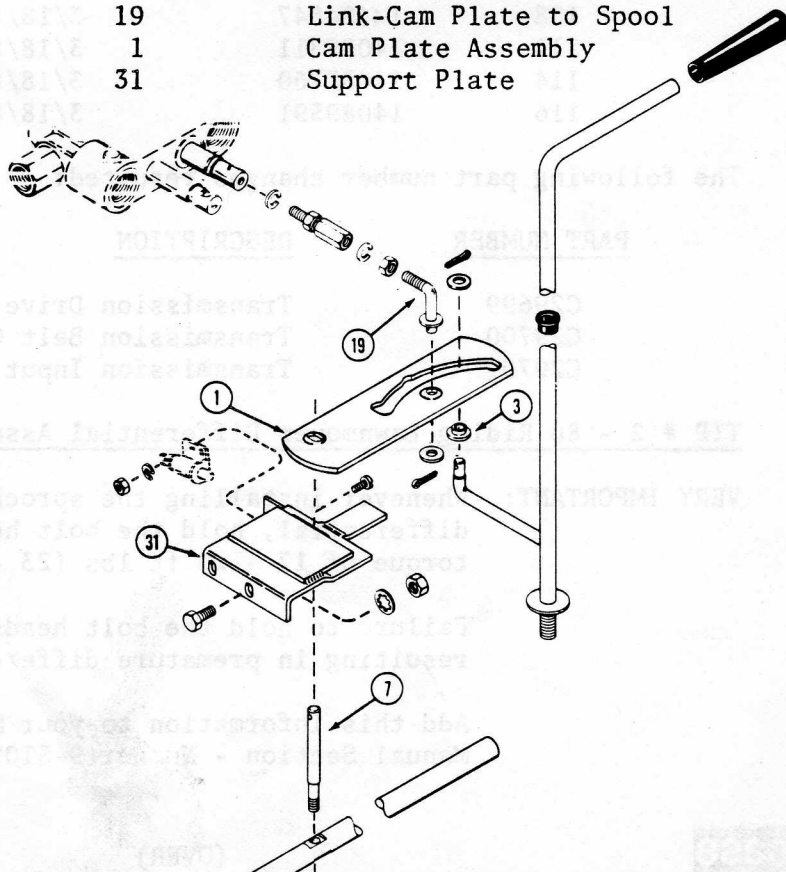
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*C29801	1	1	Cam Plate Assembly
*C29765	1	31	Support Plate

*Indicates improved parts.





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119 South First Street Winneconne, WI 54986-9576 414-582-4455

ROUTING				
DEALER PRINCIPAL	SERVICE MANAGER	PARTS MANAGER	MECHANICS	REFERENCE FILE

May 28, 1986

TIMELY TIPS FOR THE MONTH

ISSUE # 142

TIP # 1 - High Lift Wings and Special Blade Now Available for Model 80 Riding Lawnmower

TIP # 2 - Battery Warranty Pro-Rating Chart

TIP # 3 - "NIKKI" Carburetor Adjustment Procedure

TIP # 4 - Publication Catalog

TIP # 5 - New Parts Catalog/Service Manual Availability

Enclosures: #1 - Battery Pro-Rating Chart
#2 - Nikki Carburetor Adjustment Procedure
#3 - Publications Catalog
#4 - Post Card

TIP # 1 - High Lift Wings and Special Blade Now Available for Model 80 Riding Lawnmower:

For improved bagging performance of Model 80 XM, XE, and XC Riding Lawnmowers, high lift wings and a blade with mounting holes for the high lift wings are now available.

The following parts can be obtained from Ingersoll Service Parts if required:

<u>QTY</u>	<u>PART NUMBER</u>	<u>DESCRIPTION</u>	<u>NET EACH</u>	<u>LIST EACH</u>
1	C30061	Blade	\$11.25	\$15.00
2	C30069	Wing	1.36	1.94
6	C30072	Screws	.16	.22
6	131-176	Lock Nuts	.08	.12
6	192-20	Lock Washers	.01	.02

The high lift wings are included with Model B95 bagging attachments beginning with Serial Number BD13093.

