

MF 750-860

Combine Manual
09010403

Addendum to JD D-A-M



HEADSIGHT INC.
HARVESTING SOLUTIONS



About Headsight

Headsight Contact Info

Headsight, Inc
3529 Fir Road
Bremen, IN 46506
Phone: 574-546-5022
Fax: 574-546-5760
Email: info@headsight.com
Web: www.headsight.com

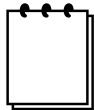
Technical Assistance

Phone: 574-220-5511

About this Manual

How to use this manual

For new installations, follow all applicable instructions in each of the numbered sections (1,2,etc) in the order that they are presented in this manual. The information in the lettered appendices (A,B, etc) is for service or advanced settings which you will not need for most installations, but may want to reference in the future.



This icon designates information of which you should take note.



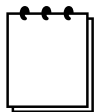
This icon designates an important instruction.

Disclaimers

Headsight, Insight, Foresight, FeatherSight and TrueSight are trademarks of Headsight, Inc. All other trademarks are property of their respective owners.

Suggestions

If you have any suggestions to improve this manual –please call 574-546-5022 or email info@headsight.com.



Portions of this product are protected by US Patents 6202395, 6833299, 7310931, and other US and international patents, issued and pending.

Table of Contents

About Headsight	i
Headsight Contact Info	i
Technical Assistance	i
About this Manual	i
How to use this manual	i
Disclaimers	i
Suggestions	i
1. Installation	2
1.1. Relay Box	2
1.2. Light Bar	2
1.3. Power Wire	2
2. Settings	3
2.1. Combine Settings	3
2.1.1. Automatic drop rate	3
2.1.2. Hydraulic accumulator	4
3. Operation	5
3.1. Enabling height control	5
3.2. Adjusting header height	5
A Diagnostics	6
1 Theory of Operation	6
2 Troubleshooting.....by symptom	6
B Wiring	9
C Parts	10

1. Installation



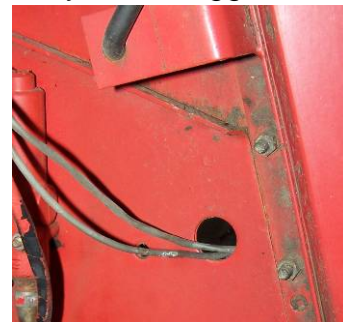
This Manual is intended as an ADDENDUM to the JD D-A-M manual also provided with the kit you have purchased. Please follow the JD D-A-M manual for installation, calibration, and troubleshooting instructions, while using the following manual as a supplement to explain how the JD D-A-M style controller can be used on the MF 750-860 combines. Specific application instructions follow, including the Relay box, controls, and hydraulic settings for MF combines

1.1. Relay Box

1. Mount DAM box and bracket first, then mount relay box within cable reach of DAM connection bracket and mark mounting hole locations.
2. Drill mounting holes using $\frac{1}{4}$ " drill bit.
3. Secure box to header using provided tie straps or optional $\frac{1}{4}$ " bolts.
4. Connect 16 pin plug to 16 pin receptacle on JD D-A-M system.
5. Connect the 3 pin flat plug to the combine. NOTE: If your combine has the 6 pin header connector, plug the 3 pin into the side of the 6 pin that has the white, green, and yellow wires. Do not connect it to the side with only 2 wires (red & black).

1.2. Light Bar

1. Mount the light bar anywhere near the console of the combine where it is easily accessible, but not where the LEDs will distract you. A suggested mount is on the vertical cab post between the side windows above the console.
2. Route the wire out the cab access hole under the console and around under the cab to follow existing wiring down the feederhouse. You may need to enlarge this hole. Make sure to leave slack for head movement.



1.3. Power Wire

- Route the power wire along with the light bar up into the cab and connect it to the red w/grey wire at the fuse/circuit breaker panel. This is the fused Header control power wire to the header lift switch. Carefully secure the wiring to keep it clear of moving parts.

