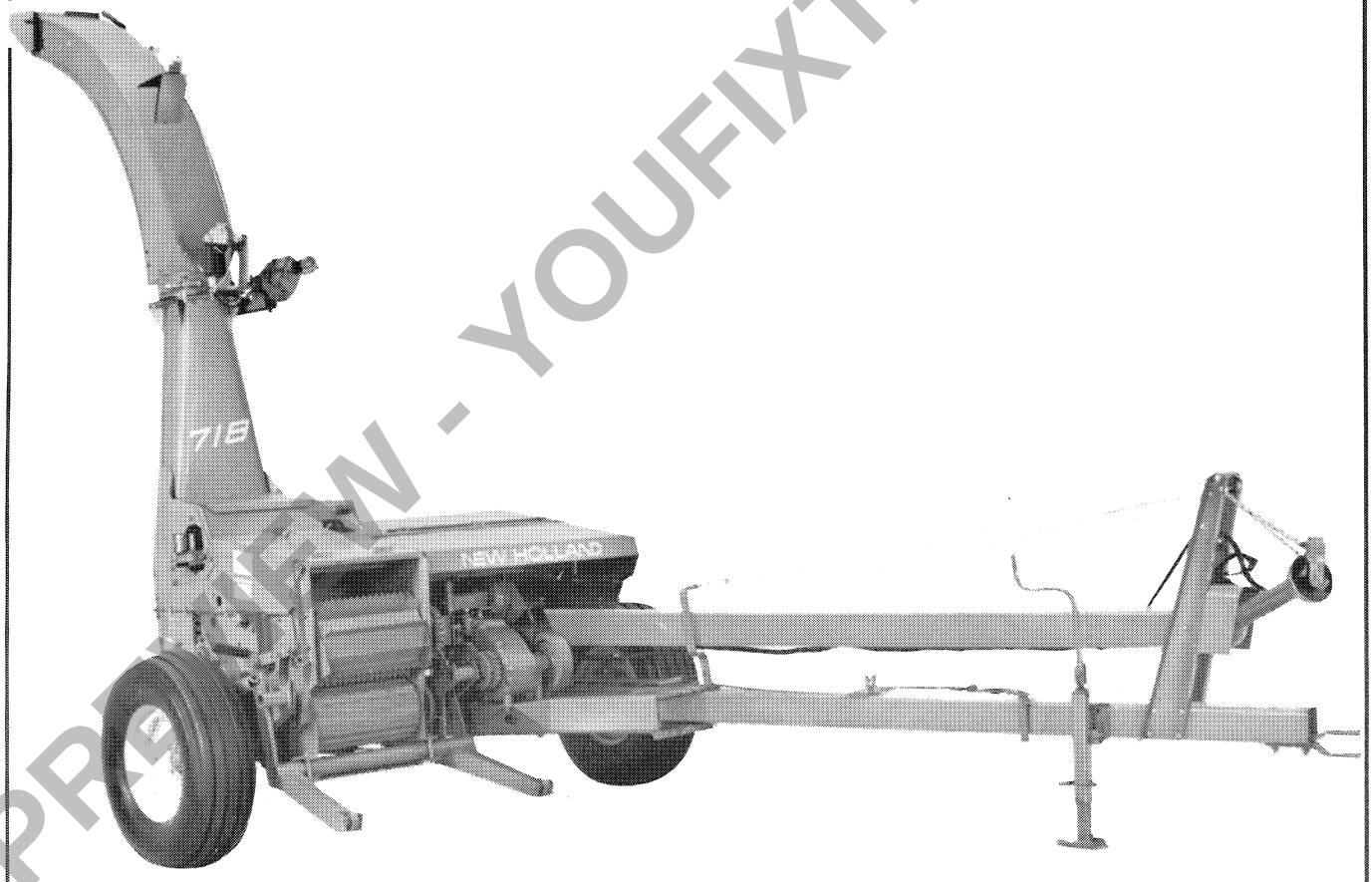
NEW HOLLAND

Service Manual

Harvester
718
40071810



Reprinted

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SAFETY

YOUR SAFETY IS OF UTMOST CONCERN TO SPERRY NEW HOLLAND. PLEASE FOLLOW THE SAFETY RULES LISTED, NOT ONLY FOR YOUR OWN GOOD, BUT FOR THE PEOPLE AROUND YOU.