The blades with mounting holes for the high lift wings are included with Model 80's beginning with the following Product Identification Numbers:

80XM	14083855
80XE	14082495
80XC	14081344

(OVER)



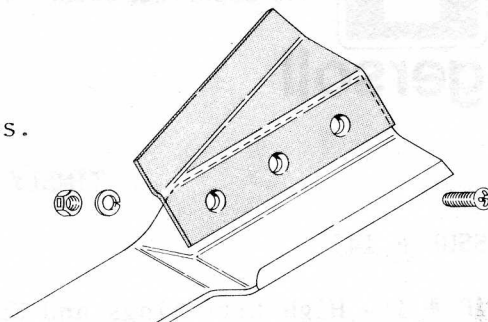
Exclusive Manufacturer of JI Case Outdoor Power Equipment

TIP # 1 - High Lift Wings and Special Blade Now Available for Model 80 Riding Lawnmower: (CONTINUED)

INSTALLATION INSTRUCTIONS:

1. Tighten nuts to a torque of 15 to 20 ft lbs.
2. Check blade balance after installation.
Balance if necessary.

This announcement is for informational purposes only.



TIP # 2 - Battery Warranty Pro-Rating Chart:

For your convenience to aid in completing battery warranty, a "Battery Warranty Pro-Rating Chart" is enclosed with this issue of Timely Tips. Utilizing this chart will save you the time normally required to calculate the warranty that you can claim and the suggested charges to the customer.

File this chart with your "Dealer IRES Manual" for future reference.

TIP # 3 - "NIKKI" Carburetor Adjustment Procedure:

The "NIKKI" carburetor adjustment procedures for 1986 Model 226, 446, 448 and 648 tractors are enclosed with this issue of Timely Tips.

Insert this supplement into your Master Service Manual after Section 9-51392, Onan Engines for future reference.

TIP # 4 - Publication Catalog:

Enclosed is the revised Publication Catalog for 1986, Form Number 8-55003. Retain this catalog for a reference when ordering publications. Please order publications on Ingersoll Form #03027 or Case Form #1740. Please mail your publications orders to: INGERSOLL SERVICE PARTS, 3600 Moser Street, Oshkosh, WI 54903.

TIP # 5 - New Parts Catalog/Service Manual Availability:

The following new manuals are now available:

1. No. 8-3000 Parts Catalog - Includes parts breakdown for our new Model 1048 Hydracutter.
2. No. 271172 3/86 Service Manual - Includes repair procedures for Briggs and Stratton twin cylinder engines as used on our Model 114 and 116 yard tractors.

Please fill out and submit the attached postcard in order to receive any of the manuals listed above. These publications will NOT be automatically shipped.

NOTE: Ingersoll Micro Fiche Users - Micro Fiche of Parts Catalog 8-3000 for the 1048 Hydracutter has already been automatically sent to you.

ROUTING				
DEALER PRINCIPAL	SERVICE MANAGER	PARTS MANAGER	MECHANICS	REFERENCE FILE



Ingersoll Equipment Co., Inc.

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Ingersoll

July 8, 1986

TIMELY TIPS FOR THE MONTH

ISSUE # 143

- TIP # 1 - Trailering Caution for 100 Series Tractors with Five Speed Transmissions
- TIP # 2 - 100YT Set-Up Reminder
- TIP # 3 - Kohler Service Bulletin No. 148 - Crankshaft Changes
- TIP # 4 - 100YT Attachment Lift Lever and Travel Control Lever Lubrication
- TIP # 5 - New Parts Catalog Availability

ATTACHMENTS - #1 - Post Card
 #2 - Kohler Engine Bulletin

TIP # 1 - Trailering Caution for 100 Series Tractors with Five Speed Transmissions:

Several field reports have been received stating that a rear axle came out of the transaxle after the tractor was transported on a trailer.

IMPORTANT! Secure the tractor to the trailer at the front and rear. Do not fasten chains or cables around the rear wheels in such a way that an outward force exists. Do not put any sideways force on the tractor with chains and cables.

TIP # 2 - 100YT Set-Up Reminder:

IMPORTANT!

The rear wheels must be installed with the VALVE STEMS OUT on all 108YT, 111YT, 114YT, and 116YT tractors.

Interference with the mower deck will result if the valve stems face inward.

This information is also provided in the Set-Up Instruction Sheet, Form #9-50926, Step #11, included with each tractor.