2. Settings

2.1. Combine Settings



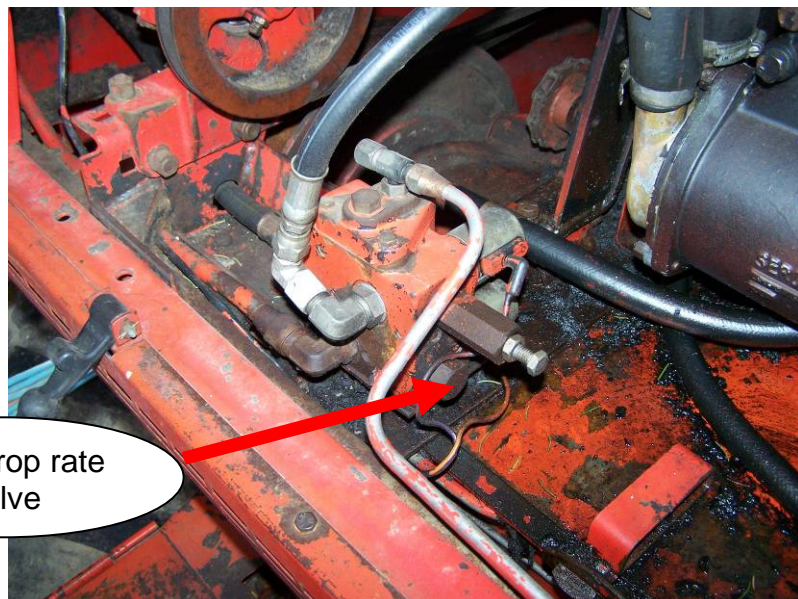
Properly setting the combine is essential to having responsive header control. You should become very familiar with the steps in this section.



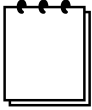
Set the automatic drop rate as high as you like without causing head “hunting”. If the head “hunts”, decrease the automatic drop rate.

2.1.1. Automatic drop rate

1. Use the automatic drop rate valve adjustment knob on the main valve block.
 - Turn in all the way then out $\frac{1}{2}$ turn for initial guess.
 - If the speed is too fast – hunting will occur.
 - If the speed is too slow – the system will not be responsive enough.
2. Common range is 6-8 seconds from header full up to full down in automatic mode.

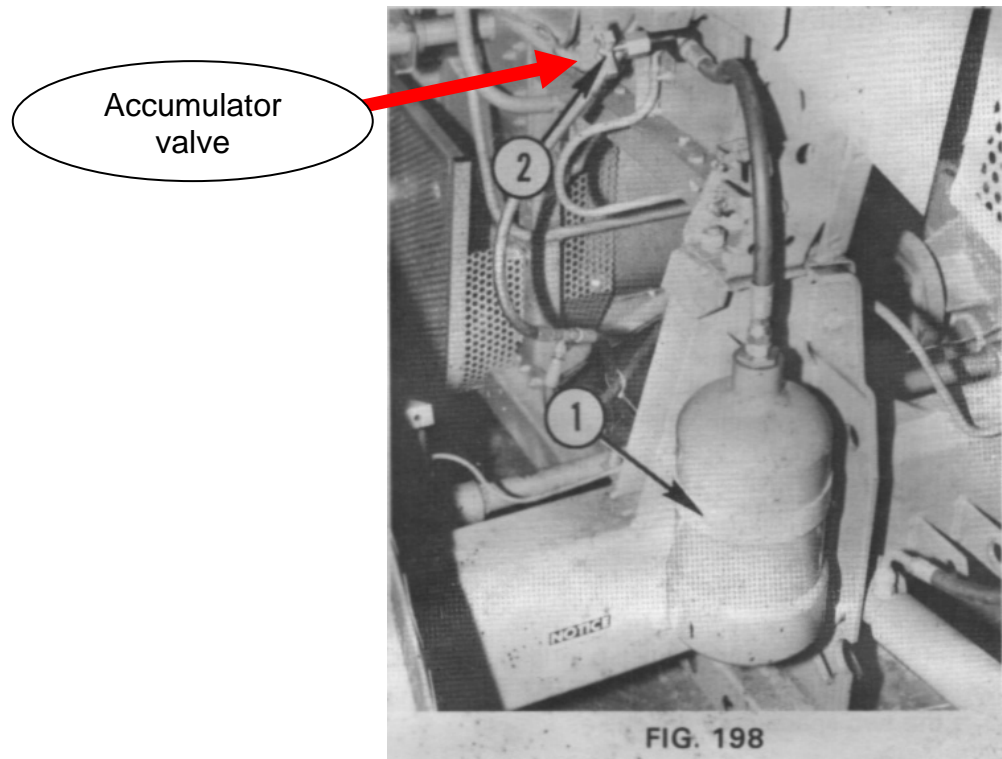


2.1.2. Hydraulic accumulator



If you do not have any accumulator, please contact either your local dealer or Headsight™ to install one. It will result in much improved operation and less stress to both you and the machine in all situations, manual or auto.

