JOHN DEERE NO. 12-A STRAIGHT-THROUGH COMBINE (66-INCH CUT) (SERIAL NO. 12-107212 AND UP)

JOHN DEERE

OPERATORS MANUAL

JOHN DEERE NO. 12-A STRAIGHT-THROUGH COMBINE (66-INCH CUT) (SERIAL NO. 12-107212 AND UP)

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FOREWORD

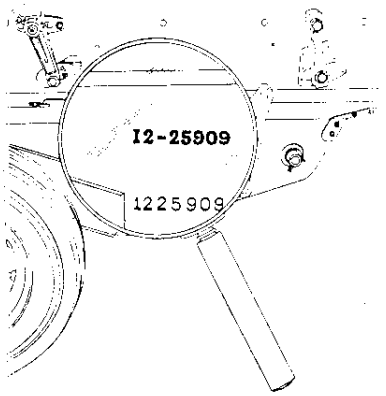
The purpose of this book is to supply useful harvesting information to owners and operators of John Deere No. 12-A "Straight-Through" Combines. This information should help in choosing the proper adjustment and special equipment required to meet each harvesting condition.

A Combine must be built to harvest a wide range of conditions. Average conditions can be handled by the standard equipment with which combine is shipped. However, unusual conditions may require some special equipment.

In addition to the standard equipment which comes with machine and the special attachments that are available at extra cost, it is sometimes necessary and advisable to make certain other equipment in the field, in order for machine to handle some unusual or purely local condition. This book contains suggestions for such special equipment. It must, of course be understood that these are only suggestions to help meet unusual situations, and therefore, they should be used only after trying all normal adjustments and recommended equipment.

Conditions vary, not only from year to year and section to section, but also from field to field. It is, therefore, obviously impossible to give definite rules for combine operation that will directly apply in every case. It is entirely possible that there are several solutions to any particular threshing problem. For this reason, we give numerous suggestions, some of which may conflict, and you can use the one that best suits your needs.

It is often necessary to settle on a compromise of adjustments to save the maximum amount of the crop. To illustrate, in a trashy condition where a large volume of straw stems, weed joints, etc., is being delivered to the cleaning unit along with the grain, it is advisable to open the chaffer and sieve a little wider and accept a slightly dirtier sample rather than to close the sieves and receive a cleaner sample but allow too much grain to pass out of machine with the blanket of trash.



SERIAL NUMBER

The Serial Number of your Combine is.....

You will find the serial number stencilled and stamped on the L. H. side of separator just above the clean grain auger housing. Write the number in the above space.

Date Purchased....., 19....