TIP # 3 - Kohler Service Bulletin No. 148 - Crankshaft Changes:

Please read the attached Kohler Service Bulletin carefully. Give particular attention to the warning and caution information.



(OVER)

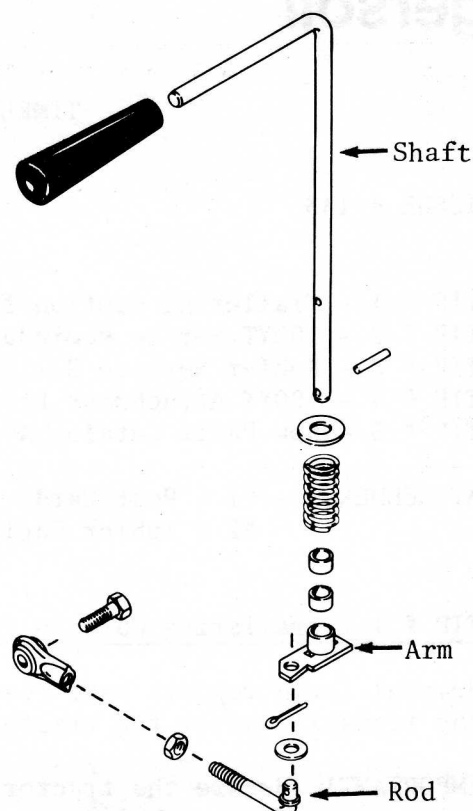
Exclusive Manufacturer of JI Case Outdoor Power Equipment

TIP # 4 - 100YT Attachment Lift Lever and Travel Control Lever Lubrication:

A small amount of free movement should exist between the lift lever shaft and arm (See illustration) to insure as much "float" as possible.

The portion of the shaft protruding through the arm should be coated with chassis grease. Use the following procedure:

1. Remove the center tray.
2. Push down on the attachment lift lever while holding up on the arm exposing the roll pin.
3. Coat the shaft and roll pin area with chassis grease.
4. Release the attachment lift lever and move it back and forth to check for a small amount of free movement.
5. Also apply a small amount of chassis grease to the steering support plate to lubricate the path of the travel control lever locating bolt head. (Not illustrated).

TIP # 5 - New Parts Catalog Availability:

Please fill out and submit the attached postcard in order to receive any of the manuals listed below. These publications will NOT be automatically shipped.

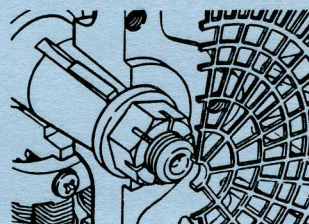
NOTE: Ingersoll Micro Fiche Users - Micro Fiche of Parts Catalogs have already been automatically sent to you.

1. Rev 1 for 8-2990 - Is an update to your new Model 108, 111, 114 and 116 yard tractor manual.
2. 8-2741 - Includes parts listing for 220, 222, 224, and 444 tractors. 1986 update.
3. 8-2751 - Includes parts listing for 226, 446 and 448 tractors. 1986 production update.
4. F1250 - Includes parts listing for J thru N (40, 44, 46) mowers, J thru S (80, 84) casters, J thru L (50, 54) blades.
5. 8-2961 - Includes parts listing for our new B98-B hydraulic bagger.

CRANKSHAFT CHANGES

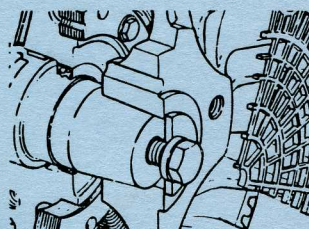
Design changes to the flywheel end of crankshaft on 4, 10, 12, 14, and 16 Hp models require new flywheel removal and installation procedures.

The old crankshaft design has an externally threaded end and uses a square key, plain washer, and marsden nut to align and secure the flywheel.



The new crankshaft design has an internally threaded end and uses a woodruff key, washers, and hex cap screw to align and secure the flywheel.

New design crankshafts are sold in kits which include the crankshaft, woodruff key, washers and/or bushing, hex cap screw, and installation instructions. Observe the following safety precautions and guidelines when removing and installing flywheels.



