

VITTETOE

CHAFF SPREADER

Case-IH

Installation Instructions

Operator's Manual

Trouble-Shooting Guide

(Please keep with combine)

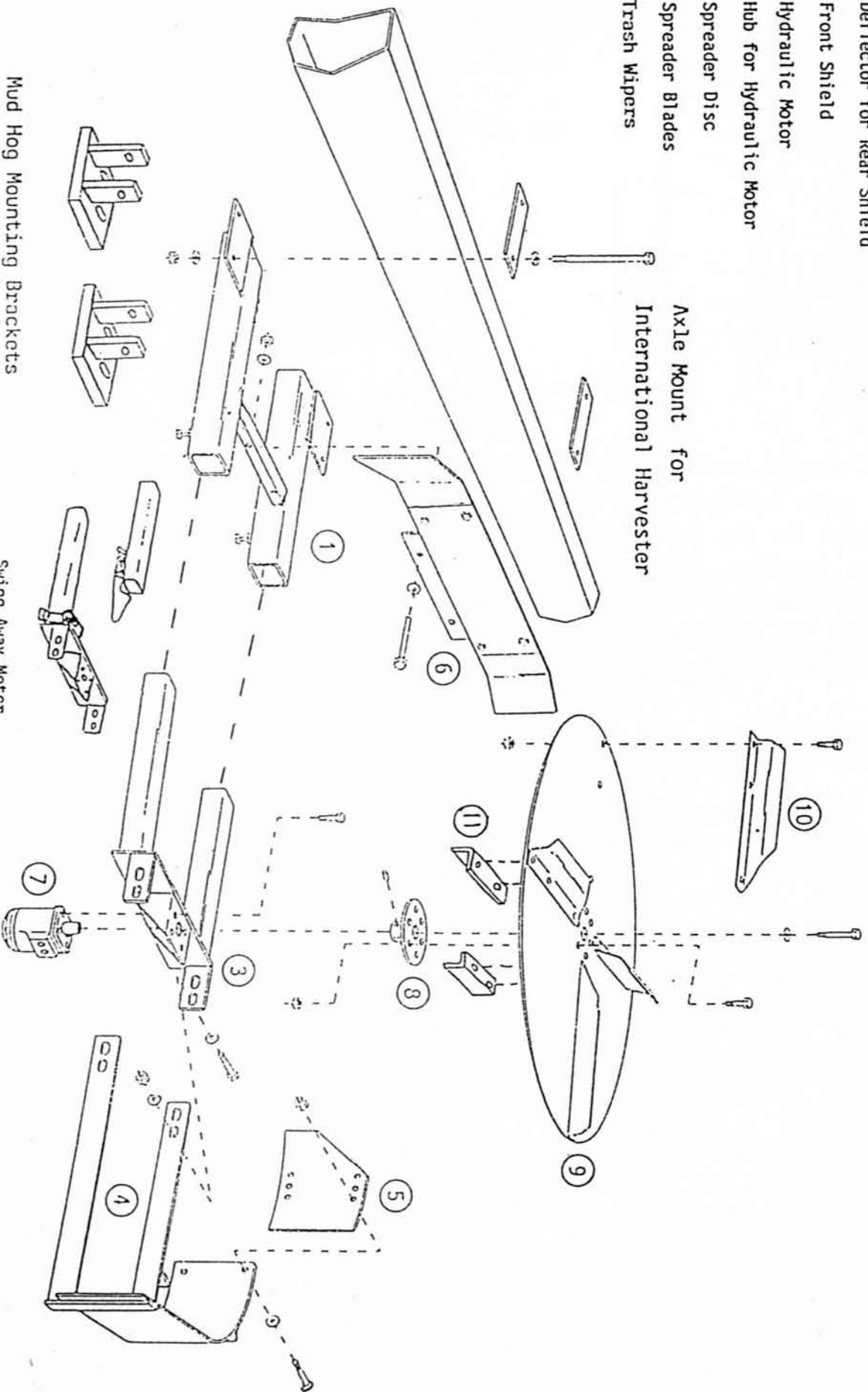
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VITTETOE SINGLE CHAFF SPREADER

- ① Axle Mount
- ③ Motor Mount Bracket
- ④ Rear Shield
- ⑤ Deflector for Rear Shield
- ⑥ Front Shield
- ⑦ Hydraulic Motor
- ⑧ Hub for Hydraulic Motor
- ⑨ Spreader Disc
- ⑩ Spreader Blades
- ⑪ Trash Wipers