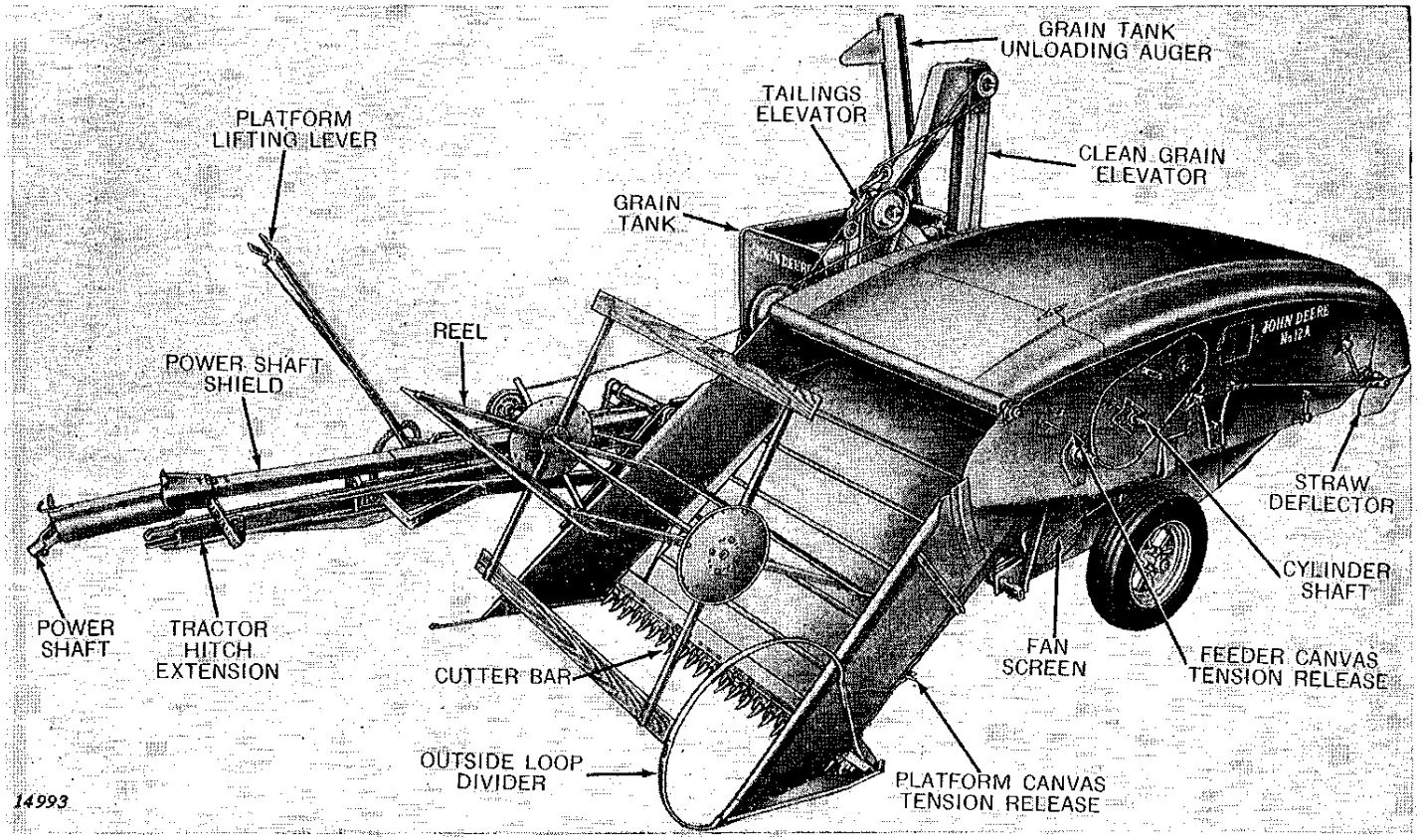
TABLE OF CONTENTS

TABLE OF CONTENTS—Continued

TABLE OF CONTENTS—Continued

TABLE OF CONTENTS—Continued

TABLE OF CONTENTS—Continued



The John Deere No. 12-A Combine

SPECIFICATIONS AND DATA

Distance Between Divider Points	72″
Length Cutter Bar	66″
Right- or Left-Hand Cut	Left
Sickle Front or to Side of Cylinder	Front
Header Hinged or Rigid	Hinged
Range Cutting Height	1-1/2″—40″
Canvas Conveyor or Spiral	Canvas
Width Canvas	59″
Reel, Ground or Power Drive	Ground
Reel Adjustable from Tractor Seat?	Optional
No. of Bats on Reel	4 (••)
Type of Cylinder	Rasp
Width of Cylinder	60″
Diam. of Cylinder	15″
Speed Range of Cylinder	450—1625 R.P.M.
Width Thresher Rear	60″
Length Separator Surface	76″ (‡)
Type of Thresher	Unit Rack
Width and Length Chaffer and Cleaning Sieves	36″ x 34″
Recleaner Available?	Yes
Power T-O or Engine Drive	Power Take-Off (***)
Drive to Cylinder	V-Belt
No. of Wheels	2
Tire Size, Main Wheels	6.50-16
Cylinder Bearings	New Departure (††) Fafnir
Beater Bearings	Hyatt
Fan Bearings	Hyatt
Main Wheel Bearings	Timken
Length with Tractor Hitch	19′ 4″
Width Over-All, Cutting	10′ 8″
Width Over-All, Transport	10′ 8″
Height Over Elevator	8′ 2″
Capacity Grain Tank	20 Bu.
Shipping Weight, Standard Equipped	About 2900 Lbs.