WARNING: Damaging Crankshaft and Flywheel Could Cause Personal Injury



Using improper procedures to remove flywheel can cause a cracked or damaged crankshaft or flywheel. This not only causes extensive engine damage, but also is a serious threat to the safety of persons near by, since broken fragments could be thrown from the engine. Always observe and use the following precautions and procedures when removing or installing the flywheel.

CAUTION:

1. Always use flywheel strap wrench, Kohler Part No. 52 455 03, to hold flywheel when loosening or tightening fastener. Do not use any type of bar or wedge between the flywheel fins as the fins could become cracked or damaged.
2. Always use a flywheel puller to remove the flywheel from the crankshaft. Do not strike the crankshaft or flywheel as these parts could become cracked or damaged.
3. Before installing the flywheel, make sure the crankshaft taper and flywheel hub are clean, dry, and completely free of lubricants. The presence of lubricants can cause the flywheel to be overstressed and damaged when the cap screw is torqued to specification.

NOTE: Some flywheels on 4 Hp models are not drilled and tapped for use with a flywheel puller. In those cases, use flywheel knock-off tool, Kohler Part No. 52 455 01.

-Over-

ROUTING	SERVICE MANAGER	SALES MANAGER	PARTS MANAGER	CHIEF MECHANIC	MECHANIC NO 1	MECHANIC NO 2	MECHANIC NO 3	MECHANIC NO 4	RETURN THIS TO
INITIAL HERE →									

ENGINE DIVISION, KOHLER CO., KOHLER, WISCONSIN 53044

Flywheel Installation

4 HP MODELS:

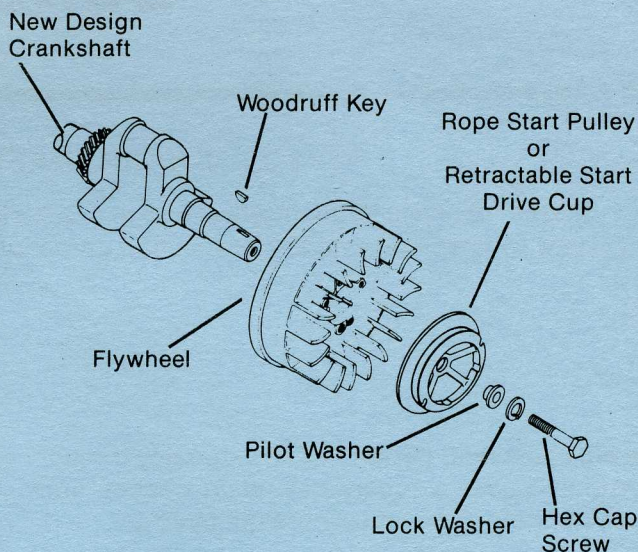
1. Insert the woodruff key into crankshaft keyway.
2. Align the flywheel keyway with woodruff key. Slide the flywheel onto crankshaft taper.
3. Position the rope start pulley or retractable start drive cup on flywheel. Install pilot washer, split lock washer, and hex cap screw (lubricate threads with oil). Torque hex cap screw as follows:



Grade 5 Screw = 190/200 in. lb.



Grade 8 Screw = 215/225 in. lb.



10, 12, 14, and 16 HP MODELS:

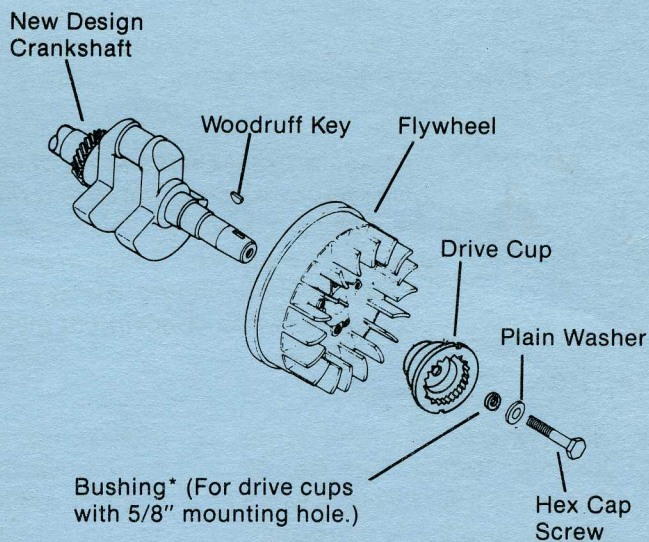
1. Insert the woodruff key into crankshaft keyway.
2. Align the flywheel keyway with woodruff key. Slide the flywheel onto crankshaft taper.
3. Install the drive cup, bushing* (if required—see illustration), plain washer, and hex cap screw (lubricate threads with oil). Torque hex cap screw as follows:



Grade 8 Screw on flywheels equipped with plastic fans = 35/40 ft. lb.