1. Close the accumulator valve all the way
2. Open the accumulator valve 1 full turn (from closed position).
 - Opening the accumulator to far will give sloppy response.
 - Not opening the accumulator far enough will give a jerky response.



3. Operation

3.1. Enabling height control

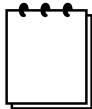


1. Turn Auto/Manual switch to Auto.



2. Press header lower button.

3.2. Adjusting header height



If a Light Bar is not connected, preset raise and lower points are used, allowing basic operation at one midrange height.

1. Turn the height position knob on the light bar with header control engaged.
 - Clockwise = higher
 - Counter-clockwise = lower

A Diagnostics

1 Theory of Operation

All JD Dial-a-Matic systems send out a 12V signal for raise and lower. The relay box provided turns the 12V signals into a GROUNDING output as expected by the MF combines. Thus, when RAISE is active, a 12V signal on the raise line from the JD D-A-M will cause the output of the relay to switch the raise wire on the combine to ground. The controller in the combine then will activate the raise solenoid valve, raising the head.



The following symbols are used in the troubleshooting guide:



Denotes a problem or symptom.

- Read through the problems and select the one that most closely represents your problem.

? A question or condition needed for the following steps that the technician must answer.

- Read through the possible options and select the one that most closely represents your problem.

★ A possible answer to the previous question or problem

- Evaluate each possible answer to determine the cause of the problem.
- Answers are given in order from most to least likely.

○ **Gives further explanation or testing instructions.**

2 Troubleshooting.....by symptom



Header is too jumpy or responds too slowly

- ★ Combine is improperly set.
 - See Settings section – adjust drop rate and accumulator.
- ★ Sensors need to be recalibrated.

- See Calibration section.



No automatic operation - height or tilt

- ★ Wiring is not connected properly
- ★ Header control is not enabled with cab controls.
 - See Operation section for instructions about how to enable.
- ★ No Ground from combine. Test single bare pin on combine 3p connector for <5 Ohms to chassis ground

? If at least 1 LED is lit on the light bar.

- ★ Relay box defective, test output to pull to ground
 - When p3 (Lower) of 16 pin has 12V, outer bare pin of relay box half of 3p connector should be <5 Ohms to chassis ground. (must be connected to combine)
 - When p5 (Raise) of 16 pin has 12V, center pin of relay box half of 3p connector should be <5 Ohms to chassis ground. (must be connected to combine)
- ★ Suspect defective Headsight™ system.
 - Test Headsight system by following raise/lower diagnostics in JD D-A-M manual.

? If NO LEDs are lit on the light bar:

- ★ Ensure light bar is properly connected to the control box.
- ★ 12V power wire not connected.
- ★ Combine ground not connected.
- ★ Suspect defective Headsight control box.



Head raises over obstacle but does not lower.

- ★ Replace KL relay in relay box.
- ★ See troubleshooting for JD D-A-M system



Head lowers to selected height but does not raise over obstacles.

- ★ Replace KR relay in relay box.
- ★ See troubleshooting for JD D-A-M system.



Unopened or discharged accumulator - Head jumps and jerks whole combine.

- ★ Test accumulator as described in combine owner's manual
- ★ Replace or recharge as necessary



Manual raise switch does not disengage auto height.

- ★ Replace combine auto height controller unit.



