

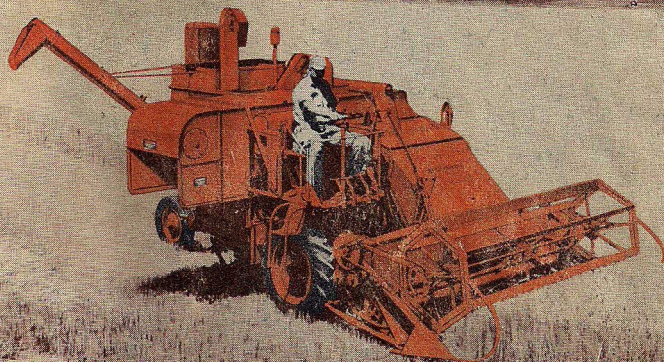
KNOWLEDGE
IS
POWER



HOW

to run your

ALL-CROP Harvester



ALLIS-CHALMERS
TRACTOR DIVISION • MILWAUKEE 1, U. S. A.



BE CAREFUL

- 1. KEEP ALL SHIELDS IN PLACE.**
- 2. STOP MACHINE TO ADJUST AND OIL.**
- 3. WHEN MECHANISM BECOMES CLOGGED, DISCONNECT POWER BEFORE CLEANING.**
- 4. KEEP HANDS, FEET AND CLOTHING AWAY FROM POWER-DRIVEN PARTS.**
- 5. KEEP OFF IMPLEMENT UNLESS SEAT OR PLATFORM IS PROVIDED. KEEP OTHERS OFF.**

AVOID ACCIDENTS

Most accidents, whether they occur in industry, on the farm, at home, or on the highway, are caused by the failure of some individual to follow simple and fundamental safety rules or precautions. For this reason most accidents can be prevented by recognizing the real cause and doing something about it before the accident occurs. Regardless of the care used in the design and construction of any type of equipment, there are many conditions that can not be completely safeguarded against without interfering with reasonable accessibility and efficient operation.

A CAREFUL OPERATOR IS THE BEST INSURANCE AGAINST AN ACCIDENT.

THE COMPLETE OBSERVANCE OF ONE SIMPLE RULE WOULD PREVENT MANY THOUSAND SERIOUS INJURIES EACH YEAR. THAT RULE IS:—

NEVER ATTEMPT TO CLEAN, OIL, OR ADJUST A MACHINE WHILE IT IS IN MOTION!

“National Safety Council”

It pays to know your machine

Knowledge of a machine, operating ability, and knowing when and how to make adjustments for more satisfactory operation are a great asset to the farm machinery user —

Such qualifications are gained through careful study of the operating instructions and actual experience with the machine in the field.

This book is intended only to assist the operator in determining adjustments that will aid in more satisfactory operation of his machine.

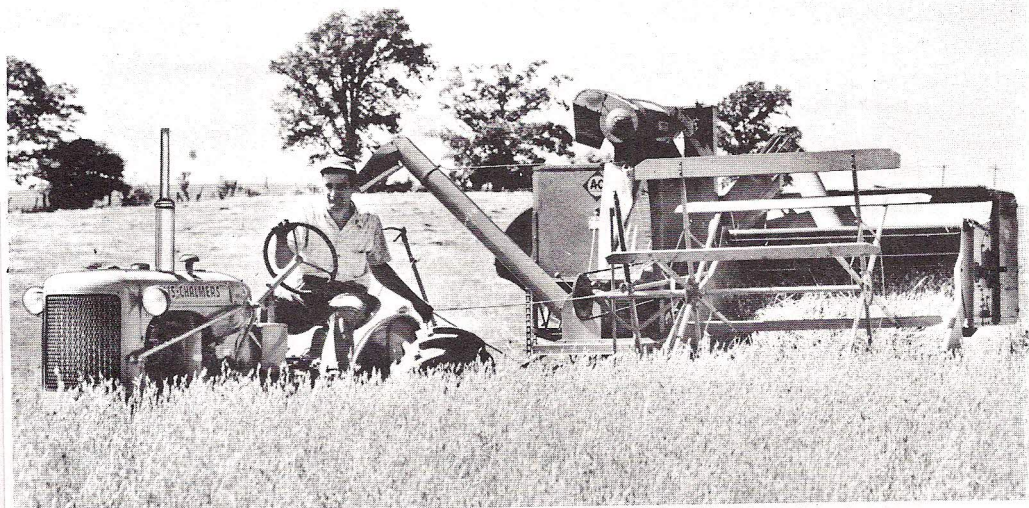
The operator's manual should be consulted for more detailed information on operation and adjustments.



Operator's manual contains essential information on care, lubrication and adjustments of ALL-CROP Harvesters. For most efficient operation and performance, follow these instructions.



"No Other Harvester has done So Much for So Many"



More farmers own and use ALL-CROP Harvesters than any other combine ever built.

Harvest when crop and weather are right — for best yield — top grade.

Harvest with regular help and tractor power — independent of custom operators and high priced extra help.

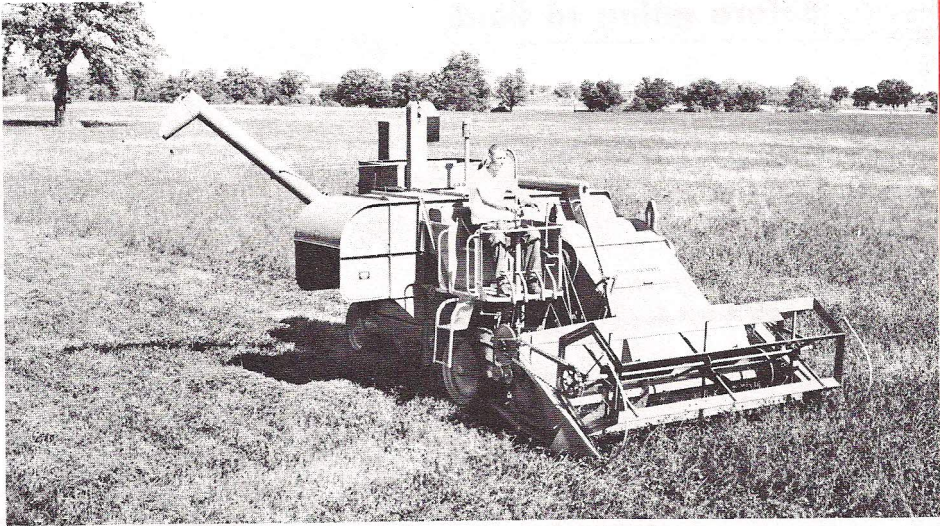
Grow and harvest the crops that pay best — as cash crops . . . as long-range soil builders and soil savers. Lower first cost — lower upkeep — pays off in better harvests . . . bigger profits.