Grade 8 Screw on flywheels equipped with integral cast-iron fins = 22/27 ft. lb.



*NOTE: Bushing may have a slight press fit when it is installed in drive cup.



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Ingersoll Equipment Co., Inc.

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ROUTING				
DEALER PRINCIPAL	SERVICE MANAGER	PARTS MANAGER	MECHANICS	REFERENCE FILE

September 15, 1986

TIMELY TIPS FOR THE MONTH

ISSUE #144

- TIP # 1 - New Ingersoll Job Code Manual - Form No. 8-55670
- TIP # 2 - Sweeper Basket and Frame Assembly Now Available
Parts Catalog/Micro Fiche Corrections
- TIP # 3 - Kohler Engine Crankcase Pressurization
- TIP # 4 - Tiller Sprocket Bolt Lengthened
Parts Catalog/Micro Fiche Corrections
- TIP # 5 - Parts Catalog/Micro Fiche Corrections

TIP # 1 - New Ingersoll Job Code Manual - Form No. 8-55670:

The new, simplified Job Code Manual that you have asked for is enclosed with this mailing.

- .The new manual applies to 1986 Model Year Tractors and attachments but ALSO CAN BE USED FOR PRIOR MODELS. The prior manual is no longer available.
- .You can begin using the new manual immediately.
- .The new manual has a new simplified index and easy to use Alphabetical Listings of the Job Codes.
- .Each Job Code INCLUDES THE TOTAL TIME REQUIRED to do that job (as has been done previously). Read the "Introduction" page thoroughly for complete instructions.
- .Additional copies can be obtained by sending a properly completed Printed Materials Requisition Form to:

INGERSOLL SERVICE PARTS
3600 Moser Street
Oshkosh, WI 54903

TIP # 2 - Sweeper Basket and Frame Assembly Now Available
Parts Catalog/Micro Fiche Corrections:

As a result of Dealer Requests, the sweeper basket assembly is now available from ISP.

<u>PART NUMBER</u>		<u>DESCRIPTION</u>	<u>DEALER NET/SUGGESTED LIST</u>	
C29618		Sweeper Basket	\$94.77	\$135.38
<u>CATALOG NO.</u>	<u>PAGE NO.</u>	<u>FICHE NO.</u>	<u>GRID NO.</u>	<u>REF. NO.</u>
C1299	9	47-6-85	A-8	1 through 9

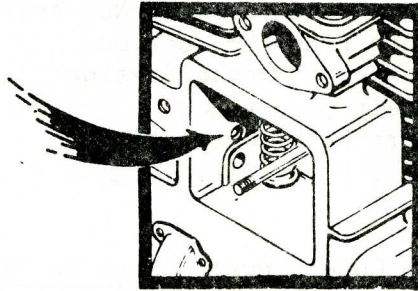


Exclusive Manufacturer of JI Case Outdoor Power Equipment

TIP # 3 - Kohler Engine Crankcase Pressurization:

Check the "O" Ring on the dipstick, making sure the "O" Ring is not nicked or damaged, and dipstick fits snugly in filler opening. Also make sure the oil filler tube is tight and there is no air leakage at the gasket. Air leakage at these locations could cause the crankcase to pressurize.

In rare instances, the crankcase ventilation hole in the valve spring chamber is plugged causing the crankcase to pressurize rather than operate under vacuum. When the casting is poured, this hole is closed by a thin layer of material which is punched out when the casting is removed from the mold. See illustration.



This condition results in excessive crankcase pressure which can cause external oil leakage at gaskets, seals, and governor shaft. This can result in excessive oil consumption where rings have not seated. To correct, slowly drill or punch away the thin cast layer and clear the passage being careful not to allow fragments to enter the block. Passage diameter should be at least 5/16".