1. DO NOT ALLOW CHILDREN OR BYSTANDERS AROUND THE MACHINE WHILE IT IS BEING ADJUSTED, SERVICED, OR OPERATED.
2. ALWAYS USE A SAFETY STAND IN CONJUNCTION WITH HYDRAULIC JACKS OR HOISTS. DO NOT RELY ON THE JACK OR HOIST TO HOLD THE LOAD COMPLETELY, AS THEY COULD FAIL.
3. ALWAYS WEAR SAFETY GLASSES WHEN USING A HAMMER, CHISEL, OR OTHER TOOLS THAT MAY CAUSE CHIPS TO FLY OFF THE WORK.
4. KEEP WORK ORGANIZED AND CLEAN. WIPE UP OIL SPILLS OF ANY KIND TO MINIMIZE THE POSSIBILITY OF A FALL. KEEP TOOLS AND PARTS OFF THE FLOOR TO FURTHER REDUCE THE POSSIBILITY OF SERIOUS INJURY.
5. BE SURE TO REINSTALL SAFETY DEVICES SUCH AS GUARDS OR SHIELDS AFTER ADJUSTING OR SERVICING THE HARVESTER.
6. AFTER SERVICING THE HARVESTER, BE SURE ALL TOOLS, PARTS, OR SERVICING EQUIPMENT ARE REMOVED FROM THE MACHINE.
7. WHEN USING A GAS TORCH, ALWAYS WEAR WELDING GOGGLES AND GLOVES. KEEP A FULLY CHARGED FIRE EXTINGUISHER WITHIN REACH. DO NOT HEAT OR WELD NEAR A FUEL TANK OR FUEL LINES, AND UTILIZE PROPER SHIELDING AROUND HYDRAULIC LINES.
8. HYDRAULIC FLUID ESCAPING UNDER PRESSURE CAN HAVE ENOUGH FORCE TO PENETRATE THE HUMAN SKIN. HYDRAULIC FLUID MAY INFECT A MINOR CUT OR OPENING IN THE SKIN. IF INJURED BY ESCAPING FLUID SEE A DOCTOR AT ONCE. DO NOT ATTEMPT TO REPAIR OR TIGHTEN HOSES THAT ARE UNDER PRESSURE.

   CYCLE ALL HYDRAULIC CONTROL VALVES TO RELIEVE ALL PRESSURE BEFORE DISCONNECTING THE LINES OR BEFORE PERFORMING OTHER WORK ON THE HYDRAULIC SYSTEM. MAKE SURE ALL CONNECTORS ARE TIGHT AND HOSES AND LINES ARE IN GOOD CONDITION BEFORE APPLYING PRESSURE TO THE SYSTEM. TO LOCATE A LEAK UNDER PRESSURE, USE A SMALL PIECE OF CARDBOARD, NEVER USE YOUR HANDS.
9. USE PULLERS TO REMOVE BEARINGS, BUSHINGS, CYLINDER SLEEVES, ETC. USE HAMMERS, PUNCHES, AND CHISELS ONLY WHEN ABSOLUTELY NECESSARY AND BE SURE TO WEAR SAFETY GLASSES.
10. BE CAREFUL WHEN USING COMPRESSED AIR. USE APPROVED AIR BLOW GUNS, DO NOT EXCEED 35 PSI (2.4 bar), WEAR SAFETY GOGGLES, AND USE PROPER SHIELDING TO PROTECT EVERYONE IN THE WORK AREA.
11. DO NOT WEAR RINGS, WRIST WATCHES, OR LOOSE FITTING CLOTHING WHEN WORKING ON MACHINERY, AS THEY COULD CATCH ON MOVING PARTS AND CAUSE SERIOUS INJURY. WEAR STURDY WORK SHOES.

THE ABOVE IS ONLY A PARTIAL LIST OF SAFETY WORK RULES. IN ADDITION, ALWAYS REFER TO THE OPERATOR'S MANUAL FOR ADDITIONAL SAFE WORK RULES REGARDING THIS MACHINE.

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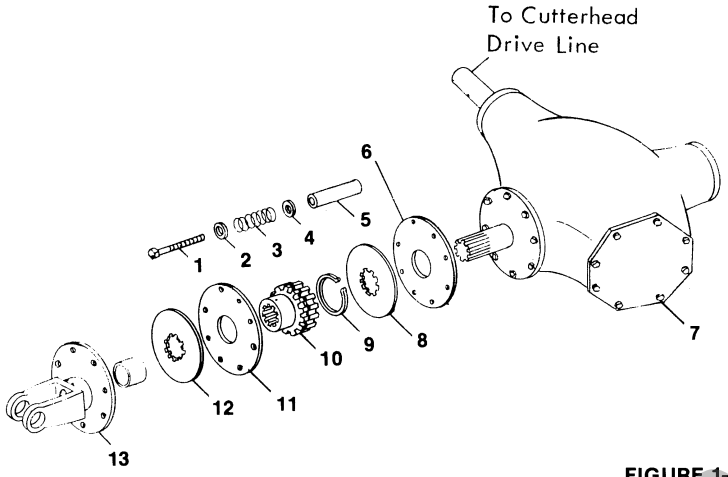


FIGURE 1-8

See Figure 1-8, for an exploded view of the main drive slip clutch for proper assembly. Make sure oil and grease are kept away from the clutch discs and plates.