A Home-Owned and operated ALL-CROP Harvester

will help you farm better —

make more money for you.

For Home Harvesting on the FAMILY FARM



Model 100 Self-Propelled ALL-CROP Harvester.

The Self-Propelled ALL-CROP Harvester brings to the self-propelled combine field, for the first time, new advantages in operating convenience, lower initial and upkeep costs, and greater adaptability in harvesting more kinds of crops. In short, it brings ALL-CROP performance to self-propelled harvesting.

you can

harvest it better

with an

ALL-CROP Harvester

ALL-CROP is an ALLIS-CHALMERS Trademark

Before going to field

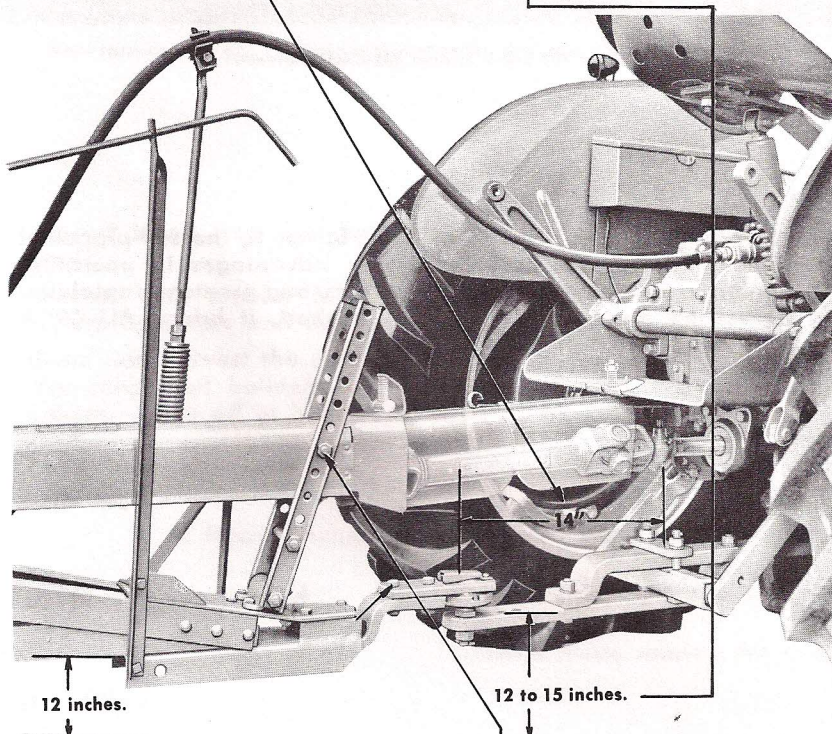
Check TRACTOR to be sure it is in good mechanical condition.

Adjust tractor drawbar to A.S.A.E. position.

14" from end of P.T.O. to center of hitch hole in drawbar.

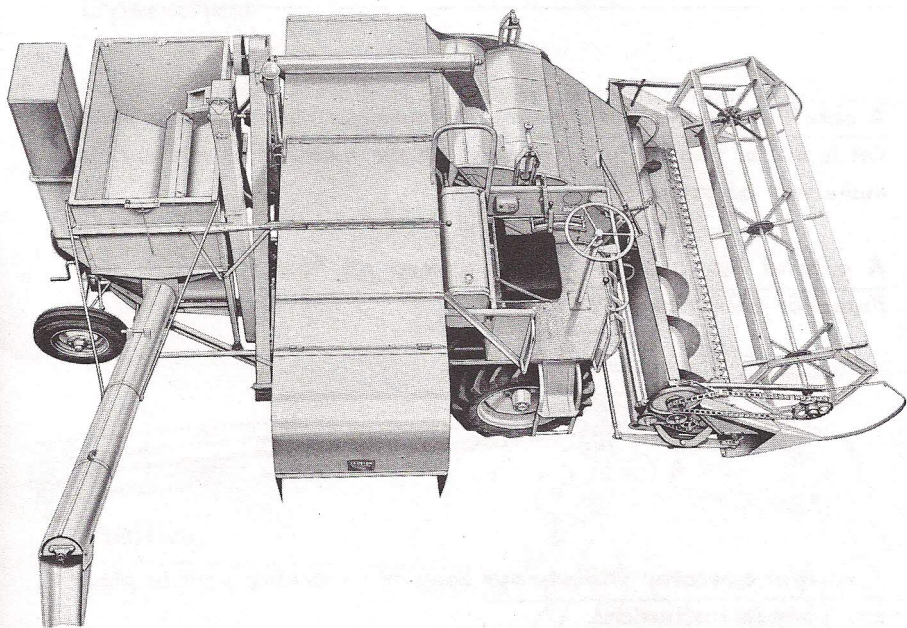
Adjust tractor wheels to narrowest tread position.

12" to 15" from top of tractor drawbar to ground.



Locate hitch plate so distance between tongue and ground is 12 inches. This same distance should be used when harvester is equipped with an auxiliary engine.

Set bearing in support arms so universal joints run in as near a horizontal line as possible.



Before attempting to operate Self-Propelled ALL-CROP Harvester in the field or on the highway, the operator should thoroughly familiarize himself with all controls and how to operate them.