TIP # 4 - Tiller Sprocket Bolt Lengthened:
Parts Catalog/Micro Fiche Corrections:

The bolt securing the drive sprocket to the hydraulic motor has been lengthened to insure full thread engagement. The correct part number is 113-17 bolt 1/4-20 x 1-1/4.

<u>CATALOG NO.</u>	<u>PAGE NO.</u>	<u>FICHE NO.</u>	<u>GRID NO.</u>	<u>REF. NO.</u>
8-1640	7	46-3-85	G6	9

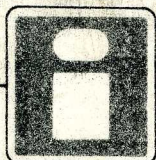
It is recommended that the bolt be changed when servicing the tiller.

TIP # 5 - Parts Catalogs/Micro Fiche Corrections:

<u>CAT. NO.</u>	<u>PAGE NO.</u>	<u>DESCRIPTION</u>	<u>FISCHE NO.</u>	<u>GRID NO.</u>	<u>REF. NO.</u>	<u>CORRECTION</u>
8-2741	49	Reservoir	26-5-86	D-8	First	Should be **
***8-2751			31-7-86	D-2	Ref. No.	C24818* on both
					15	Fiche

**Cross Out/Disregard Numbers in description list

***Parts Catalog was corrected before printing



Ingersoll Equipment Co., Inc.

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ROUTING				
DEALER PRINCIPAL	SERVICE MANAGER	PARTS MANAGER	MECHANICS	REFERENCE FILE

Ingersoll

November 7, 1986

TIMELY TIPS FOR THE MONTH

ISSUE # 145

- TIP # 1 - Slow Travel Speed-Hydriv Tractors with Mono-Block Travel Control Valve
- TIP # 2 - Revised PTO Rod Guide for 200 Series Garden Tractors
- TIP # 3 - Lift Assist Spring Kit, P/N C30162, For 1987 Model 100YT Tractors
- TIP # 4 - 1987 Model Fender Installation on 200 and 400 Series Tractors
- TIP # 5 - Check for Tight Brake Adjustment During Predelivery Inspection
- TIP # 6 - Mower Mounting Bracket for Model 648 Loader

TIP # 1 - Slow Travel Speed-Hydriv Tractors with Mono-Block Travel Control Valve:

Several reports have been received that new tractors equipped with the single piece "mono-block" travel control/holding valve lack full travel speed in the forward direction.

The cause of this symptom has been confirmed to be over travel of the holding spool causing oil loss through the deceleration orifice of the holding valve. To slightly limit the stroke of the holding valve spool and to block this orifice when in a "drive" mode, a LONGER SPOOL END is available from Ingersoll Service Parts under Part Number C30481.

Instructions:

1. First insure that the symptom is not caused by improper travel spool linkage adjustment, low oil level or tight brake adjustment.
2. Confirm the symptom by measuring speed in forward direction and reverse direction in the same speed range and same engine throttle setting.

The symptom is confirmed if the tractor has more travel speed and power in reverse and less speed in forward.

3. Place a drain pan under the travel control valve. Some oil loss will occur.
4. Remove the lower, rear, 1 inch wrench size, hex plug, spring, and washer from the holding valve portion of the travel control valve. See Illustration.
5. Pull the holding valve spool partway out of the valve body.
6. To keep the spool from rotating, put a small punch through one of the cross holes and unscrew the end of the spool.
7. Install the new spool end insuring that it pilots properly into the small spring for the check-ball.

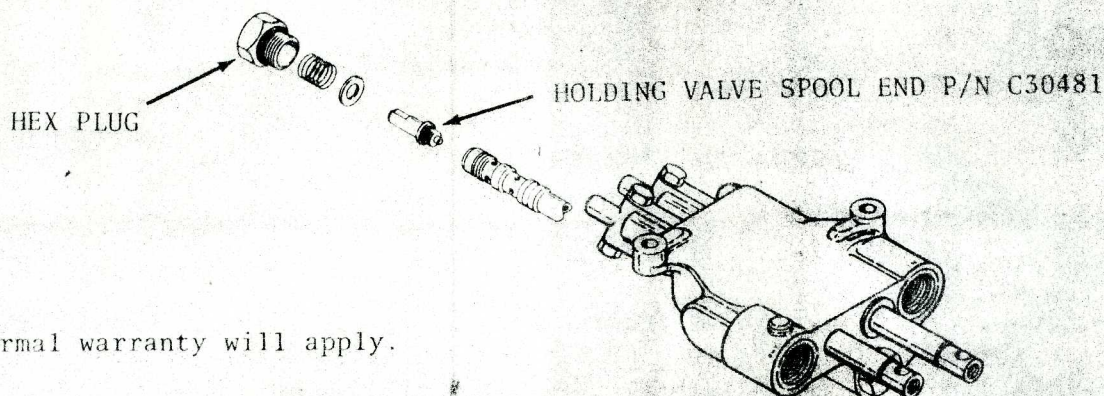
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Exclusive Manufacturer of JI Case Outdoor Power Equipment