‡ Measured in a straight line from center of cylinder shaft to point of discharge of straw.
†† Sealed Ball.
*** Engine Optional.
•• Six and Eight Bat Optional.

IMPORTANT

Read carefully the instructions referred to on this page before starting to combine.

Lubricate your combine thoroughly and regularly. See lubrication charts pages 9 to 11, incl. Keep it in good mechanical repair.

Slip clutches should be set tight enough to operate under load, but loose enough to allow slipping should an overload occur. See page 74.

Don't overload combine. Vary your travel speed according to the volume of your crop. See page 14.

Be familiar with the fundamentals of combining. See page 81.

Break in your combine carefully. See page 12.

Don't start combining before your crop is ripe. See page 13. If your crop is to be windrowed read pages 78 to 80, incl.

Be familiar with all operating adjustments. See pages 16 to 76, incl.

See pages 82 to 131, incl., for information on combining various crops.

Don't shift unloading auger drive lever without first disengaging power take-off. See page 71.

Take proper care of V-Belts. See pages 72 and 73. Keep tires properly inflated. See page 75.

When the season is over store your machine with care. See page 77.

LUBRICATION

The economical and efficient operation of any machine is dependent upon regular and proper lubrication of all moving parts with a quality lubricant. Greasing is just as vital to the service life of farm machinery as is the use of proper lubricating oil in the crankcase of an automobile or tractor. Neglect leads to reduced efficiency, heavy draft, wear, breakdown, and costly replacement of parts.

Grease is not costly—bearings are expensive!!!

Keep main drive gear case filled with a good grade of gun grease.

Wheel bearings are packed with grease at the factory. They should be repacked at the beginning of each season.

Chains, sprockets and sickle should be oiled except when working in dry sandy conditions.

Wipe dirt from grease fittings before greasing.

Lubricate all parts thoroughly with a good grade of gun grease but avoid excessive lubrication. Excessive lubrication will allow excess lubricant to drop onto belts, causing slippage.

Replace all missing grease fittings immediately.

Do not overlook the grease fitting in right-hand end of feeder canvas idler roller or the grease fitting in platform canvas drive roller right-hand bearing box. Both these grease fittings must be greased through hole in platform canvas drive roller sheave.

