New Idea

Operator's Manual

706D

Uni-Power Unit

6 Cylinder Diesel

Operator's Manual

NI-O-706D PU

OPERATOR'S MANUAL NO. US-181

AVCO NEW IDEA FARM EQUIPMENT

No. 706D Uni-POWER UNIT

6 Cyl. Diesel Engine

For the Dealer and Operator

Read this operator's manual • Save it for reference

AVCO NEW IDEA FARM EQUIPMENT
COLDWATER, OHIO 45828, U.S.A.

Engine Specifications

GENERAL

Bore and stroke	3.875 x 5
Number of cylinders	6—in line
Stroke cycle	4
Piston displacement (cu. in.)	354
Filing order	1-5-3-6-2-4
Crankshaft	7 main bearings
Valves	Overhead push rod operated mechanical lifters
Compression ratio	16:1
Top speed (full load)	2500 RPM
Top speed (no load)	2650 RPM
Low idle speed	900 RPM
Horsepower—PTO*	95 H.P.
Horsepower—Brake	108 H.P.

*Observed PTO horsepower for operable power units including drive train, hydraulic system, electrical system, water pump, fan, and necessary emission control equipment corrected to 500 foot elevation (29.00" HG) and 85°F.

PISTON

Material	Aluminum
Rings	3 compression; 2 oil

OILING SYSTEM

Oil Pump	Rotor type
Intake screen	Fixed-screed type
Oil filter	Spin on, 1 quart
Crankcase capacity	16 quarts

ELECTRICAL

Batteries	1—12 Volt
Alternator—Delco	61 Amp.
Starting Motor	Delco

Lights — 2 headlights, 1 red taillight, 2 flashing amber.
Instruments — ammeter, tachometer, fuel gauge, coolant temperature, oil pressure gauge

INJECTION PUMP & FILTER

Type pump	CAV
Filter	CAV

DIESEL FUEL

Grade	No. 2
	Use No. 1 below freezing point

Power Unit Specifications

Ground Drive

Type	Hydraulic controlled variable speed V-Belt
Transmission (Rockwell)	T-1250
Wheel ends (Rockwell)	E-1600
Clutch	11" single disc.
Brake	Hydraulic band actuated disc.

SPEEDS

M.P.H. with 18.4 — 26 tires, @ 2500 RPM

1st	91 — 2.41
2nd	1.99 — 5.28
3rd	5.12 — 13.52
Rev	1.87 — 4.95
Tire equipment	18.4-26, 6 ply and 11L-15, 6 ply 18.4-26, 10 ply and 11L-15, 6 ply 24.L-26, 10 ply and 11L-15, 6 ply

TRANSMISSION OIL

Transmission & differential	2 gal.
Wheel ends	5 qt.
Main drive gear box	5qt.
Grade	SAE 90 E.P. type gear lubricant
Implement clutch	3 qt. H.D.

COOLING SYSTEM (pressurized)

Capacity	38 quarts
Radiator Cap	Pressurized type, 7 lbs.

FUEL CAPACITY . . . . . 47 gallons

DIMENSIONS (With 18.4 — 26 tires)

Wheel base	127"
Over-all length	187"
Over-all Width	111½"
Over-all Height	95"
Front wheel tread	85"
Rear wheel tread	53½"
Dry weight (No extra equipment)	8200

NOTE: All weights and dimensions approximate

IMPLEMENT DRIVE

Clutch	Multiple Disc. Oil Bath Type
Pulley size	7"dia. x 4v.
Speed (Load)	1807 RPM (Implement Drive Shaft)
Speed (No Load)	1930 RPM (Implement Drive Shaft)
Control	Hand operated clutch

POWER LIFT

2 Lift cyls. — 1-7/8" dia. 20" stroke single acting Valve automatic lock-out type.

Steering	Hydrostatic power
Steering Wheel	Tilt — telescope

HYDRAULIC PUMP

Type Pump	Gear-split flow-priority to steering
System Type	Open Center
Displacement	12 G.P.M. at 2500 R.P.M. engine speed
Hydraulic oil	15 qt.
Pressure	1750 — 1850 PSI Max.
Main valve	Pilot operated with port beyond

Because our engineers are constantly improving products, we reserve the right to change design and/or specifications without notice.