**See operator's manual
for complete instructions
on preparing to start
and operate harvester.**

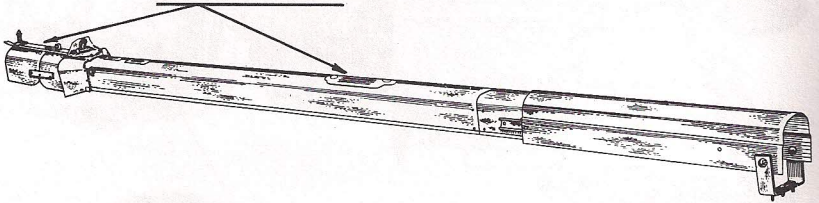
KEEP ALL SHIELDS IN PLACE

BE A SAFE OPERATOR

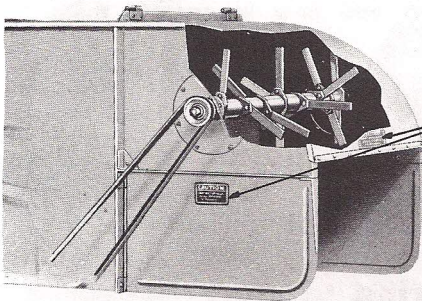
A good operator is a careful operator

A careful operator will always be sure the tractor Power Take-Off is out of gear before he works on the machine or attempts to make any adjustments.

A careful operator will always keep all Power Take-Off and Propellor Shaft shields in place.



A careful operator will always keep this warning sign in place and obey its instructions.



CAUTION
Keep out of hood
when spreader
is Running.

All shields and warning signs are for the operator's protection!

A good operator is a safe operator!

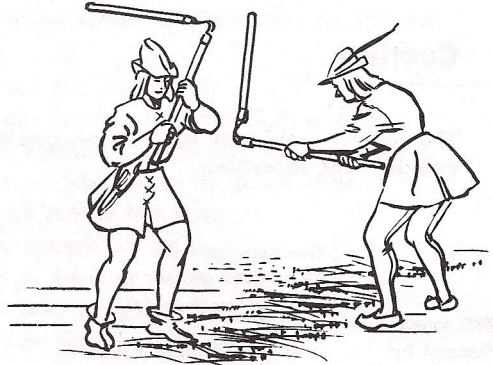
Operation

There are Four Operations Performed in the Combine Harvesting of Grain and Seed Crops —

Cutting



Shelling



Separating



Cleaning



Suggestions for the operator

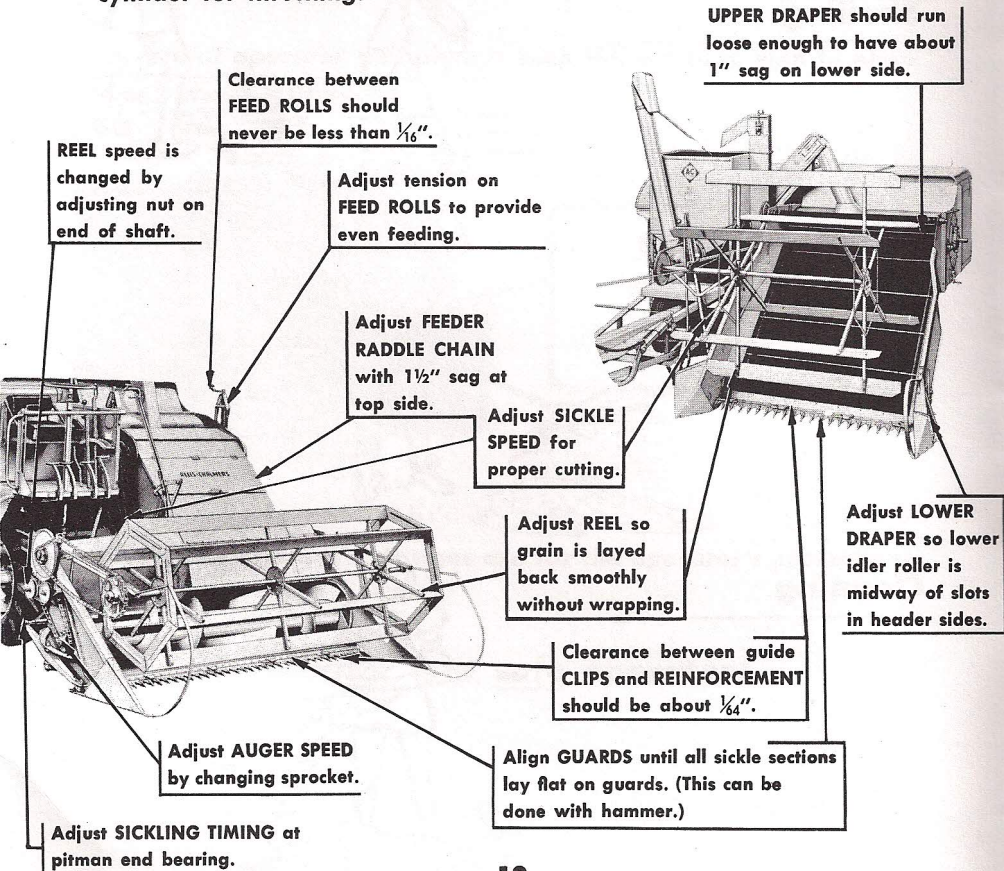
Know your adjustments! Lack of knowledge about machine adjustments, or machine operation is usually the cause of field problems.

A study of these pictures and suggestions will guide you in locating the cause and making the proper adjustments to overcome your problem.

The following adjustments and suggestions, unless otherwise noted, are common to all models.

Cutting

The header performs the cutting operation and delivers material to cylinder for threshing.



Is this your problem?

Check this.

Not cutting a clean swath.

Worn or broken sickle sections.
Sickle out of time with guards (S.P. only).
Too much clearance at guide clips.
Sickle sections not laying flat on guards.
Bent guards.
Excessive play in sickle linkage.
Ground travel too fast.
Sickle speed too slow.
Using wrong type of guard.
Drive belt slipping.
Operating cutter bar too close to ground.

Material bunching on cutter bar.

Reel set too high.
Reel set too far forward (S.P. only).
Sickle sections not laying flat on guards.
Too much clearance at guide clips.
Ground travel too fast.
Sickle speed too slow.
Worn or broken sickle sections.
Drive belt slipping.
Reel too slow or belt slipping.

Reel wrapping.

Reel set too low.
Reel speed too fast.