LUBRICATION CHARTS

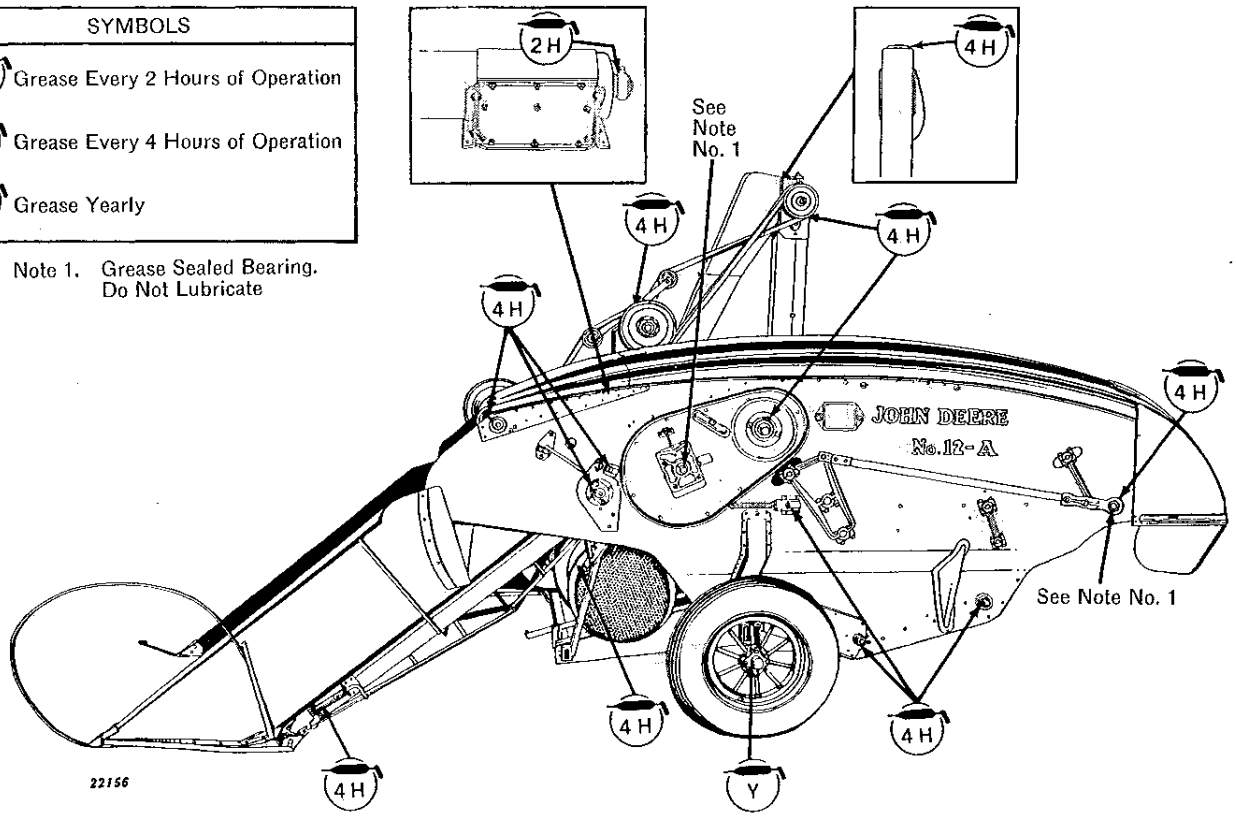
See the following pages for location of all fittings.

Important Note: The "Symbols" on the charts that follow apply to machines that have been thoroughly broken in. When the machine is new, lubricate the bearings often during the first few days of use.

LUBRICATION CHART A

SYMBOLS	
2 H	Grease Every 2 Hours of Operation
4 H	Grease Every 4 Hours of Operation
Y	Grease Yearly