Variable Speed Drive Belt Adjustment

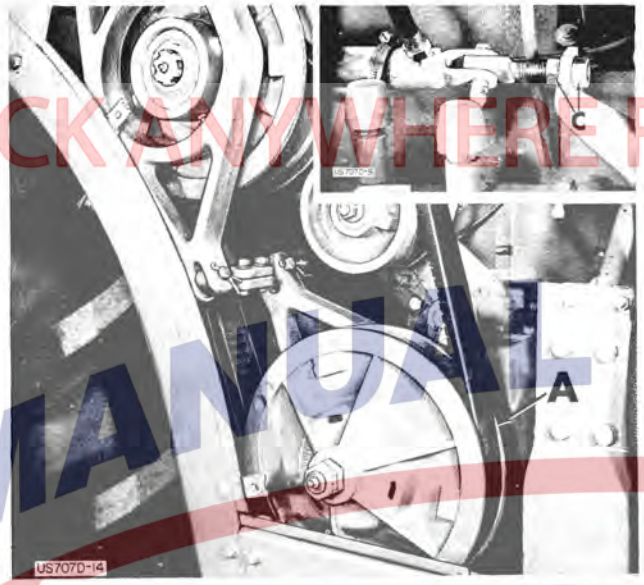

Figure 16

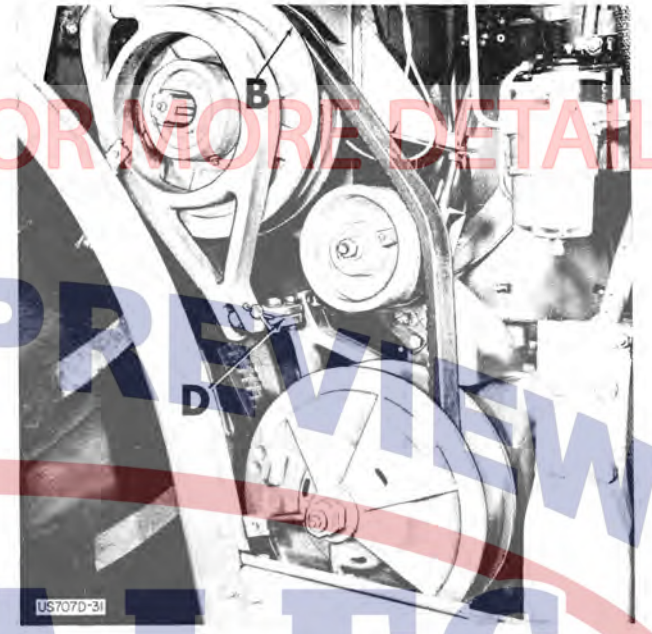

Figure 17

Figs. 16, 17, 18 & 19

DO NOT ATTEMPT TO ADJUST THE BELT WITH THE ENGINE RUNNING.

Operate the variable drive from one extreme to the other. Check to see that the belts runs flush with the outside diameter of both the driver and driven sheaves as shown at "A" (Fig. 16) and "B" Fig. 17). If not, proceed as follows:

EACH OF THESE STEPS MUST BE FOLLOWED IN THE SEQUENCE LISTED

1. Loosen upper nut "G" (Fig. 19). Do not Disturb the bottom nut at this time.

2. With the belt positioned as shown at "A" (Fig. 16), adjust the lower sheave first. Adjust nut "C" on the end of the variable drive cylinder to the point where the belt runs flush with outside diameter of the drive sheave at "A". NOTE: Adjust a small amount at a time — run the unit so the belt seats properly. Repeat as required until perfect alignment is attained. Do not adjust with engine running.

3. With belt positioned as shown at "B" (Fig. 17), loosen bolts "D" and adjust the turn-buckle to the point where the belt runs flush with outside diameter of the driven sheave at "B". NOTE: Adjust a small amount at a time — run the unit so the belt seats properly. Repeat as required until perfect alignment is attained. Do not adjust with engine running.

4. Run the unit to position the belt to it's center position on both sheaves as shown at "E" (Fig. 18). The speed range indicator on the console should be positioned to the center of the dial as shown at "F".