Axle Mount for
International Harvester



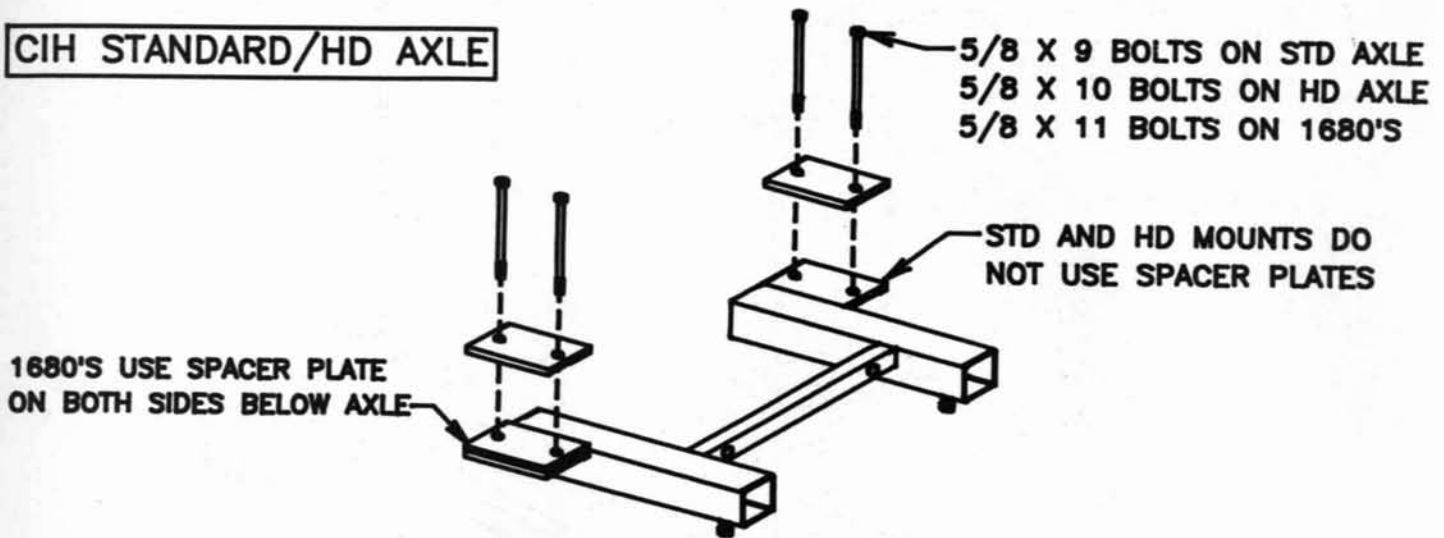
Mud Hog Mounting Brackets

Swing Away Motor
Mount Bracket

STEP 1

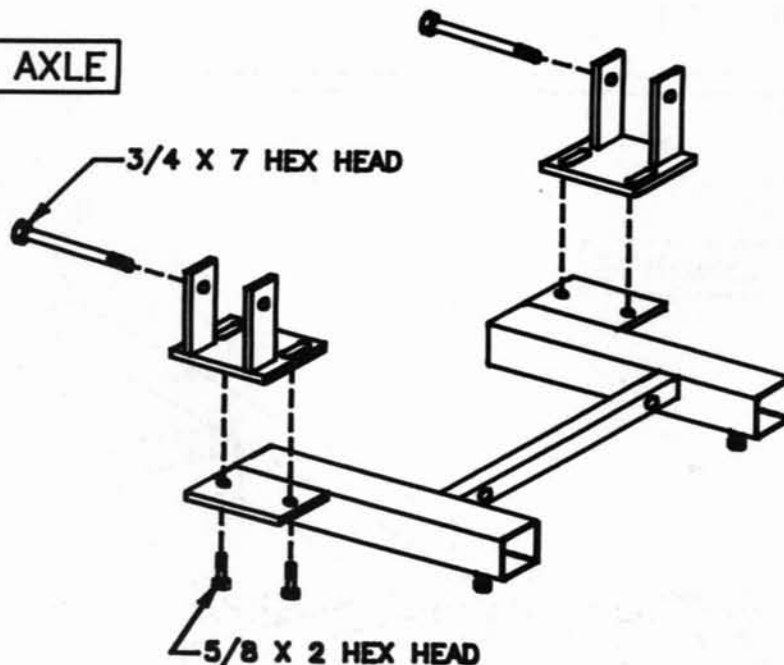
Bolt axle mount to axle using the figure which applies to you.