Burnish the clutch slightly after installing new plates or discs.

1. Adjusting bolt
2. Washer
3. Spring
4. Washer
5. Spacer bushing
6. Plate
7. Main drive gearbox
8. Disc
9. Retainer
10. Drive hub
11. Plate
12. Disc
13. Front plate assembly

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HARDWARE KEY

CAP SCREW GRADE IDENTIFICATION MARKS

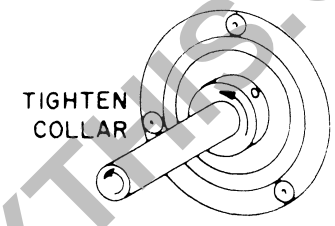
FOR BOLTS AND SCREWS ¼ THROUGH NOMINAL DIAMETER

Identification Grade Marking	Grade
NO MARK	Grade 1
	Grade 2
	Grade 5
	Grade 8
	STAINLESS STEEL BOLT

Square head set screws should be seated as follows:

1. Tighten the set screw.
2. Rap the set screw head with a hammer.
3. Re-tighten the set screw.
4. Lock the jam nut.

Tighten the locking collars in direction of rotation.



STANDARD TIGHTENING TORQUE FOR NORMAL ASSEMBLY APPLICATIONS

NOTE: When an assembly is made up of a zinc plated bolt and an unplated nut, the unplated torques apply. If the bolts is cadmium "plated" and the nut is unplated, plated torques apply.

	SAE Gr. 2	SAE Gr. 5		SAE Gr. 8	
	Min. Torque	Min Torque Ft. Lbs. (N·m)		Min. Torque Ft. Lbs. (N·m)	
Size	Ft. Lbs. (N·m)	Plain	Plated	Plain	Plated
1/4"	5 (7)	8 (11)	7 (10)	12 (16)	10 (14)
5/16"	10 (14)	18 (24)	15 (20)	26 (35)	21 (29)
3/8"	18 (24)	31 (42)	25 (34)	48 (65)	39 (53)
7/16"	31 (42)	53 (72)	43 (58)	75 (102)	60 (81)
1/2"	45 (61)	82 (111)	66 (90)	115 (156)	92 (125)
5/8"	82 (111)	170 (231)	140 (190)	235 (319)	190 (258)
3/4"	155 (210)	290 (393)	230 (312)	415 (563)	330 (448)
7/8"	165 (224)	430 (583)	340 (461)	600 (814)	480 (651)
1"	250 (339)	640 (868)	510 (692)	900 (1220)	720 (976)

SPECIFICATIONS AND DESIGN SUBJECT TO CHANGE WITHOUT NOTICE.

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SECTION 6
TROUBLESHOOTING
BASE UNIT

SERVICE PROBLEM	POSSIBLE CAUSE	CORRECTION
Poor "quality" or length of cut.	Harvester set for wrong length of cut.	See length-of-cut setting or decal on the machine.
	Dull knives.	Sharpen knives and adjust the shear bar.
	Shear bar not properly adjusted to the knives.	Set to within .010" to .015" (.25-.38 mm) as explained on instruction decal.
	Feeding the harvester too light.	Increase size of windrows for pick-up attachment. Increase the ground speed for row crop and sickle bar attachments.
		Shift reversing gearbox into neutral at end of field.
	Feedroll springs missing or broken.	Replace broken or missing feedroll springs.
	Not maintaining cutterhead RPM.	Check tractor PTO clutch and condition.
Loss of blowing action.	Under-size cutterhead due to continued sharpening of knives.	Reset cutterhead knives.
	Excessive housing band clearance.	Adjust housing band to the cutterhead (after re-setting knives) 1/32" to 1/16" (.8 to 1.6 mm).
	Harder to blow material being handled.	Add optional paddle kit.
Knife sharpener stone holder turns hard - will not ratchet down.	Threads on stud or in holder are dirty.	Clean, oil lightly.
	Locking plug at inner end of locking handle swelled and stuck in holder threads - does not release.	Remove plug. Dress down so it will release freely.
	Stone not extended from the stone holder far enough.	Loosen ratchet nut and move stone down so that ¾" to 1" (19 to 25 mm) of stone extends beyond bottom edge of the holder.
Knives dull quickly.	Incorrect sharpening.	Sharpen until each knife has a sharp edge all the way across.
	Shear bar not properly adjusted to knives.	Set to within .010" to .015" (.25 to .38 mm), as explained in instruction decal.