**Plugging under lower draper roller.
("60" & "66" only)**

Lower idler roller too high in slots.
Tailings deflector above cylinder not deflecting material into cylinder.

**Material bunching at upper draper.
("60" & "66" only)**

Draper too loose.
Draper frame not free to float.

Material not feeding even to cylinder.

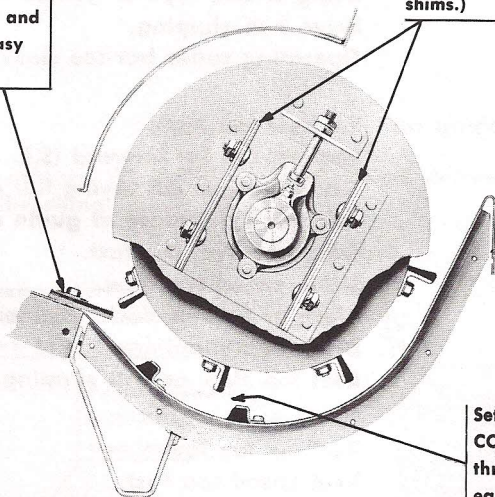
Too much tension on feed roll tension springs (S.P. only).
Feed rolls running too close together (S.P. only).
Reel improperly adjusted.
Drapers speed too fast ("60" and "66" only).
Feeder raddle chain too tight (S.P. only).
Conveyor auger speed too slow (S.P. only).

Shelling

The grain or seeds are threshed from heads or pods by a combination of rubber-against-rubber shelling contacts on cylinder bars, shelling plate and concaves.

Adjust SHELLING PLATE closer to cylinder bar for hard to thresh crops and farther away for easy to thresh crops.

Move CYLINDER forward for heavy crops and rearward for light crops. (This is done by shifting shims.)



Set CYLINDER closer to CONCAVES for hard to thresh crops and raise for easy to thresh crops.

In long straw conditions, set CYLINDER close to CONCAVES to chop straw. (CONCAVE clearance is measured at second concave.)

Is this your problem?

Cracking grain and beans.

Check this.

Cylinder speed too high.
Cylinder set too close to concaves.
Too much threshed grain returning to cylinder.
Shelling plate lagging worn.
Rubber worn on cylinder bars.
Concave rubber worn.
Wrong concave grate (S.P. only).

Not shelling grain and seeds.

Cylinder speed not kept uniform.
Cylinder not set close enough to shelling plate and concaves.
Ground travel too fast.
Cylinder speed too slow.
Increase number of bars on cylinder in very hard shelling grain and seeds ("60" & "66" only).
Cylinder set too far forward.

Cylinder choking down in heavy crops.

Power take-off speed not steady (Normal speed is 535 RPM).
Ground travel too fast.
Material bunching on header.
Cylinder speed too slow, or speed not kept uniform.
Cylinder should be in forward position.
Feed rolls adjusted too far apart (S.P. only).
Not enough tension on upper feed roll (S.P. only).
Set cylinder closer to concaves to break up straw.

Handling long straw back of cylinder.

Set cylinder closer to concaves to break up straw.
For extremely heavy straw, move cylinder forward.

Cylinder vibration.

Cylinder running above recommended speed (1600 RPM maximum), ("60" & "66" only).
(1400 RPM maximum) (S.P. only).
Cylinder out of balance.
Cylinder bars gum up in weedy or green conditions — keep bars clean.

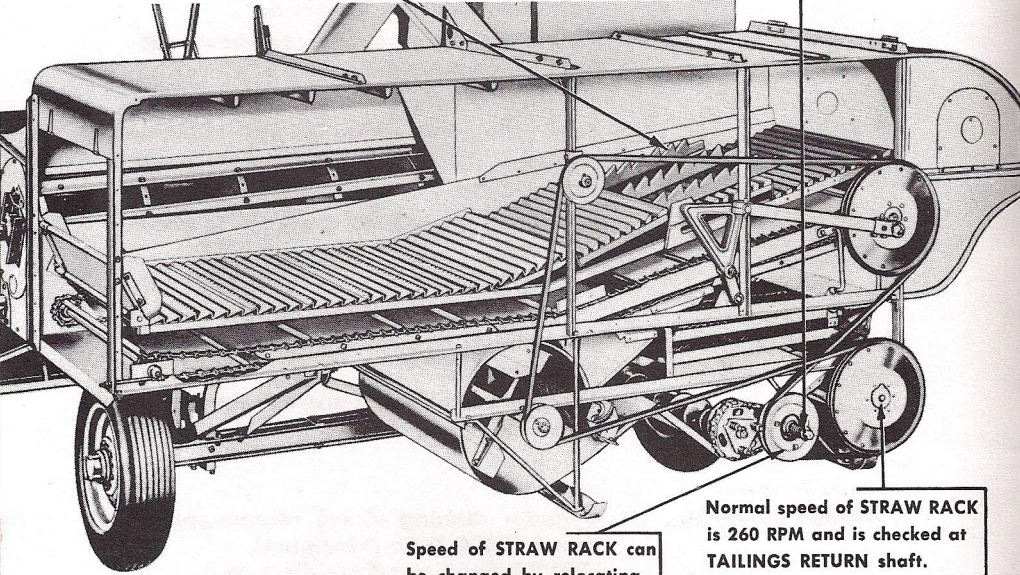
Separating

ALL-CROP Harvesters use two proven methods, or principals, to do a thorough and complete job of separating and saving grain.

One of these is **AIR BLAST SEPARATION**, a strong blast of air from the cylinder carries the material up in a long arc to a series of curved deflectors in the top of thresher body which direct it toward the left hand end of straw rack, immediately behind cylinder. The other is by shaking the straw from below with an oscillating **STEP-UP STRAW RACK**.

In extremely heavy coarse straw or viny conditions, it may become necessary to remove one or more **FISHBACKS**.

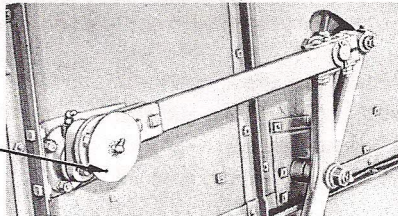
Speed of **SEPARATOR DRIVE SHAFT** on both model harvesters should be set at 535 RPM and is regulated by the engine throttle and governor.



