



CLICK ANYWHERE FOR MORE DETAILS

MANUAL PREVIEW

International Harvester

Service Manual
706 & 756

Chassis Only

purchase full manual at

Service Manual

JENSALES.COM

or Call 800-443-0625



CLICK ANYWHERE FOR MORE DETAILS

THIS IS A MANUAL PRODUCED BY JENSALES INC. WITHOUT THE AUTHORIZATION OF
INTERNATIONAL HARVESTER OR IT'S SUCCESSORS. INTERNATIONAL HARVESTER AND IT'S SUCCESSORS
ARE NOT RESPONSIBLE FOR THE QUALITY OR ACCURACY OF THIS MANUAL.

TRADE MARKS AND TRADE NAMES CONTAINED AND USED HEREIN ARE THOSE OF OTHERS,
AND ARE USED HERE IN A DESCRIPTIVE SENSE TO REFER TO THE PRODUCTS OF OTHERS.

IH-S-706,756

**INTERNATIONAL HARVESTER
FARMALL**

MANUAL PREVIEW

JENSALES[®]

SERVICE MANUAL

purchase full manual at

JENSALES.COM

or Call 800-443-0625

(CHASSIS ONLY)

GENERAL

The power train of the 706, 806 and 1206 Series Tractors is basically the same in its design. The only difference is the size of bearings and gears which will vary with models.

The tractors may be equipped with power shift torque amplifier, 540 or 1000 RPM independent power take-off (1206, 1000 RPM only), hydraulic system and high clearance attachments for 706 and 806.

All tractors will have a 9 gpm hydraulic pump located in the bottom of the clutch housing to provide fluid for the hydrostatic power steering, power brakes and for lubrication of the power train. This pump will also supply fluid to the power shift clutches in the TA on tractors so equipped.

NOTE: Refer to GSS-1343 for complete information on all hydraulic and lubrication circuits.

CONTENTS

	Page
Introduction	2
Specifications	5
Torque Chart	7
General	3
Power Flow	11
Splitting the Tractor	12
Clutch Housing Assembly with TA and Speed Transmission	13
Torque Amplifier	15
Brakes	
706 and 806	
Removal and Disassembly	20
Reassembly	21
1206	22
Rear Axle and Bull Pinion Shaft (706 and 806)	23
Removal and Disassembly	23
Reassembly	24
Bull Pinion Bearings	24
Rear Axle Assembly	24
Rear Axle and Bull Pinion Shaft (1206)	
Removal and Disassembly	26
Reassembly	28
706, 806 and 1206	
Rear Axle Bearing Pre-Load Adjustment	29

CLICK ANYWHERE FOR MORE DETAILS

Page

Differential

Removal	29
Inspection	30
Reassembly	30
Adjusting Bearings	30

Range Transmission

Disassembly	34
Inspection	36
Reassembly	37
Countershaft and Reverse Idler Shaft	37
Main Shaft Assembly	39
Power Take-Off Driven Shaft Assembly	39

Independent Power Take-Off	42
--------------------------------------	----

Belt Pulley Attachment	48
----------------------------------	----

High Clearance and Cotton Picker Drop Housings	50
--	----

All-Wheel Drive

General Information	54
Description	55
Wheel Ends	56
Adjusting Steering Stops and Toe-in	61
Differential	61
Drive Line Service	68
Transmission	69

Adjustments

Adjusting IPTO Operating Pressure	72
Adjusting Hydraulic Brake Pedal	74
Parking Lock	74
Range Transmission and Park Lock Adjustment (Foot Operated)	77
Range Transmission and Park Lock Adjustment (Hand Operated)	78
TA Operating and Control Linkage	80
Spring Loaded Clutch	81
Over-Center Clutch	82
Speed Transmission Adjustments	83

Trouble Shooting	84
----------------------------	----

FOREWORD

The instructions and special tools shown in this Blue Ribbon Service Manual are for use by International Harvester Dealers and their factory trained servicemen.

The specifications as listed in this manual are current as of the printing date. Due to changes and improvements in our products, dealers are periodically issued service bulletins to keep this manual up-to-date. We suggest you refer to the most recent information when performing service work on this equipment.

International Harvester Factory Trained servicemen are best qualified to service IH equipment.

CONTENTS

	Page
Introduction	3
Principles of Operation	4
Control Valve	8
Manual Pump	12
Steering Cylinders (Double Acting)	20
Filling and Venting the System	24
Unit Performance Testing	25
Trouble Shooting	25
Special Service Tools	32

JENSALES.COM

or Call 800-443-0625

CLICK ANYWHERE FOR MORE DETAILS

CLICK ANYWHERE FOR MORE DETAILS

FOREWORD

GSS-1343-D

BASIC HYDRAULIC SYSTEM

706, 806 and 1206 Series Tractors

**Hydraulic Brakes, Power Steering,
Drive Selector and Lubrication**

IMPORTANT

When servicing late production 706 and 806 Tractors and all 1206 Tractors, see page 47.