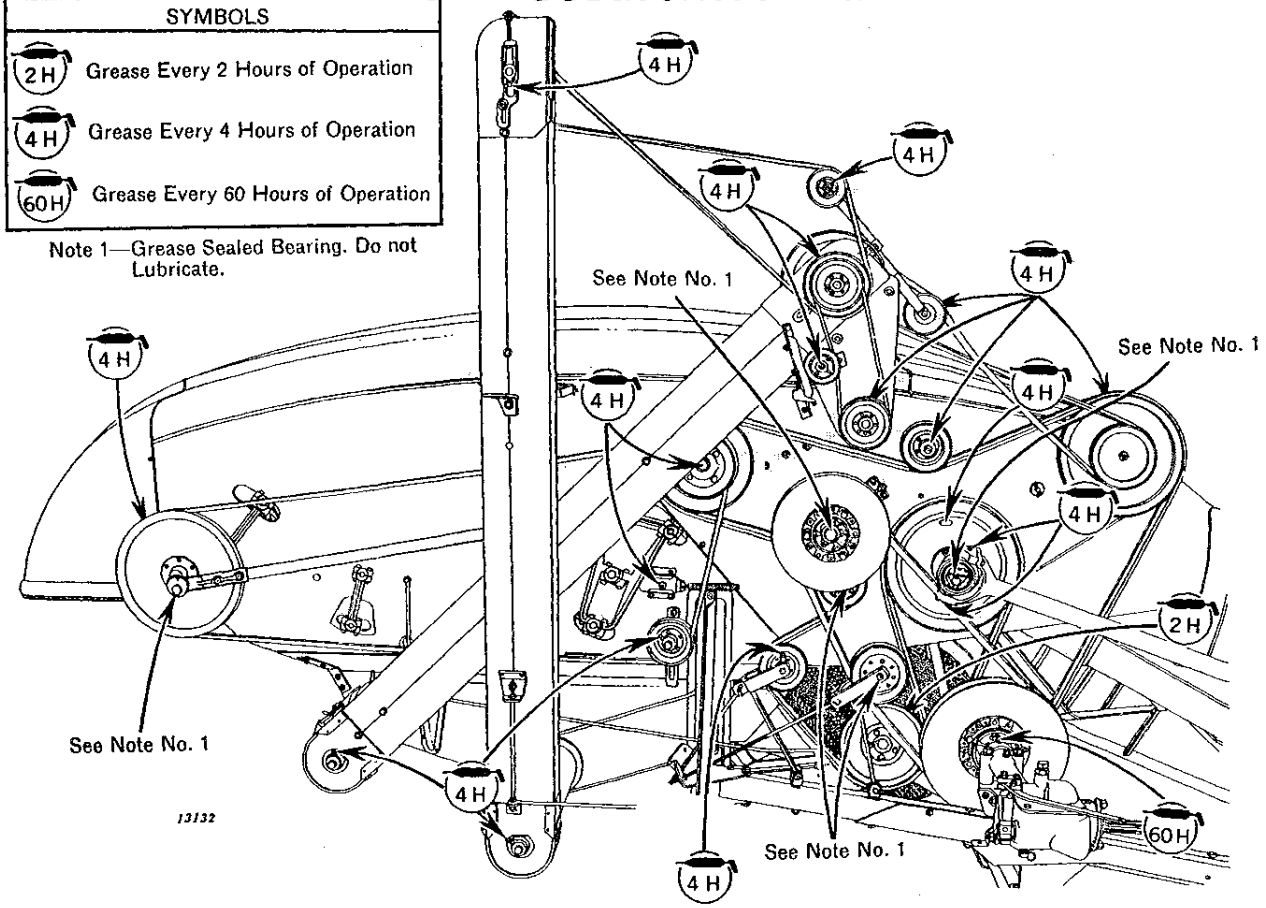
Note 1. Grease Sealed Bearing. Do Not Lubricate