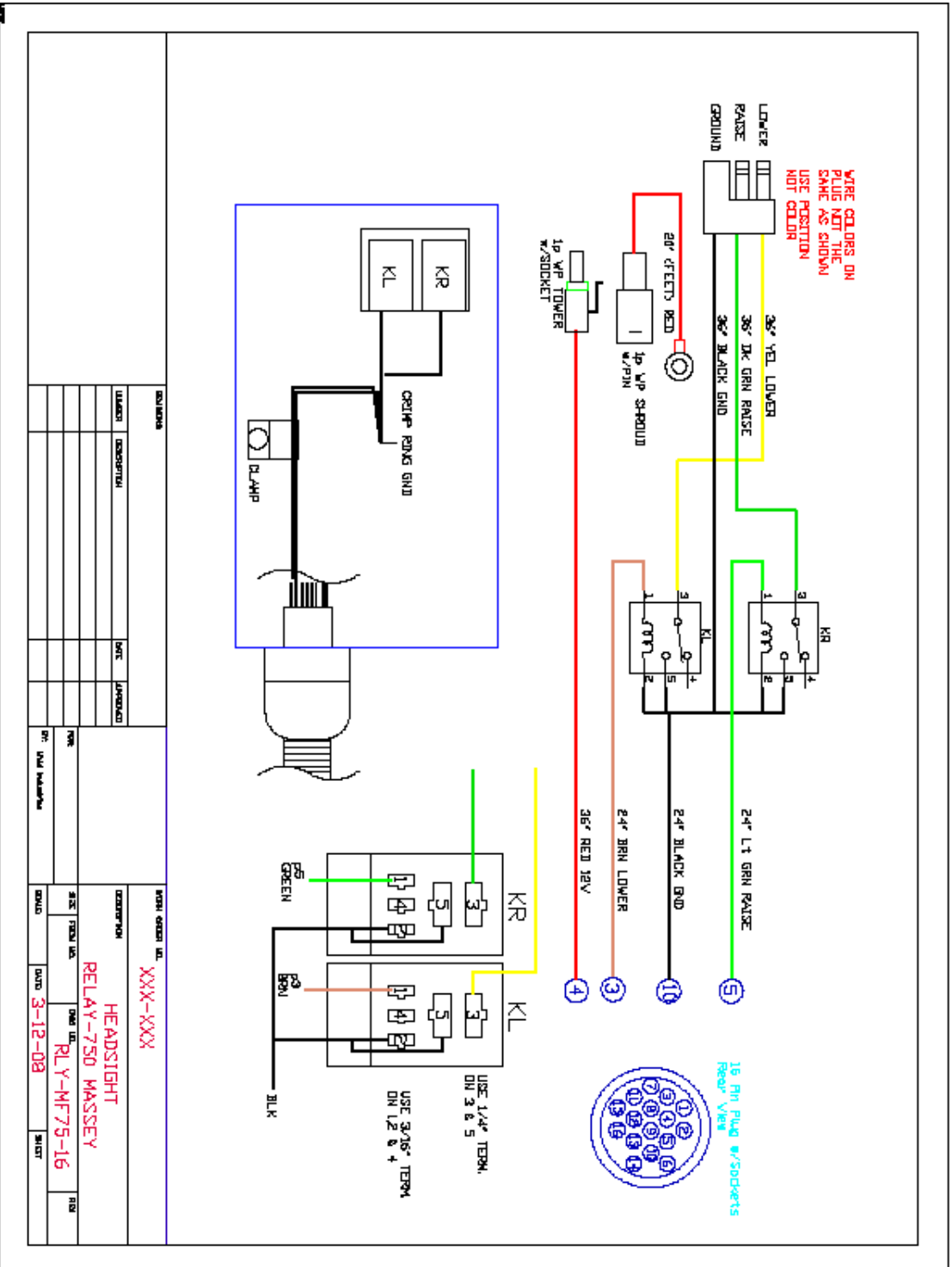
Manual lower switch does not engage auto height.

- ★ Test Headsight™ system as described in "No operation"
- ★ Test combine 12 V supply as above.

? If all systems appear to be working, with both raise and lower signals sent to the combine.

- ★ Check OEM raise/lower wiring
- ★ Test combine auto height controller unit.

B WIRING



C Parts



<u>Key#</u>	<u>Part#</u>	<u>Description</u>	<u>Qty</u>	<u>Notes</u>
1	RLY-MF750	RELAY UNIT	1	
2	SP Order	POWER WIRE	1	

HEADSIGHT INC.

HARVESTING SOLUTIONS



3529 Fir Rd. Bremen, IN 46506
Ph: 574-546-5022 Fax: 574-546-5760
info@headsight.com www.headsight.com