LIBRARY FILING INFORMATION

JENSALES.COM

1. File this Manual in Book 11 after Divider Tab GSS-1343.

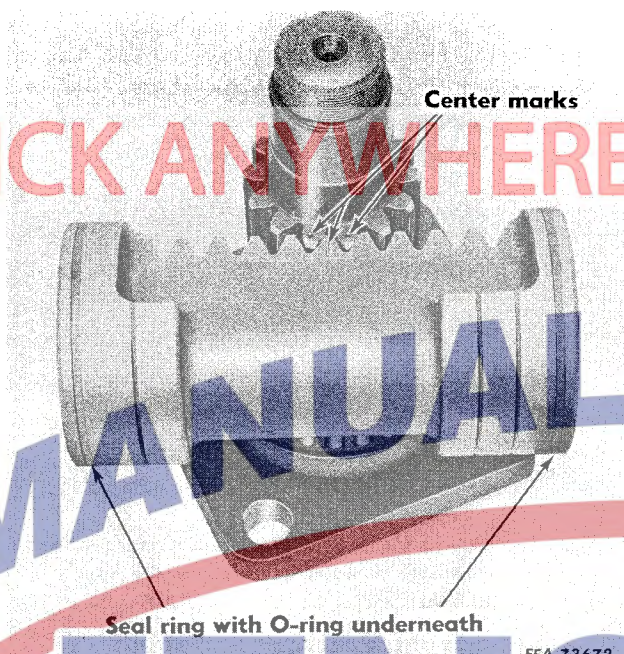
2. Enter the following information in the Service Manual Index.

In the Tractor Brakes Section on page 19, and in the Tractor Hydraulics Section, page 25, Print or preferably Type in the Manual Description, Form Number, and the Book filed in.

CLICK ANYWHERE FOR MORE DETAILS

CONTENTS

	Page
Introduction	4
Glossary of Terms and Symbols	4
Specifications	6
Torques	8
Torque Chart	9
How it Works	
The complete System	10
Hydraulic Supply and Control Circuit	10
Power Steering	12
Power Hydraulic Brakes	14
Power Braking	14
Manual Braking	16
Drive Selector and Clutch Lubrication Circuit	16
Direct Drive Position	18
TA Drive Position	19
Lubrication - During TA Shift	19
Hydraulic Lock of Valve Spool	19
Feathering	19
Clutch Dump Valve	19
Clutch Housing and Transmission Lubrication System	20
Clutch Lubrication Control	20
Oil Cooler and Differential Lubrication System	22
Disassembly	
General	28
Multiple Control Valve Assembly	28
Hydraulic Pump	29
Farmall Power Steering	29
Power Brake Valves	30
Inspection	31
Final Inspection - After Assembly	32
Reassembly	32
Trouble Shooting	33
Testing the Multiple Control Valve	44



Illust. 18. Farmall steering shaft pinion and piston rack.

Removing the manual steering pump is easier if the unions in the hydraulic lines, pointed out on Illust. 19 are disconnected. The pump will then come out of the steering column with two short pieces of hydraulic tubing connected to it which are easier to disconnect when off the tractor. Another method is to use a narrow wrench through the access opening below the steering wheel to reach the line connections on the manual pump body leaving all tubing within the steering column. However, during reassembly it probably will be necessary to loosen both sets of connections in order to line up the hydraulic tubes before drawing them both up tight. See Illust. 19.

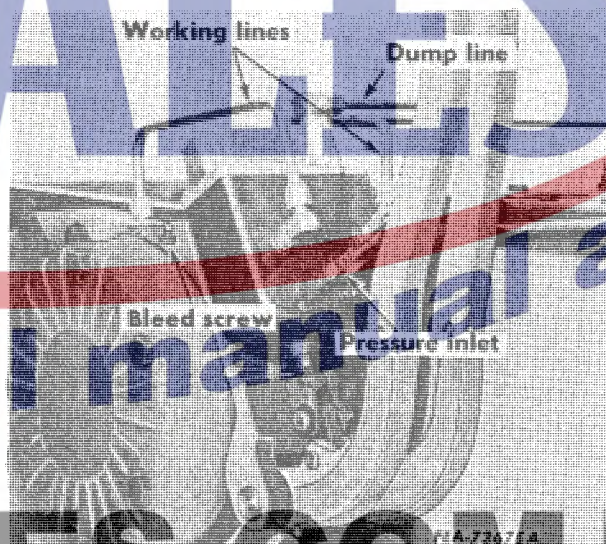
Power Brake Valves

The location of the power brake valve assembly is shown in Illust. 20. Disconnect the pedal linkage, hydraulic lines, and remove the capscrews to free the complete assembly.

Remove the machine screws holding the body cap plate on the valve body. Refer to Illust. 21. The valve spools, pistons, and springs may now be pulled out of the valve body as shown. On early production tractors, the small piston and reaction spring was secured to the valve spool with a Reed Prince type screw and locktite. Heat the



Illust. 19. Disconnect points for manual pump removal.



Illust. 20. Power brake valve and pedal linkage.

screws to soften the locktite before removing the screws. Phillips type screws are furnished for service, and locktite should be used on screw threads.