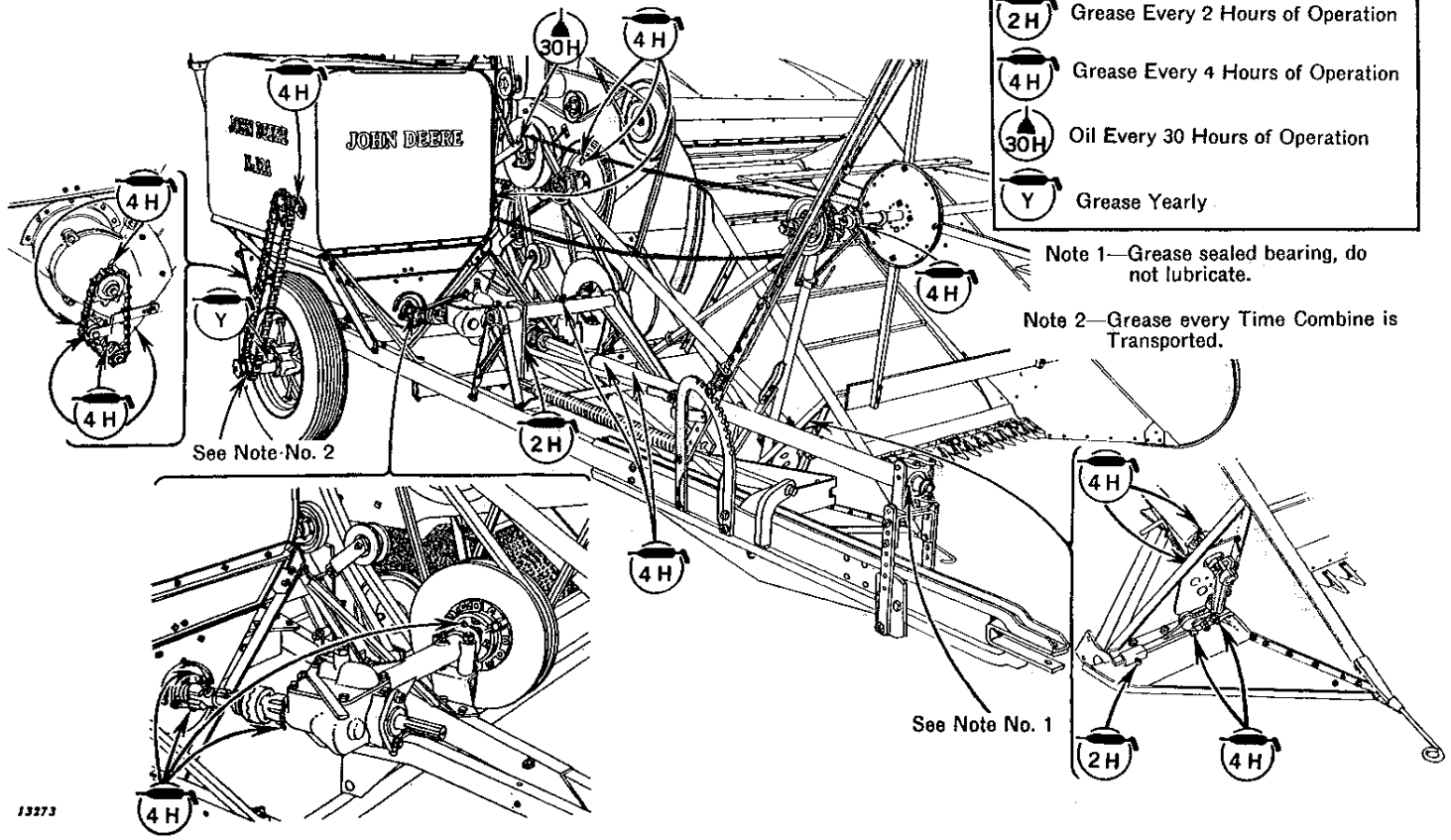
LUBRICATION CHART B

SYMBOLS	
2H	Grease Every 2 Hours of Operation
4H	Grease Every 4 Hours of Operation
60H	Grease Every 60 Hours of Operation

Note 1—Grease Sealed Bearing. Do not Lubricate.



LUBRICATION CHART C



SETTING-UP AND BREAKING-IN THE NEW COMBINE

The Setting-Up Manual.

Almost all field troubles can be traced directly to improper setting-up and starting. It is, therefore, of the greatest importance that extreme care be taken to see that the machine is set up and started properly. To reduce transportation cost the combine is partially disassembled for shipment; in spite of this, John Deere Combines are more completely assembled at the factory than most combines.

The **Setting-Up Manual** should be followed very closely. The printed copy in the **Setting-Up Manual** should be read carefully. It is not always possible to illustrate the assembly of all units. In such cases, an explanation is given in the printed section. If you read and follow the directions given, there should be no trouble experienced due to the machine being improperly set up.

Breaking-in the New Combine.

After the setting-up is completed, the entire machine should be gone over and bolts tightened. All bearings should be generously lubricated. (See lubrication charts on pages 9 to 11, incl.)

All V-belt drives should be checked carefully with the illustration shown on page 72. Belts should be tight enough to eliminate slippage because a belt can be very quickly ruined if it is allowed to slip in the grooves of a sheave for any length of time. Excessive heating of a sheave is a sign of belt slippage. Be sure all shafts turn freely.

Platform and feeder canvases should be installed before the combine is run off.