CIH STANDARD/HD AXLE



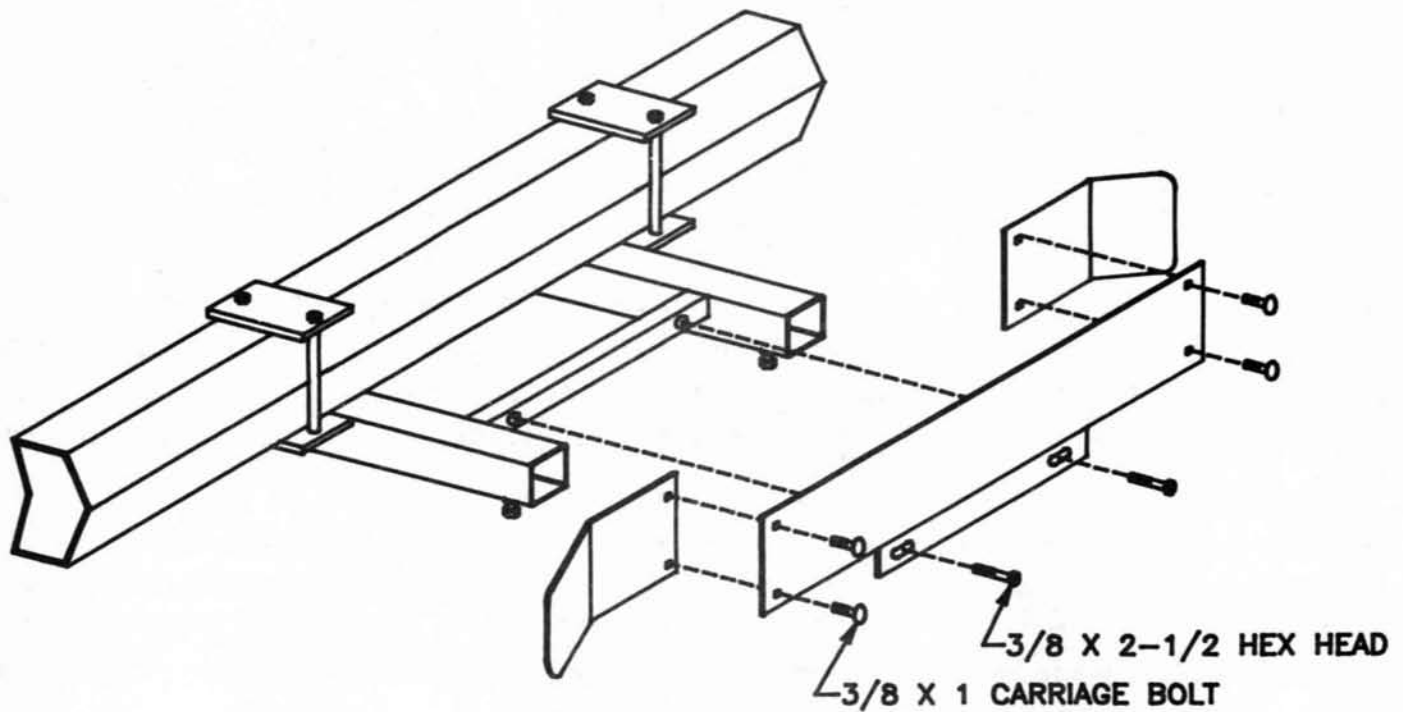
The axle mount will fit up to the bottom of the axle with bolts in front of and behind the axle going to a plate on top of the axle. If there is an interference with the steering cylinder bracket, it should be spaced out 1/2" from the axle allowing the axle mount bolt to pass between the axle and the steering cylinder bracket.

CIH MUD HOG AXLE



Bolt the 2 mud hog adapter brackets to the top of the standard CIH axle mount. Each adapter bracket bolts to the axle with one bolt going through the axle from front to rear. The mud hog adapter brackets can be rotated 180 deg. if needed to avoid interference with steering cylinder brackets.