5. Check idler tension spring for proper adjustment. It must measure 3-1/4" from end to end as indicated in figure 19. Adjust nuts "G" to attain this adjustment. Tighten nuts securely.

6. Repeat two — readjust as required.

Figure 18

Figure 19

Variable Drive Belt Replacement

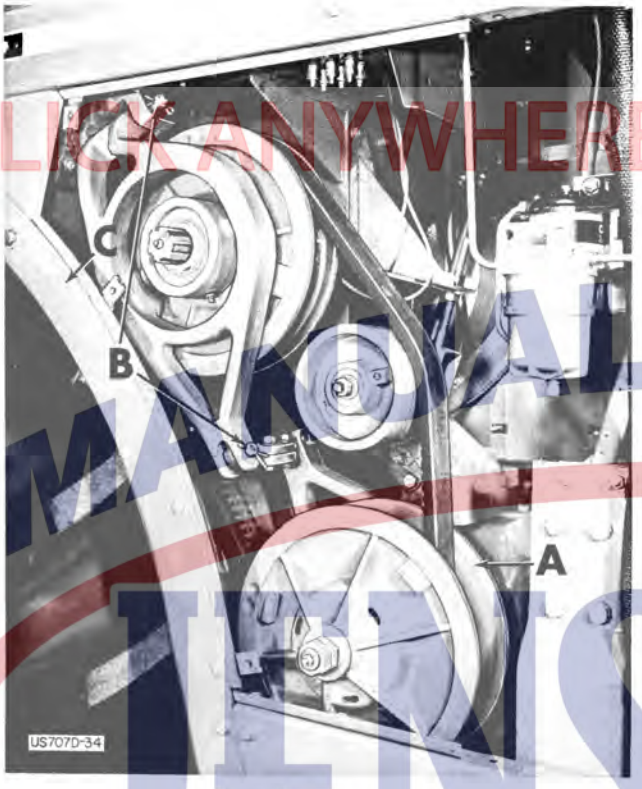

Figure 20

Fig. 20 — Remove engine screen and open variable drive inspection door, then proceed as follows:

1. Open lower sheave "A".
2. Loosen nuts "G" (Fig. 19) to relieve tension from idler spring.
3. Remove connecting pins "B". Remove the small door indicated at "C" from the back side of the wheel housing to remove the upper pin. Remove shifter yoke. Belt can now be removed and a new one installed.
4. Replace all parts.
5. Adjust belt as described on previous page.

NOTE: BELT ADJUSTMENT MUST BE CHECKED AFTER ONE AND FOUR HOURS OF USE ON A NEW MACHINE OR IF A NEW BELT HAS BEEN INSTALLED. THEREAFTER, CHECK DAILY.

Implement Drive Belt Idler

Figure 21

Fig. 21 — After the implement being used has been mounted and the belts installed, the idler can then be adjusted. It should be adjusted to the point where the belts drive and do not slip on the sheaves. Insert A ½" drive ratchet into recepticle at "A" and adjust the idler as required. Three holes are provided in the quadrant at "B" for proper location of the idler pulley to the belt of the implement being mounted. Use the hole best suited to locate the idler. The idler should also be aligned with the belt. Loosen bolt "C" in idler arm support and shift idler accordingly. Hole "D" can be used to insert a punch to align the idler with the belt. Tighten bolts securely.