The clean-out doors in the bottom of the clean grain and tailings elevators, and grain tank unloading auger (see Figures 65 and 69), should be opened. Run combine slow for some time to allow the parts to work in gradually. After a short run at idling speed, stop combine and inspect completely, making a careful check for loose bolts, heating bearings, binding parts, loose belts, etc. After a complete re-lubrication, the combine should again be started and run for a brief period at a slow speed. It should then be brought up to a tractor fast idle speed and operated at that speed for at least two hours, preferably longer. After this full-speed run-off, another careful check should be made for loose bolts, heating bearings, etc. New belts will stretch slightly after the first run-off and tension should be increased.

Remember, the breaking-in period is just as important with a new combine as it is with a new automobile. Don't try to "step it down to the floor" right at the start. If you do, trouble is sure to develop later.

STARTING IN THE FIELD

Understand Function of All Working Units.

Before starting to combine, turn to pages 18 and 19 where you will find a cutaway view showing the working units of the machine. Study this carefully to understand thoroughly the function of each unit and become familiar with the adjustments necessary to obtain best results.

Don't Start Combining Until Crop Is Ripe.

It is only natural for the owner of a new combine to want to try his machine as early as possible. This results in most new combines being started in the field before the crop is ready for combining. If a binder is seen in the neighbor's field, the urge to start becomes uncontrollable. **When grain is ready for binding, it is not ready for straight combining.** No one would think of picking up bundles right after a binder and hauling them in for threshing, yet, in too many instances, the combine is expected to satisfactorily handle grain in the same state of immaturity.

A combine should not be started until the grain is dead ripe, which is usually 7 to 10 days after it is customarily cut with a binder. **If the threshed grain feels damp or is easily dented with the fingernail, the moisture content is usually too high for safe storage.**

Grain crops containing **14% moisture or less** are considered dry enough for safe storage. Arrangements can usually be made at the local grain elevator for necessary moisture tests. The maximum moisture content for safe storage depends upon the crop to be combined and in part upon atmospheric conditions, storage facilities, foreign material in the grain, whether handled in bulk or sacks, and whether the crop is for market or feeding.

The first round in the field is usually the hardest. The forward speed of tractor should be as slow as possible to reduce the volume of material entering machine. The tractor should be run at full throttle to keep the combine mechanism up to full speed thus guarding against slugging and clogging—**shift the tractor to a lower gear to obtain slower travel speed but do not throttle down tractor motor.**

In certain sections of the country where grain ripens unevenly, and where green weeds present a serious problem, the practice of windrowing is followed. There are advantages as well as disadvantages in this method of harvesting. On pages 78 to 80, incl., you will find detailed information on windrowing. Read this very carefully before deciding upon your method of harvesting.

Do not start combining until crop is ripe.

Limitations of a Power Driven Combine.

The operating efficiency of any power driven machine is directly proportional to the tractor power available. Steady, smooth power is of vital importance—any fluctuations in tractor motor speed is reflected in the speed of the combine—uneven speed results in loss of grain, inferior threshing and, in extreme cases, complete plugging of the machine. Every precaution should be taken to maintain uniform speed.

The Operator.

The degree of satisfaction given by this or any other combine is directly dependent upon the carefulness of the tractor operator. Once the combine has been adjusted to meet the crop condition, the rest is up to the operator.

Excessive travel speed is one of the greatest causes of trouble. Traveling at a high rate of speed over rough ground can cause extra wear and breakage that would not occur if the combine was pulled at a more reasonable speed. Overloading, resulting in a loss of grain, is another evil of fast ground travel. More straw is taken in than the machine can handle. The heavy layer of material passing over the rack and sieves carries out grain.

The tractor motor must be operated at full throttle at all times. Any necessity for reduction in travel speed should be met by shifting to a lower gear instead of throttling tractor engine.

When stopping the tractor to unload grain tank, or for any other reason the combine should be cleaned out before disengaging power take-off. If necessary to stop in the middle of the field, the combine and tractor should be backed up a few feet before again going ahead. This will allow the combine to come up to speed before grain enters.