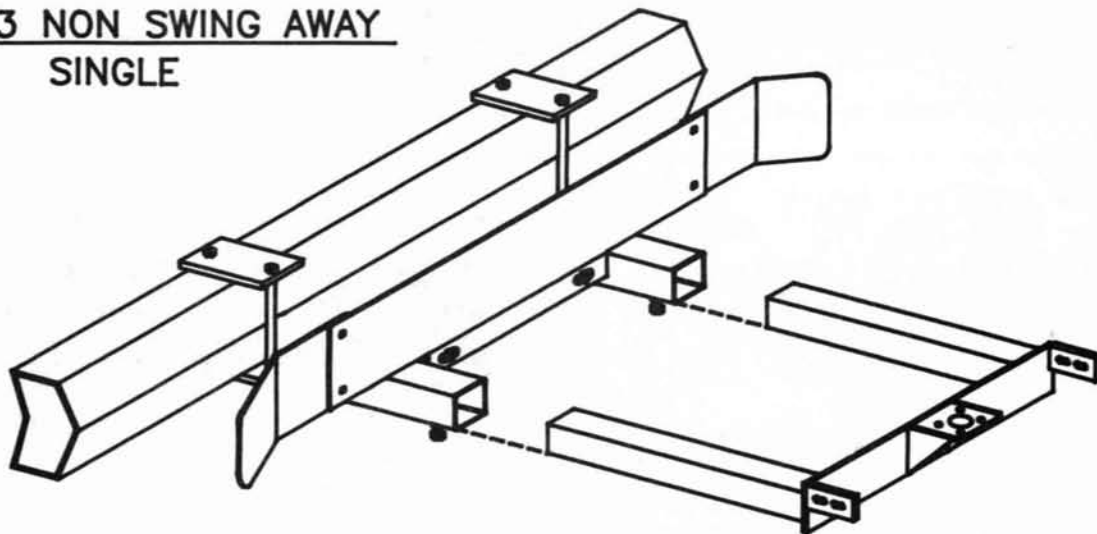
STEP 2
SINGLE



Bolt front shield on rear of cross tube of axle mount using 2-3/8" X 2" bolts. Bolt front shield extension to each side of front shield using 2-3/8" X 1" carriage bolts on each side.

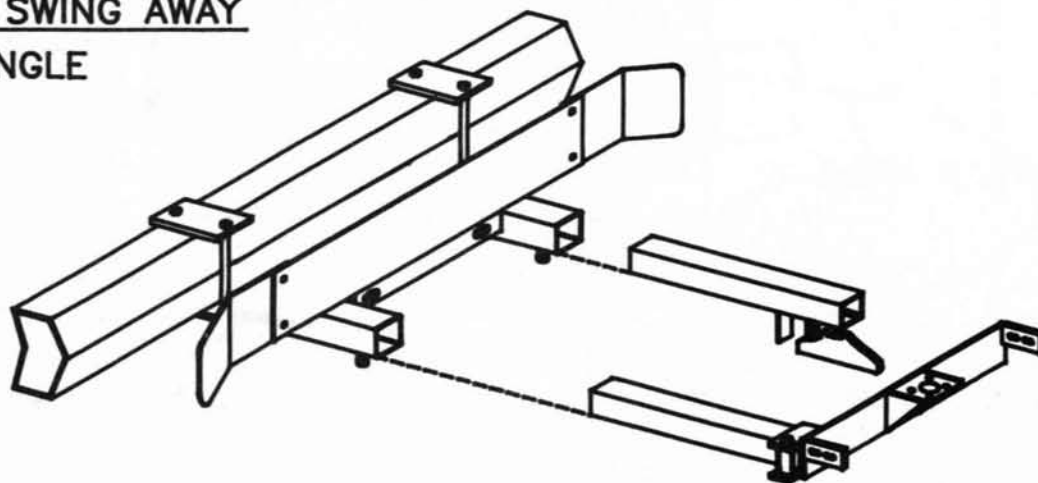
WARNING: After installing the front shield, make sure that the tires will clear the shield when the wheels are turned or when the axle pivots. If the tires do not clear, unbolt the extension from each side and move them toward the center far enough that they will clear. Drill new holes and rebolt them.

STEP 3 NON SWING AWAY
SINGLE



Slide the tubes of the motor mount into the tubes of the axle mount. Adjust so that the center of the hole on the motor mount plate is approximately 20" from the rear of the front shield. Tighten and lock the set screws on the bottom of each side of the axle mount.