IMPORTANT: The two valve spools are not alike and should be marked for reassembly in the correct bore. The inlet orifice (BO) is screwed into the valve body inlet port and may be removed for inspection and cleaning.

INTRODUCTION

This manual was prepared in order to familiarize service personnel with the operating principles and proper servicing techniques for the IH Load and Position Control Hitch and the Auxiliary Hydraulic System.

Information on the remainder of the Hydraulic Systems will be found in other Blue Ribbon Service Manuals.

Some of the illustrations shown are of cutaway units to better illustrate the features being discussed. Although the units have been cut away, the location of all parts remain the same.

IMPORTANT
When servicing 1206 Tractors, see page 52.

CONTENTS

	Page
Specifications	4
Torque Chart	7
General Description	8
Principles of Operation	8
Changing from 3 Point to 2 Point Hitch or 2 Point to 3 Point Hitch	24
Trouble Shooting	25
Checks and Adjustments	31
Test Procedure	35
Servicing Components	38
Load and Position Control Cylinder and Valve Units	38
Rockshaft	44
Torsion Bar Assembly	44
Control Quadrant, Levers and Control Linkage	44
Auxiliary Valves	47
Double-Acting Check Valve	50
Pumps and Filters (Refer to Service Manual GSS-1279)	

(2) Attach Flo-Rater inlet to an auxiliary valve (Illust. 16A). Actuate valve and hold to eliminate unlatching. Outlet from Flo-Rater should return to rear opening. (Flo-Rater valve open.)

(3) Place load control lever in "OFF" position.

(4) Position control lever anywhere in "LIFTING" portion of quadrant. Not in "ACTION CONTROL" portion.

(5) Start the tractor and operate at approximately 1000 RPM or 5 GPM free flow on the Flo-Rater.

(6) Observe the amount of dripping or leakage from area of load control valve and cylinder assembly. There should be little or no leakage.

(7) Turn the Flo-Rater valve in to obtain approximately 1200 PSI. If a bad leak is present or if the pump is no good you may not be able to obtain the 1200 PSI.

(8) Observe to see if the amount of leakage or seepage has increased a great deal, and attempt to determine from

what area the additional leakage originates. Observe for cored passage leakage in the upper cover and left front side of the rear frame.

(9) If excessive leakage is observed, the rear cover must be removed for further inspection and correction.

(e) If after performing step (c) and (d) above, and the flow and pressure still do not meet specifications, replace the pump.

5. Air in the system or traveling with the fluid.

Test for air leaks by overfilling the hydraulic system with an extra five gallons of Hy-Tran. Attach a hose with a male coupling to an auxiliary valve outlet. Run the engine at low idle and pump the fluid into a container. When the fluid level is lowered to the level of the air leak, the leak will be apparent by air traveling with the fluid from the hose. Inspection in the main frame will also indicate the level of the air leak.



Illust. 16A. Checking the hitch and auxiliary system for leakage.

Load and Position Control Hitch - Continued

Problem	Cause	Test
Hitch will not lower.	1. Main control valve spool sticking or spring damaged. 2. Drop check valve pilot ball cage is misadjusted. 3. Action control valve piston sticking over discharge port. 4. Drop poppet seat is loose. 5. Drop check valve is sticking.	1. Check by attempting to manually operate linkage through the rear opening (Illust. 22). Spool sticking is nearly always due to dirt contamination. 2. Turn cage in. If hitch now lowers readjust linkage per instructions page 32. 3. Disassemble and inspect. 4. Disassemble and inspect. 5. Disassemble and inspect.
Hitch lowers very slowly.	1. Position control lever is in action control range or linkage is out of adjustment. 2. Drop check valve pilot ball cage misadjusted. 3. Action control valve spool or piston sticking. 4. Drop check valve piston is sticking or seat is loose.	1. Place position control lever 1/2 inch above the action control zone. If the hitch lowers at the correct speed, the linkage is properly adjusted. If not adjust per instructions on page 32. 2. Turn the cage in (Illust. 25). If this corrects the problem, the cage should be adjusted per instructions on page 33. 3. Disassemble and inspect. 4. Disassemble and inspect.
Hitch lowers load too fast. (Position control is not in action control zone).	1. Action control valve piston is sticking open.	1. Disassemble and inspect.

Service Manual Reference List

GSS-1342-D	"Power Train" - 706, 806 and 1206
GSS-1343-D	"Basic Hydraulic System" - 706, 806 and 1206
GSS-1344-D	"Load and Position Control Hitch and Auxiliary Hydraulic System" - 706, 806 and 1206
GSS-1377	"D-310 Engine and Fuel System"
GSS-1346-E	"D-361 and DT-361 Engine and Fuel System"

CONTENTS

Page

Specifications

Engine	4
Chassis	6

Hitch and Control Linkage Adjusting Procedure

General	7
Adjusting Procedure	7

Hydraulic Seat

9

Shift Linkage and Park Lock Adjustment

10

Adjustment Procedure	11
----------------------------	----