TIP # 1 - Slow Travel Speed-Hydriv Tractors With Mono-Block Travel Control Valve (CONT):

8. Reinstall the washer, spring and hex plug.



Normal warranty will apply.

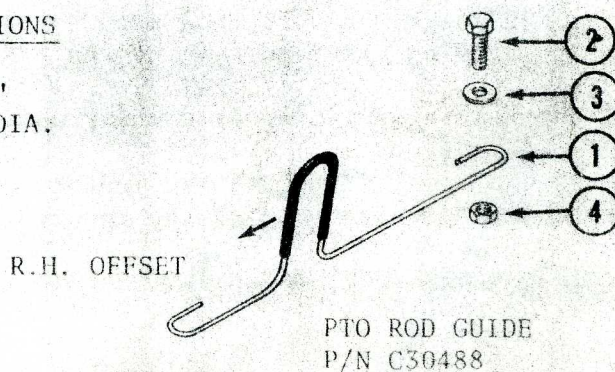
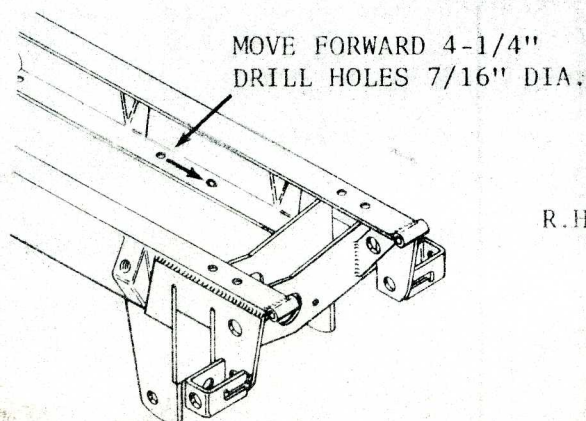
TIP # 2 - Revised PTO Rod Guide for 200 Series Garden Tractors:

A new PTO rod guide, P/N C30488, has been provided with 200 series garden tractors effective with the following Product Identification Numbers:

<u>MODEL</u>	<u>P.I.N.</u>
220	14091230
222	14092210
224	14093149
226	14094149

The loop on the revised guide is offset approximately 1/2" further to the right for improved centering of the PTO clutch engaging arm between the snowblower drive belt. When installing snowblowers on 200 series tractors prior to the above P.I.N.'s carefully check for belt clearance at the left side of the PTO engaging arm. If there is contact between the belt and the clutch arm order the new guide, P/N C30488, and hardware as listed below from Ingersoll Service Parts.

<u>REFERENCE NO.</u>	<u>PART NUMBER</u>	<u>DESCRIPTION</u>	<u>QTY</u>
1	C30488	PTO Rod Guide	1
2	113-206	3/8 - 16 x 3/4" Bolt	2
3	195-104	3/8" Plain Washer	2
4	131-1181	3/8 - 16 Lock Nut	2

ILLUSTRATIONS

TIP # 2 - Revised PTO Rod Guide for 200 Series Garden Tractors: (CONTINUED)

Remove the original guide from it's location at the lift cylinder anchor bracket and secure the bracket using the original hardware. Mark and drill the new 7/16" diameter holes 4-1/4" further forward as illustrated maintaining the same center line location on the frame rails. Install the new guide by centering the ends over the new mounting holes in the tractor frame rails using two 3/8 x 16 x 3/4" bolts, 3/8" plain washers and 3/8 - 16 lock nuts.

NOTE: On Model 226 tractors these holes may already be in the frame rails and the new guide can be attached directly to them.