STEP 3 SWING AWAY
SINGLE

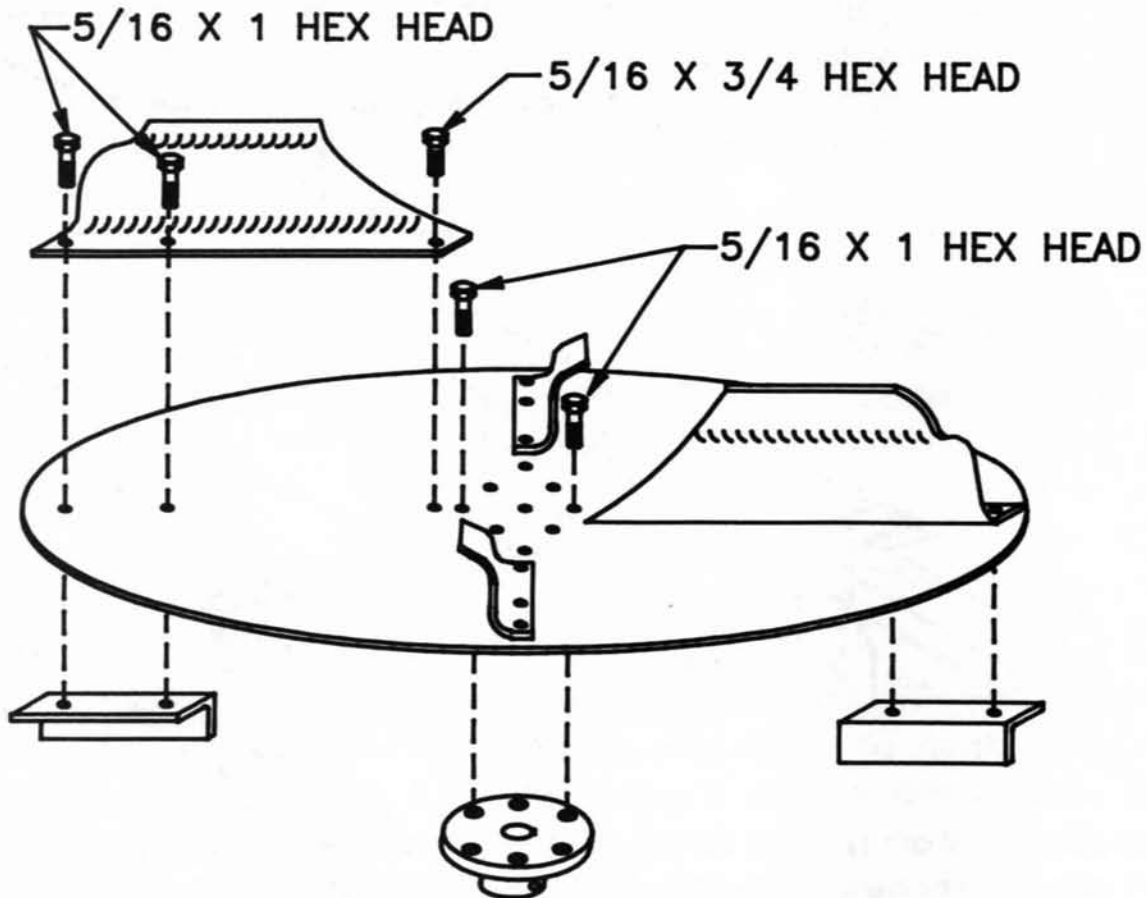


Slide the motor mount arm, with the spring loaded latch, approximately 9–10 inches into the right axle mount tube (latch mechanism down), and tighten and lock the set screw on the bottom of the right axle mount tube. Next, slide the remaining motor mount tube (with the hinged connection) into the left axle mount tube. Engage the latch and adjust so that the motor mount is square with the axle mount. Snug tighten and lock the left axle mount set screw. Unlatch motor mount and swing it clear open. Now, tighten and lock the left axle mount set screw. **NOTE:** When you swing the motor mount closed it will strike high and will require considerable down pressure to close and latch. This is an intended pre-load condition and will latch properly when unit is fully assembled.

STEP 4 SINGLE

STEP 4A

Bolt the four spreader blades to the spreader disc, using three 5/16" x 3/4" bolts and locknuts per blade in two opposing blades, and one 5/16" x 3/4" and two 5/16" x 1" bolts and locknuts with trashwipers on the bottom side of the disc on the other two opposing blades.