Brake Adjustment

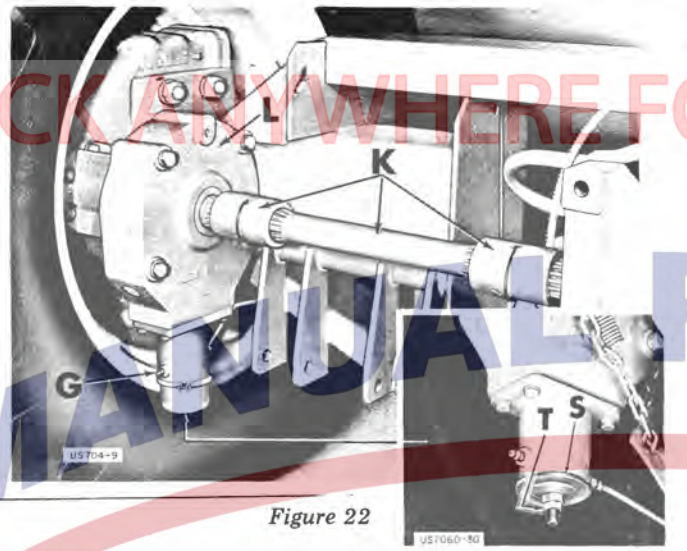

Figure 22

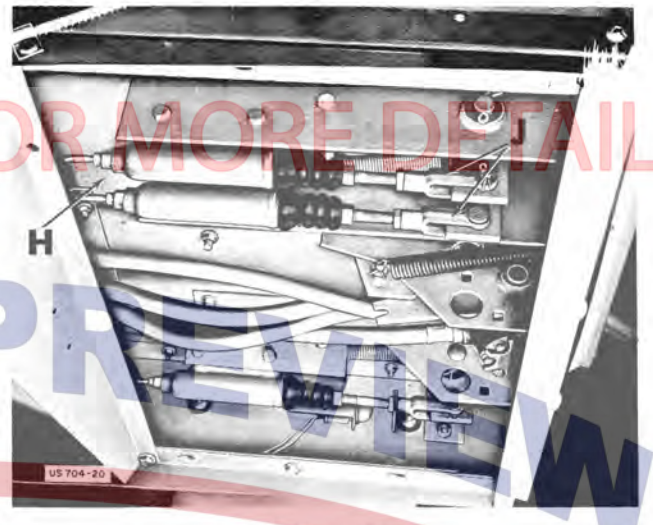

Figure 23

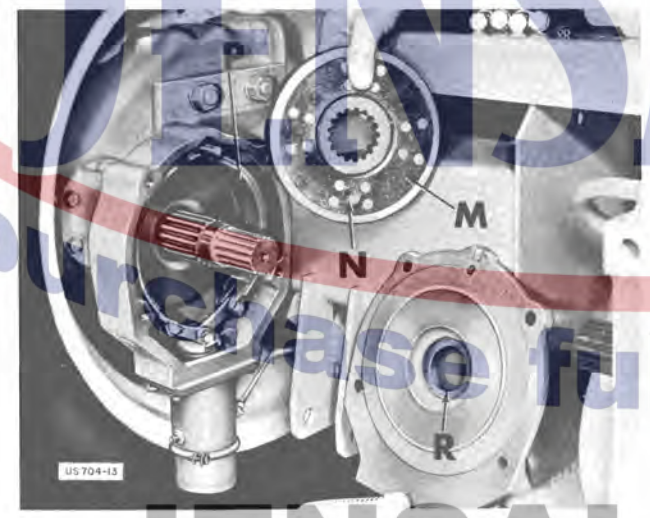

Figure 22A

Brake Adjustment

To check brakes for proper adjustment, remove pins holding clevises "J" (Fig. 23). Push pistons back until they make contact with socket in master cylinders. Adjust clevises so they lack alignment by 1/6" to 1/8" (short). If pedals are not even when brakes are applied, adjust clevis on highest pedal until this pedal is equal with the lower one.

NOTE — Make sure to lock jam nuts against clevises.

Servicing Brakes

To service the brakes, remove shaft and couplings "K" (Fig. 22). Remove cover "L". Pull lining and disc assembly "M" from the brake housing. To disassemble the disc to replace lining, insert a punch or screw driver through spring at "N" (Fig. 22A) to unlatch hook at other end. Do this to both springs. Replace parts as required. Shoes "P" can also be inspected and serviced at this time. Inspect and replace dust seal "R" as required.

Bleeding Air From System

Figs. 22, 22A, & 23 —

To bleed air from the system, apply pressure to brake pedals and loosen fitting "G" (Fig. 22 — both sides). When air bubbles no longer appear, retighten nuts. NOTE: The system uses standard hydraulic brake fluid. To add fluid, remove plate from *top* side of operator's platform indicated at "H" (Fig. 23) for access to master cylinder.

Adjustment After Replacing Lining

Adjust one brake at a time. Depress one pedal to lock brake. With the pedal in that position the brake actuating piston "S" (Fig. 22) should protrude out of the housing ¼". Adjust nuts at "T" accordingly. Tighten jam nut securely. Adjust the other brake in the same manner.