Speed of **STRAW RACK** can be changed by relocating spacers in **DRIVE SHEAVE**.

Normal speed of **STRAW RACK** is 260 RPM and is checked at **TAILINGS RETURN** shaft. (Both sheaves are same size.)

On model "100" self-propelled, check **RACK** speed at front end of grain drag drive shaft. Normal speed is 260 RPM.



Is this your problem?

Check this.

**Straw not moving
on rack.**

Ground travel too fast.

Rack speed too fast.

In some conditions, decreasing rack speed slightly below normal will move straw faster.

Material not feeding evenly into cylinder.

Fishbacks retarding movement of straw.

In some conditions straw will move faster on rack if straw is cut up shorter at cylinder.

**Saving grain over
rack.**

Ground travel too fast.

Rack speed too fast.

Excessive tailings return to cylinder.

Material not feeding evenly into cylinder.

Straw bunching on rack.

Fishbacks retarding movement of straw.

**Straw, pea or bean
vines clinging and
bunching on rack.**

Set cylinder closer to concaves to break up straw

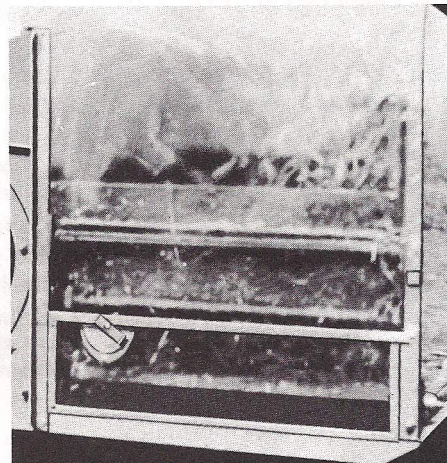
Rack speed above 260 RPM.

Fishbacks retarding movement of straw.

Large deflector retarding movement of viny straw conditions.

Attach wooden strips about 2" apart, lengthwise on flat section of rack, directly behind cylinder ("60" only).

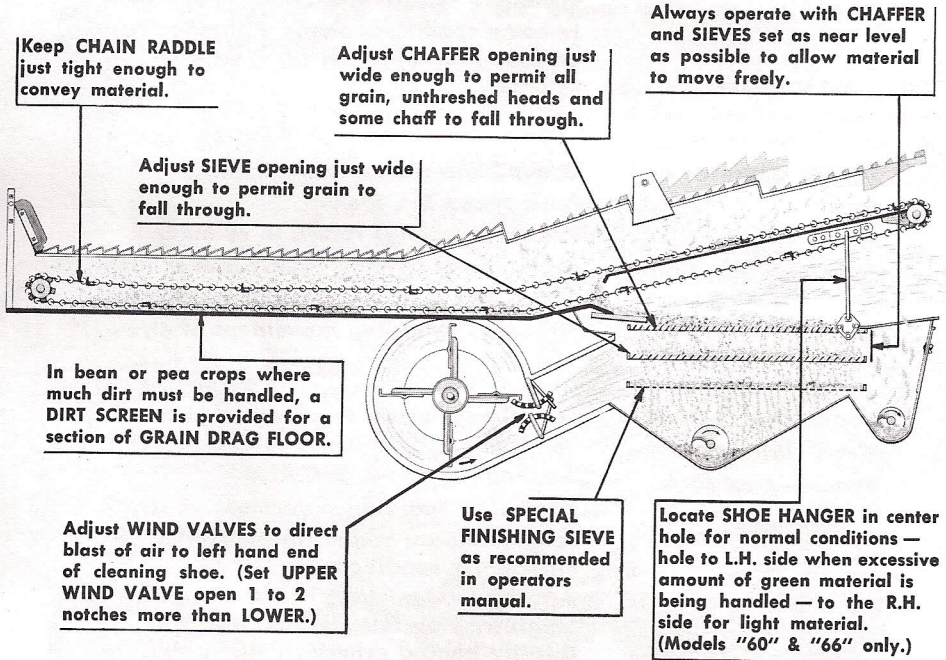
Action-photo through ALL-CROP Harvester with glass sides. See how shelled grain and straw leave cylinder in a high arc, resulting in AIR BLAST SEPARATION.



Cleaning

The **CLEANING SHOE** oscillates in the same manner and at the same speed as the **STRAW RACK**, shaking and fluffing the material, permitting heavier particles to fall through while the light chaff is blown from the machine.

Patented **SAWTOOTH WIND VALVES** control air volume and direct air current over the sieves.



Is this your problem?

Saving grain and seeds over cleaning shoe.

Adjusting cleaning sieves.

Check this.

Open chaffer and sieve just enough to let grain through.

If blowing over grain, reduce air.

If grain is riding out with chaff, increase air.

Wrong size finishing sieve.

Shoe speed too fast, 260 RPM, same as rack.

Run cleaning shoe and rack at recommended speed. 260 RPM.

Adjusting cleaning sieves.

If shoe is too slow, chaffer will load up and grain ride over.
If shoe is too fast, grain will bounce out and overload tailings return.
If chaffer is open too much, it will retard the movement of chaff and load up, resulting in poor cleaning and loss of grain. (See instruction book for proper opening of chaffer and sieve).

Overloading chaffer.

Ground travel too fast.
Chopping straw too fine.
Cylinder speed too high or set too close to concaves.
Using too many concaves.
Wind valves not properly adjusted.
Chaffer set too high at discharge end.
Chaffer openings too wide.
Not using blank in place of concave grate (S.P. only).

Handling green weeds and heavy chaff.

Chaffer openings too wide.
Cylinder speed too high or set too close to concaves.
If grain shells easily, remove one concave.
Air blast not directed at proper place on chaffer.
Shoe hangers not properly located.
Use round hole tailer (Special Equipment).

Returning too much threshed grain to cylinder.

Chaffer and sieve openings too narrow.
Using wrong size special finishing sieve.
Wrong size sieve used in tailings elevator.

Chaffer loading on forward side.

Wrong size sieve in tailings elevator.
Too much tailings return.
Using sieve instead of blank in tailings elevator for clover.