If ditches in the field necessitate throttling down motor when crossing they should be cut around.

By rounding the corners in the field more uniform speed can be maintained when turning.

The tractor operator should note very carefully the condition of the crop and adjust platform so just enough of the straw is cut to get all the grain. If, in a certain section of the field, the crop is extremely heavy and down badly, he should take less than a full swath.

The tractor operator should listen for the warning of clutches slipping. He should also listen to tractor motor for any evidence of slowing down, caused by cylinder starting to slug, and stop the tractor before the machine has become completely plugged.

Owner's Responsibility in Proper Operation of Combine.

The John Deere dealer is obligated to explain thoroughly, the adjustments that are built into the machine and give general instructions on when and how to make these adjustments. He should also explain to the operator the value of the Setting-Up Manual and the special Operator's Service Manual you are now reading. The information given in these Manuals will afford a clear understanding of the fundamentals of combine harvesting. **The best use of these fundamentals to suit the condition in which the machine is operating is a responsibility that is completely up to the operator.**

Proper Preparation of Field for Combining Will Mean Less Trouble and More Profitable Operation.

In fields where small grain follows corn in the rotation of crops, special care should be taken before seeding to clean up or cover cornstalks and large corn roots. They can be very troublesome should the crop go down.

When a cornstalk or root hooks onto the point of a guard, a great deal of grain is pushed ahead and run down. It is usually necessary to then stop, back up and clean off the cutter bar before going on. Raising the cutter bar to avoid this will mean a loss of some of the beaten down grain.

Another thing, large corn roots can be injurious to canvases should they be carried up the platform to the narrow feeder throat.

A little extra work done when preparing the field for the small grain crop will pay big dividends when harvest time rolls around.

Suggest:

If the above button click is invalid.

Please download this document

first, and then click the above link

to download the complete manual.

Thank you so much for reading

APPROXIMATE SETTINGS MADE AT FACTORY FOR COMBINING SMALL GRAIN

Cylinder Speed and Spacing Between Concave and Cylinder.

When combine is run off at factory, the cylinder speed is set to operate at 1300 R.P.M. under load. At this speed, best results can be expected in handling most small grains. The cylinder and concave spacing is set at 1/4". Remember, even though these are factory settings and need not be changed until field trial indicates a necessity for readjusting, it must be understood **they cannot be expected to handle all crops in all conditions.** Suggested changes for different crops and conditions will be found on pages 82 to 131, incl.

The cylinder and the separator are driven by separate belts. The speed of the cylinder can be varied without affecting the speed of the balance of the machine. Instructions for varying cylinder speed are found on pages 38 to 40, incl.

Basic Speed of Separator.

The basic separator speed can be checked at the end of feeder canvas drive roller. The speed at this point should be 540 R.P.M. with tractor throttle at fast idle. **Tractor or engine governor should be set so that speed of this roller is 540 R.P.M.**

Beater Behind Cylinder.

The beater behind the cylinder is set to operate at 650 R.P.M., **with tractor operating at fast idle.** Conditions sometimes make it desirable to change this speed. Full instructions for changing beater speed are found on page 51.

Triangular covers are installed over beater teeth. They prevent wrapping of green material on beater if combine is started in the field before crop is sufficiently ripe. See pages 51 and 52.

Cleaning Fan.

The valves at sides of fan housing are set about two-thirds open and the blast deflector in fan throat is set to throw the blast about one-third of the way back from the front of shoe. See pages 82 to 131 incl., for special settings.

Cleaning Chaffer and Sieve.

The adjustable chaffer lips are set about one-half open and adjustable sieve lips about one-third open when combine leaves the factory—these are average settings. A good rule to remember is to have lips of chaffer or upper sieve open as wide as possible without admitting too much coarse material and so grain works through before it passes over two-thirds of the length of sieves. Close the lips of the adjustable sieve as much as possible without carrying clean grain into tailings return auger.