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SECTION 8
SPECIFICATIONS

NOTE: All dimensions are transport position, standard tires, and no extensions.

Width with 822-R2 2-row wide	95¾" (2.43 m)
Width with 822-N2 2-row wide	92¼" (2.34 m)
Width with 722 1-row	86¾" (2.20 m)
Width with 717-S sickle bar	104¾" (2.66 m)
Width with 770-W pick-up	96⅞" (2.46 m)
Height w/standard spout (Add 15" (381 mm) when vertical extension is used) (Add 4½" (114.5 mm) when base unit is raised to its maximum height)	10'6" (3.2 m)
Length w/standard spout (Transport position) (Add 50" when 4' horizontal extension is used)	16'1¼" (4.98 m)
Weight (base unit, no options installed)	2,180 lbs. (972.5 k)
Power required	55 to 90 horsepower (See "PTO Slip Clutch" section)
Number of knives	12 or 6
Cutterhead speed	975 RPM
Cutterhead width	17½" (4445 mm)
Size of cutterhead (diameter)	24" (609.6 mm)
Throat opening	17" x 4½" (431.8 mm x 101.6 mm)
Length-of-cut range	⅛"-2-13/16" (3.2-71 mm)
Standard tires	9.5L x 14
Optional tires	11.00L x 14

PICK-UP ATTACHMENT (770W)

Weight	558 lbs. (253.1 k)
Pick-up width	66¾" (1.69 m)

SICKLE BAR ATTACHMENT (717S)

Weight	780 lbs. (353.8 k)
Overall width	80¾" (2.05 m)
Cutting width	17-5/16" (1.81 m)
Sickle strokes	1300 per minute

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DISASSEMBLY

To disassemble the gearbox:

1. Drain the oil from the gearbox by removing cover, Q, Figure 2-5.
2. Using a chisel, unlock the stake nut, AA, from the input shaft, X. If desired, the stake nut, AA, can be split open with the chisel in the event unlocking it from the groove in the input shaft, X, is too difficult to accomplish.
3. Remove the hardware at L, and remove bearing caps, M, and shim pack, N, as well as bearing cap, Y, and shim pack, V.
4. Press the input shaft, X, in the direction of bearing, T, to remove the gear, S, and spacer, CC (540 RPM version only) from the input shaft, X. Support the gear, S, while doing this pressing to prevent damage to the main housing, A. The gear is pressed on with 5500 to 7000 lbs. (24500-31000 N·m) of force.
5. Press the bearing cup, O, out of the housing, A.
6. Press the bearing, P, off the shaft, X.
7. Remove the seal, W, from the bearing cap, Y.
8. The bearing cup, U, will have come out of the main housing, A, when pressing the shaft, X, through the gear, S. Press off the bearing cone, T, from the input shaft, X.
9. Remove the bearing cap, B, by removing the hardware, C.
10. Remove the seal, F, from bearing cap, B.
11. Unlock tab washer, G, from spanner nut, D, and remove spanner nut, D, and tab washer, G, from output shaft, E.
12. Press output shaft, E, in the direction of bearing, K, sliding the shaft, E, through bearing, K, shims, BB, special spacer, DD (1000 RPM version only), bearing cone, J, bearing cone, I, and washer, H.
13. Press bearing cone, K, from the output shaft, E.
14. Remove washer, H, and bearing cone, J, from housing, A.
15. Press bearing cups, I and K, from the main housing, A.
16. Remove shims, BB, and spacer, DD (1000 RPM version only).

INSPECTION

Inspect all gearbox bearings for wear and/or contamination and clean as necessary.

Thoroughly clean the gearbox housing of all old oil. If metal filings are present in the oil, all bearings should be replaced regardless. Always install new gearbox seals prior to reassembly. Thoroughly coat the lips of all grease seals and the mating surfaces between the seals and the gearbox casting prior to reassembly.

REASSEMBLY

1. Press bearing cone, K, onto the output shaft, E.
2. Insert the proper quantity shims, BB, (plus special washer, DD, on 1,000 RPM units only) into the gearbox housing, A. The proper quantity of shims, BB, is determined by using the following chart.

STAMP NO. ON GEAR BOX

BEARING THICKNESS CODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
0	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36
1	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35
2	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34
3	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33
4	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
5	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
6	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
7	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29
8	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28

REQUIRED SHIM PACK IN THOUSANDTHS 0.000

An example of the proper shims to be used would be:

Number stamped on gearbox housing	- 3
Bearing code number marked on a slip of paper shipped with new bearing, K,	- 1.1885
Shim pack thickness	.018"

Shims are available in .003", .005", and, .007" thicknesses.

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