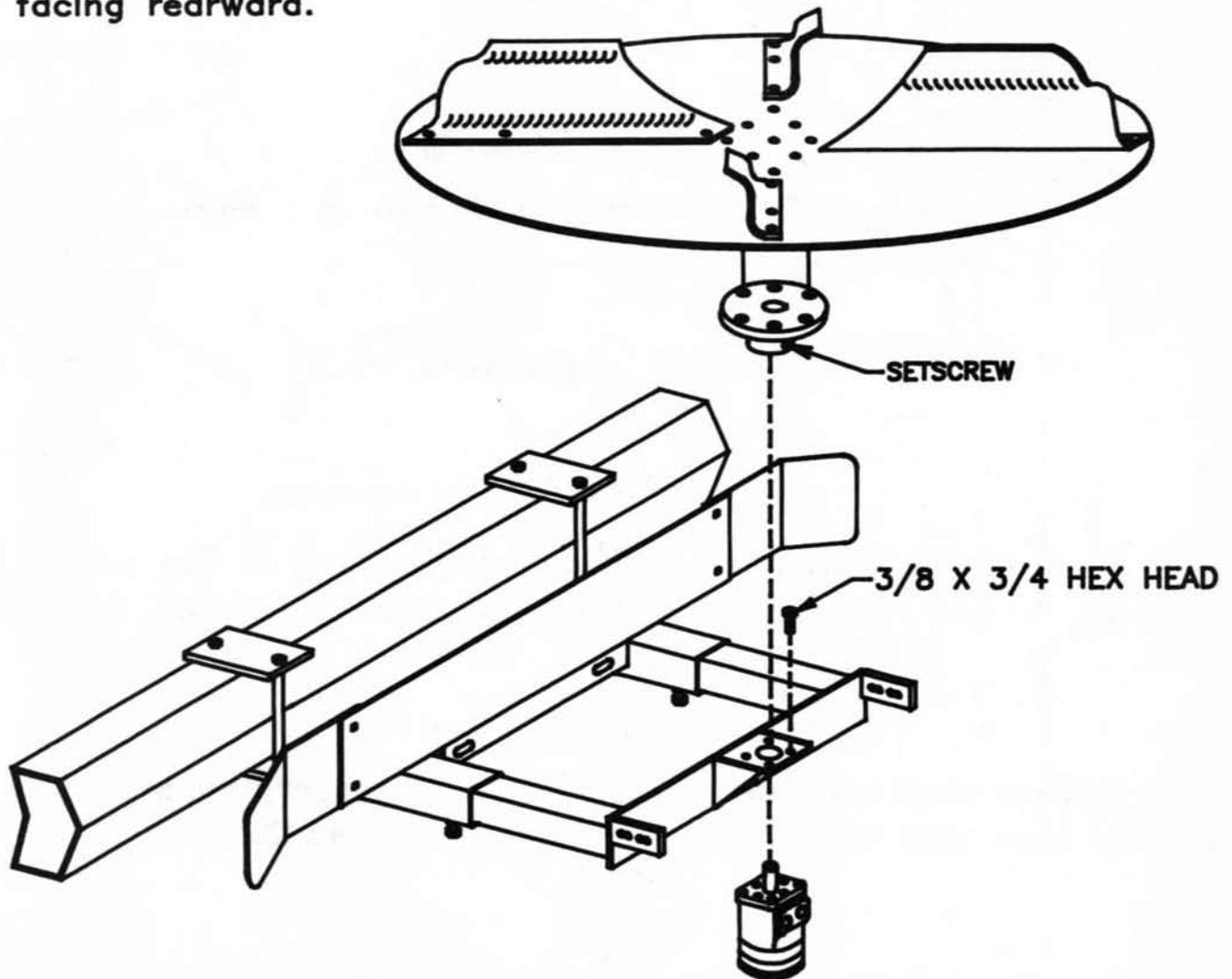
****Locknuts must be used with hub and discs.****

STEP 4B

Bolt the hub for the hydraulic motor to the spreader disc (on opposite side of the spreader blades) using six 5/16" x 1" bolts and locknuts. Center the hub during assembly by looking through the hub and centering the center hole of the disc.

STEP 5
SINGLE

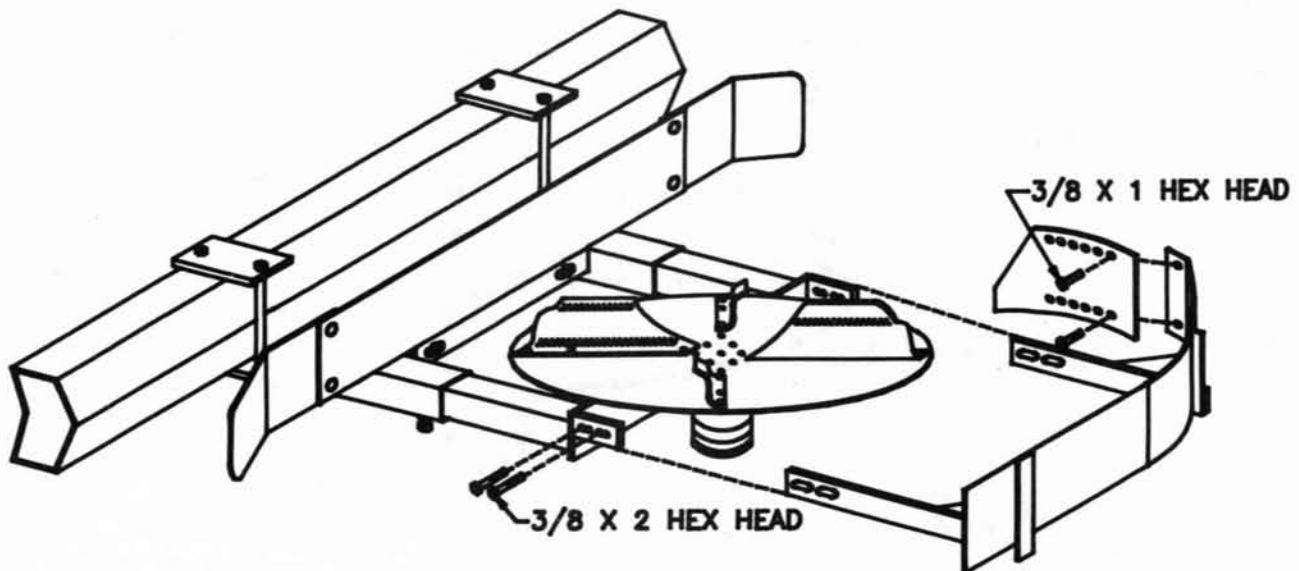
STEP 5A CAUTION: Feel the bottom side of the motor mount plate with your fingers to check for foreign material, such as beads of weld spatter. Remove any foreign material found (failure to do so will cause a hairline fracture in the top plate of hydraulic motor when the motor is bolted in place, and hydraulic oil will leak during operation). Bolt the hydraulic motor to the motor mount bracket using the 3/8" x 3/4" bolts already in the motor. The ports should be facing rearward.