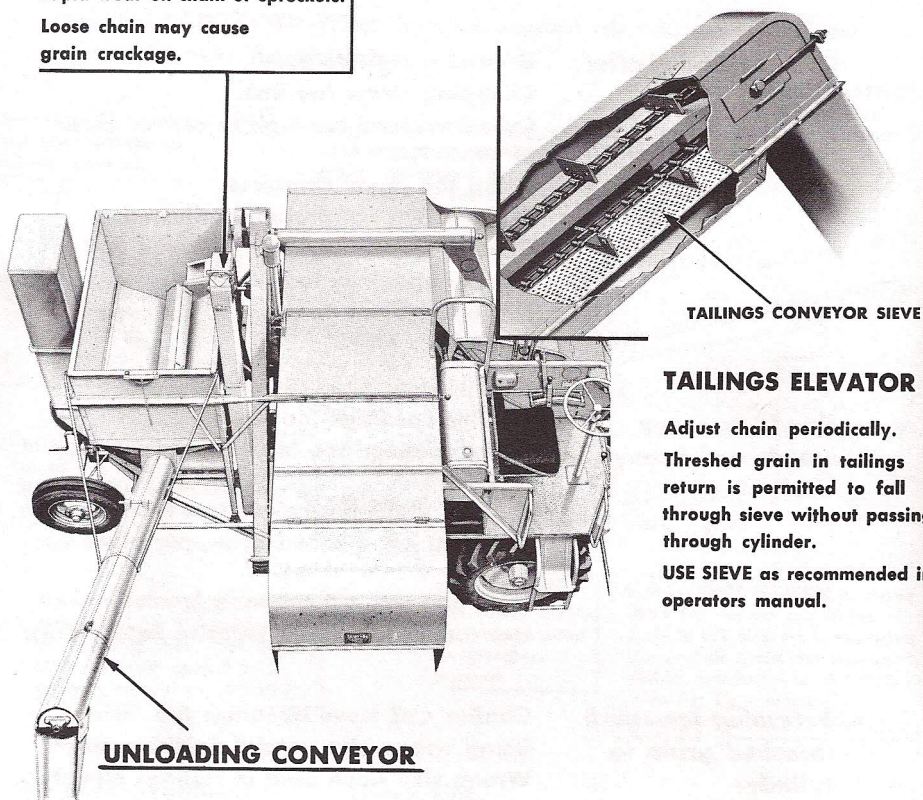
Overloading tailings return.

Too many unthreshed heads.
Cylinder clearance too wide.
Sieve openings too narrow.
Not enough air to lift chaff.

Elevators and Conveyors

GRAIN ELEVATOR

Keep chain tight, but not to an extent to cause rapid wear on chain or sprockets. Loose chain may cause grain crackage.



TAILINGS CONVEYOR SIEVE

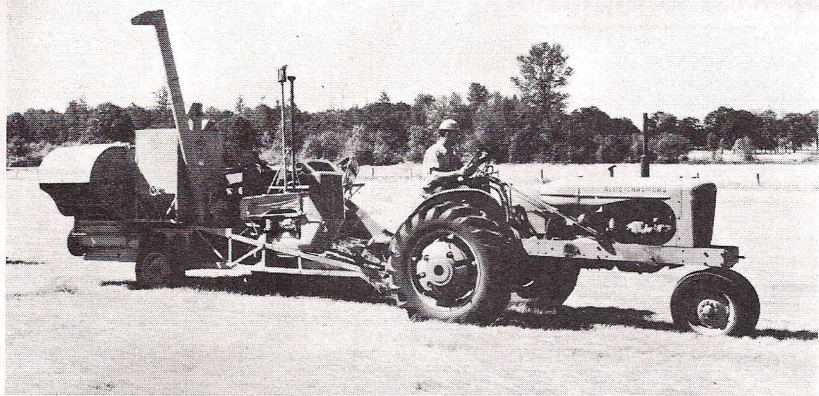
TAILINGS ELEVATOR

Adjust chain periodically. Threshed grain in tailings return is permitted to fall through sieve without passing through cylinder. USE SIEVE as recommended in operators manual.

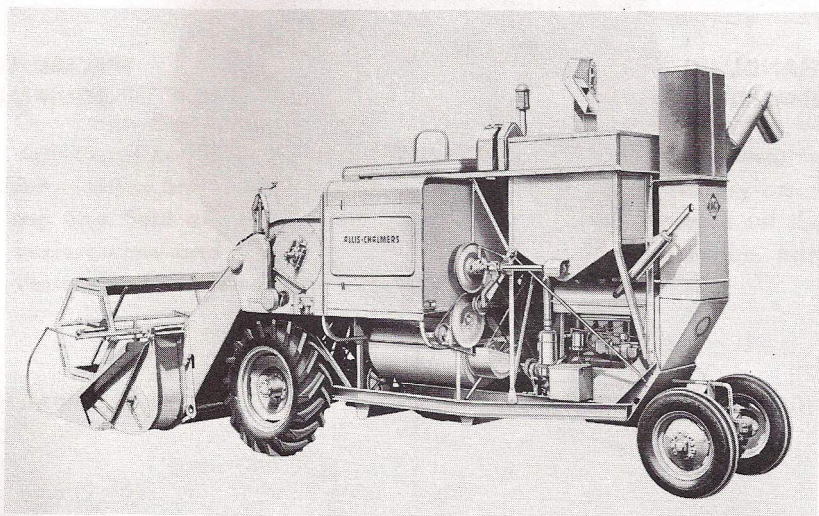
CONVEYORS

Be sure conveyors and elevators are free of damp grain and chaff before starting, after a rain.

Open elevator doors and allow harvester to run empty for a short period.



Model "60" and "66" ALL-CROP Harvesters can be operated by a full two-plow tractor equipped with power take-off, or an auxiliary gasoline engine mounted on the harvester tongue.



Model "100" self-propelled ALL-CROP Harvester is powered by the Model "WD"-45 "Power-Crater" tractor engine.