Again check the clearance between the clutch engaging arm and the snowblower belt. The clearance should be equal on both sides. If necessary, loosen the lock nuts and adjust the position of the guide to equalize the belt clearance.

Normal warranty will apply.

TIP # 3 - Lift Assist Spring Kit, P/N C30162, For 1987 Model 100YT Tractors:

1987 Model 100YT tractors, effective with the following Product Identification Numbers, are furnished with a new lift torsion spring, P/N C30154, to prevent the possibility of the N42 and N43 from latching into transport when operating over rough terrain.

<u>MODEL</u>	<u>P.I.N.</u>
108	14084946
112	A11
114	14088189
116	14089708

The original lift assist spring assembly is, however, required for the snowblower, utility blade and rear discharge mower. Current production of these attachments does include the Lift Assist Spring Assembly and have been assigned new model designations as follows:

Model T82	Snowblower
Model N47	Rear Discharge Mower
Model M52	Utility Blade

When installing these attachments with prior model number designation on 1987 Model 100YT, beginning with the above P.I.N.'s, it is necessary to order and install the P/N C30162 Lift Assist Spring Kit. The kits are available through Ingersoll Service Parts and will be shipped at no charge to update your attachment inventory as necessary to install on 1987 Model 100YT tractors.

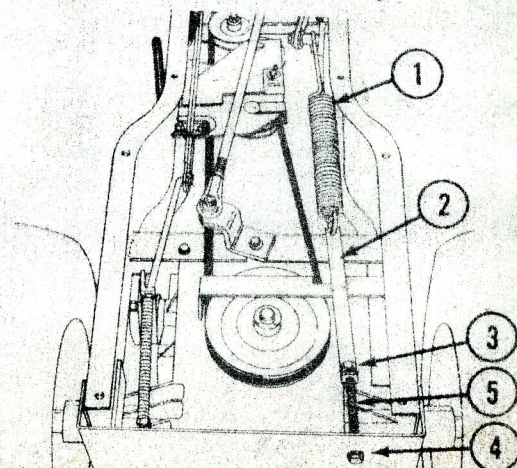
P/N C30162 LIFT ASSIST SPRING KIT

1. C29189 Assist Spring
2. C29233 Assist Spring Bar
3. 131-176 Nut - 5/16" Lock
4. C14906 Nylon Washer
5. 123-101 Bolt - 5/16" x 4"

ALSO SEE ATTACHED INSTALLATION INSTRUCTIONS

Since the Spring Kit is being provided at no charge a Service Adjustment Request should NOT be submitted.

(OVER)



TIP # 4 - 1987 Model Fender Installation on 200 and 400 Series Tractors:

The 1987 fenders must be attached to the rear of the footrests for proper installation. As with all sheet metal assemblies it is easier to leave all parts loose, start all the bolts/screws and then tighten everything.

The following information is found in the revised set-up sheet, now packaged with subject tractors, Step #12.

12. Use the following procedure to install the fenders:

- a. Loosen the 3 foot support mounting bolts on each foot support.
- b. Position the fenders on the seat supports.
- c. Loosely install the rear and top fender bolts and the screw and nut between the fender and foot support.
- d. On some tractors it may be necessary to pry between the front inside of the tire and the fender side panel to install the front fender bolts.
- e. Lift the outboard edge of the footrests to achieve alignment and tighten the screw and nut.
- f. Tighten all bolts.

TIP # 5 - Check for Tight Brake Adjustment During Predelivery Inspection:

On occasion, a brand new 200/400 series tractor may seem hard to push when the transaxle is in neutral or may seem jerky when operating. This can be caused by a tight brake adjustment.

If this should occur, loosen the brake band adjusting nut and readjust the brakes in accordance with the instructions in the operator's manual.

NOTE: On new tractors it is also helpful during predelivery to "run-in" the brake band until it closely conforms to the shape of the drum.

TIP # 6 - Mower Mounting Bracket for Model 648 Loader:

A special mower mounting bracket, Part Number C30168, must be used when mounting a three spindle rotary mower to the 648 loader to insure proper belt clearance at the rotating engine air intake screen. The Part Number C30168 bracket is available from Ingersoll Service Parts.

This announcement is for informational purposes only.