STEP 5B Slide the hub for the hydraulic motor (with disc attached) down over the shaft and shear key on the hydraulic motor. Bolt through the center of the disc into the end of the hydraulic motor shaft with one 1/4" x 3/4" bolt with lock washer and flat washer. Tighten the set screw in the hub keyway.

NOTE: Failure to assemble with shear key installed, or failure to tighten either the set screw or top bolt may result in damage to the hub, motor shaft, and possibly combine, if not caught in time.

STEP 6
SINGLE



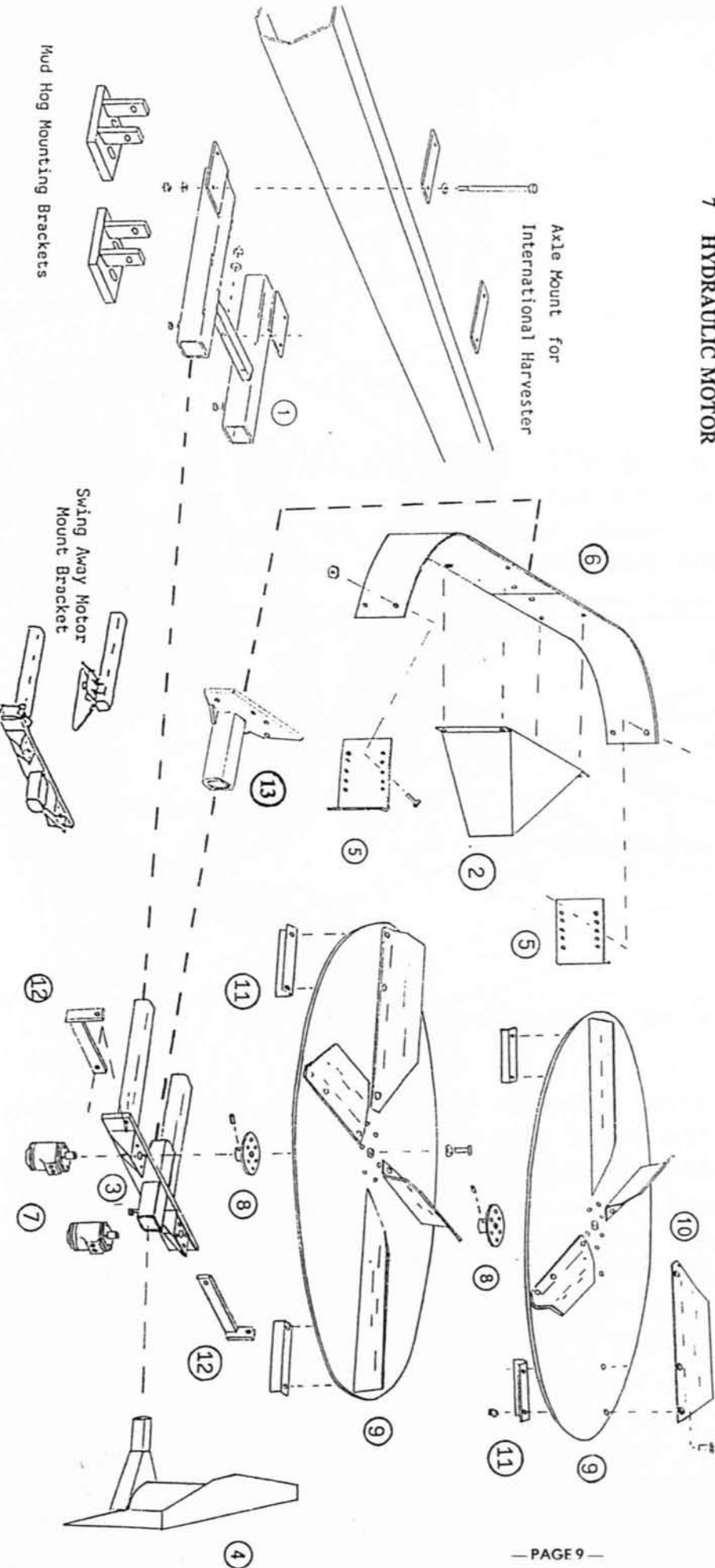
STEP 6A Bolt the rear shield deflector (using one of the center sets of holes) to the right inside of the rear shield using two 3/8" x 1" bolts.