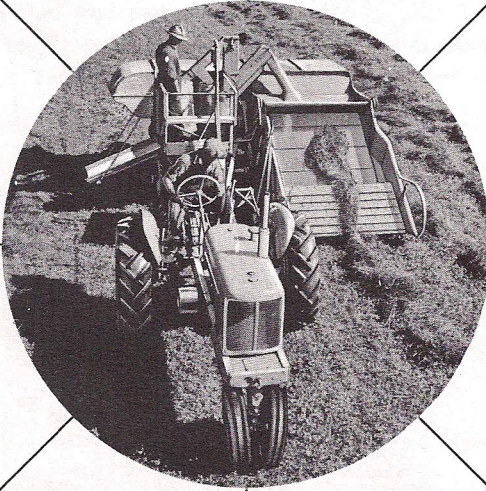
Both sides of engine are accessible for easy inspection and daily service.

Special Equipment

WINDROW HARVESTING EQUIPMENT

DOCKAGE REMOVAL EQUIPMENT

STRAW HANDLING EQUIPMENT



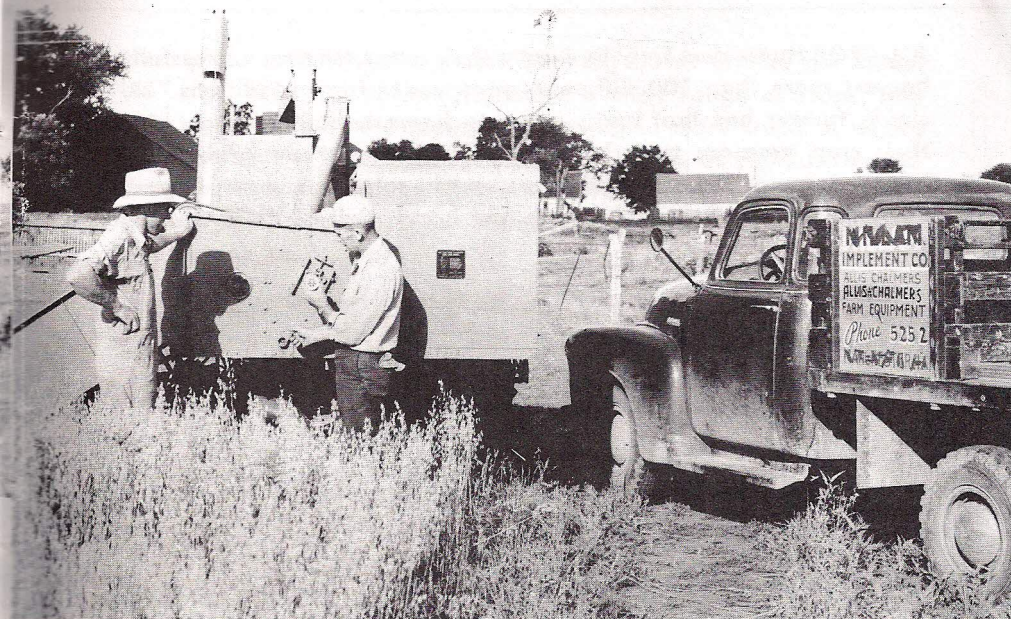
GRAIN HANDLING EQUIPMENT

SPECIAL WHEEL EQUIPMENT

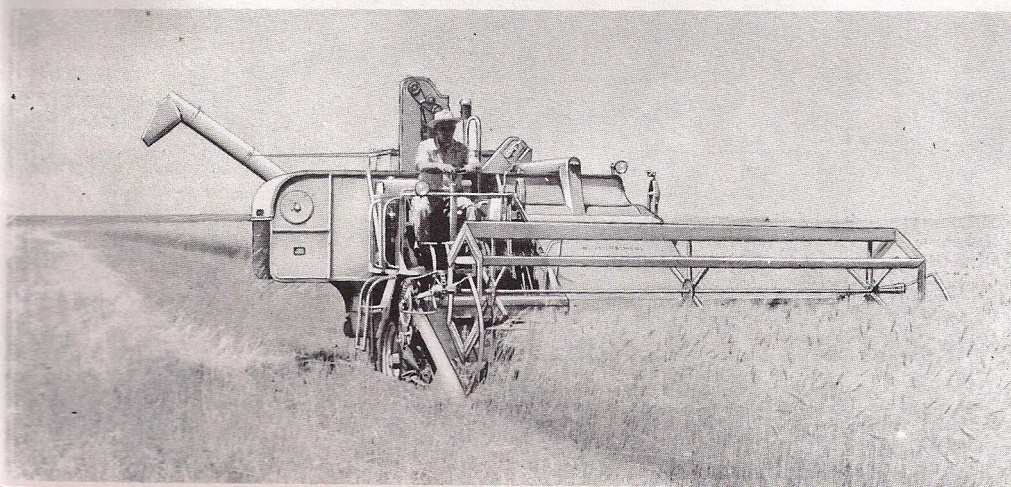
SPECIAL SIEVES & SCREENS

ACCESSORY EQUIPMENT

SPECIAL CROP OR FIELD CONDITIONS



Our in-the-field service on every major A-C machine begins on delivery day — guiding your use of the new equipment with operating information and service suggestions gained from both factory training and field experience. The right start helps you receive all the performance and long life built into Allis-Chalmers tractors, harvesters and implements.



Truly an ALL-CROP Harvester

ALL-CROP Harvesters truly live up to their name for they successfully harvest more than 100 different crops under farm conditions. No single farmer has that many crops to harvest, but many do plan their crop program to include several different crops: grain, flax, beans, grass or legume seed, peas, vetch, sorghums, cane, hegari, milo, flower and vegetable seed; and harvest all of them with an ALL-CROP Harvester.

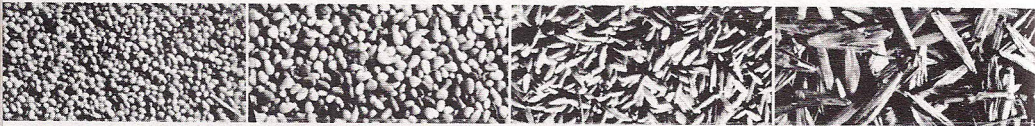


BARLEY

RYE

WHEAT

OATS



HOP CLOVER

RED CLOVER

CANARY GRASS

BROME GRASS

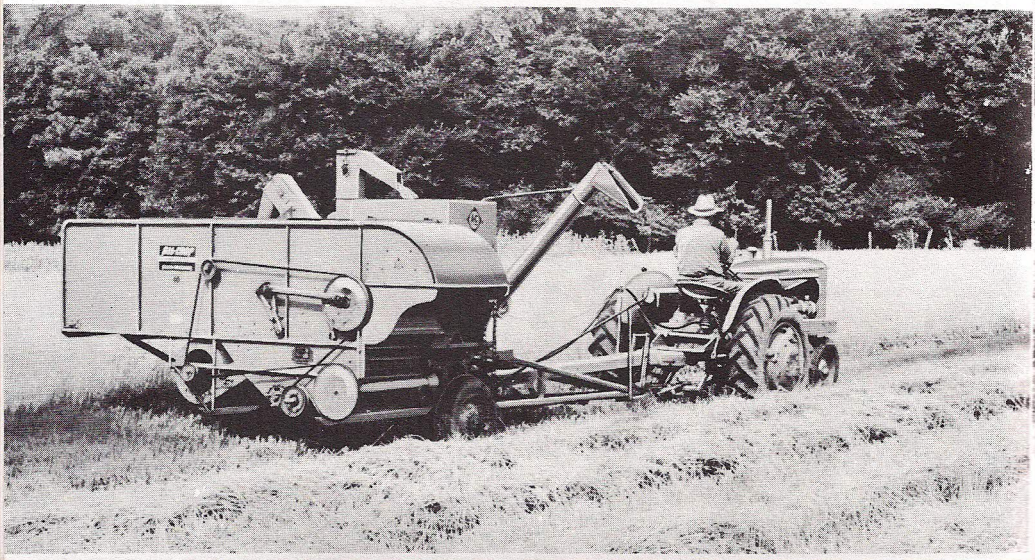


FLAX

SOYBEANS

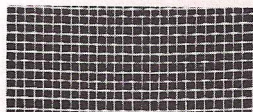
PINTO BEANS

BUCKWHEAT



Finishing Sieves for ALL-CROPS

A complete selection of low-cost finishing sieves enable the Model "66" and "100" to efficiently handle a wide range of crops, and do a top-notch job of cleaning and saving in more crops. A wheat or soybean sieve is furnished with each machine as standard equipment. Additional finishing sieves are available at moderate prices to meet all requirements for beans, small grains, sorghums, grass and legume seed crops.



24" x 24"
Red Top.



1/16" x 3/8"
Blue Grass, Canary Grass,
Orchard Grass, Bent Grass,
Chickory.



1/14"
Timothy, Ladino Clover,
Dutch Clover, Birdsfoot Tre-
foil, Giant English Clover,
Hop Clover, Persian Clover,
Tobacco, Sand Drop Grass.



1/12"
Red and White Clovers,
Alsike Clover, Carpet
Grass, Turnip.



7/64"
Alfalfa, Crimson Clover.



9/64"

Flax, Lespedeza, Sweet Clo-
ver, Millet, Lettuce, Onion,
Radish, Rape, Spinach, Zin-
nia, Mustard, Poppy, Ber-
muda Grass, Rhodes Grass,
Hubam Clover, Carrot Seed.



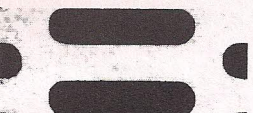
5/32" x 3/4"

Wheat, Sorgo, Sagrain,
Maize, Cane, Broom Corn,
Rye, Big Blue Stem, Crested
Wheat Grass, Brome Grass,
Vetch, Cabbage, Canadian
Rye Grass, Dallis Grass,
English Rye Grass, Fenu-
greek, Fuzzycheat, Grama
Grass, Johnson Grass, Su-
dan Grass, Western Wheat
Grass, Hegari, Kaffir.



3/16"

Crotalaria, Large Flax.



3/16" x 3/4"
Large Wheat.



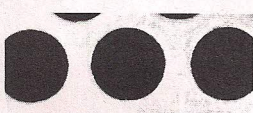
4/16"

Kaffir Maize.



5/16"

Buckwheat, Sugar Beets,
Table Beets, Mung Beans,
Okra, Chinese Red Peas.



3/8"

Soy Beans, Navy Beans,
Cow Peas, Red Rice, Whip-
poorwill Peas.



7/16"

Great Northern Beans,
Pop Corn.



9/16"

Beans — Baby Lima, Cran-
berry, Italian, Kidney.

NO SIEVES NEEDED:

Barley, Horse Beans, Mung
Beans, Velvet Beans, Gyp
Corn, Indian Rice Grass,
Oats, Alaska Peas, Austrian

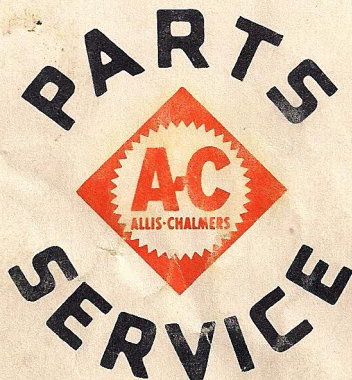
Peas, Lady Peas, Common
Rice, Safflower, Spelt, Sun-
flower, Bountiful Beans,
Black Eye Beans, Clay Bank
Beans, Ebony Beans,

Garvanza Beans, Kentucky
Wonder Beans, Pinto Beans,
Red Mexican Beans, Pars-
nip Seed, Table Peas.

Repair Parts

Machinery manufacturers make no distinction between parts for repair purposes and those used on the assembly lines. Thus, when you buy genuine parts you buy with the knowledge and confidence that you are getting parts designed to give you maximum performance.

When in need
of service or
repairs:



See your
ALLIS-CHALMERS
DEALER

We are anxious that your Allis-Chalmers Farm Equipment operate to your utmost satisfaction.

We are ready to supply your repair parts needs and offer the services of our factory trained mechanics and modern shop facilities.

We welcome you and your family at our store. Make it your "in town" headquarters.

ALL-CROP is an ALLIS-CHALMERS Trademark

Your Allis-Chalmers Dealer.