STEP 6B Bolt the rear shield arms to the inside of the two mounting ears on each side of the motor mount using two 3/8" x 2" bolts.

NOTE: The rear shield is made so that the deflector will be touching the disc. Slide the rear shield as close to the disc as possible. Adjust so that the gap between the disc and rear shield increases as you follow clockwise around the disc. Pull the deflector away from the disc so it is as close as possible without touching.

VITTETOE DOUBLE CHAFF SPREADER

- 1 AXLE MOUNT
- 2 FRONT SHIELD V
- 3 MOTOR MOUNT
- 4 REAR SHIELD
- 5 DEFLECTOR FOR FRONT SHIELD
- 6 FRONT SHIELD
- 7 HYDRAULIC MOTOR
- 8 HUB FOR HYDRAULIC MOTOR
- 9 SPREADER DISC
- 10 SPREADER BLADES
- 11 TRASH WIPERS
- 12 FRONT SHIELD BRACE
- 13 FRONT SHIELD MOUNT

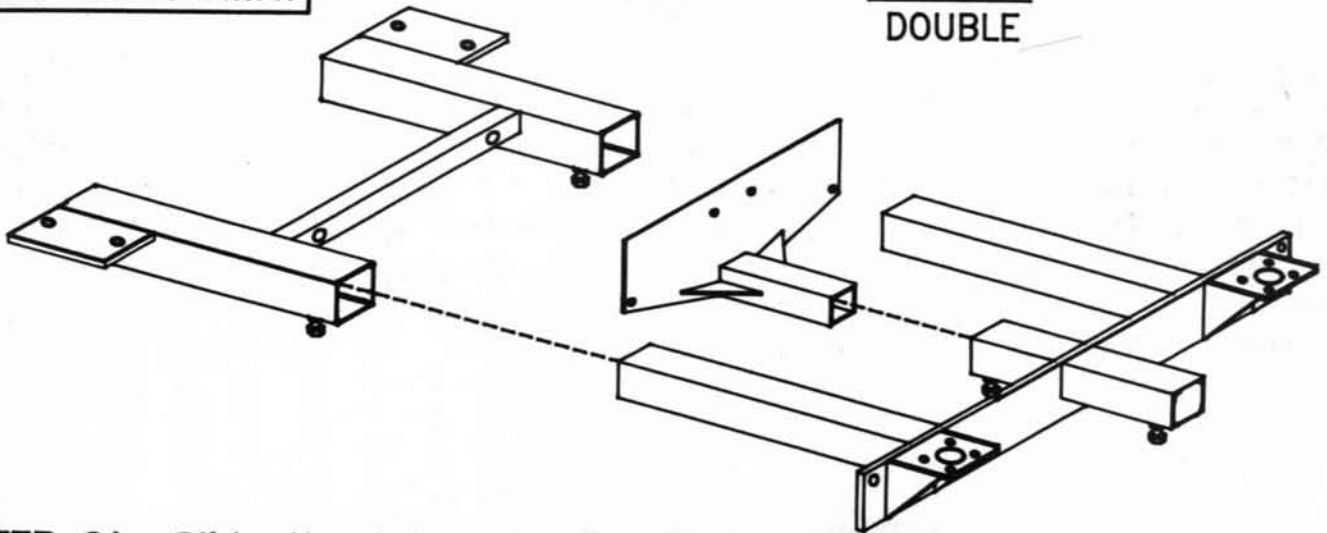


Mud Hog Mounting Brackets

Swing Away Motor Mount Bracket

NON SWING AWAY

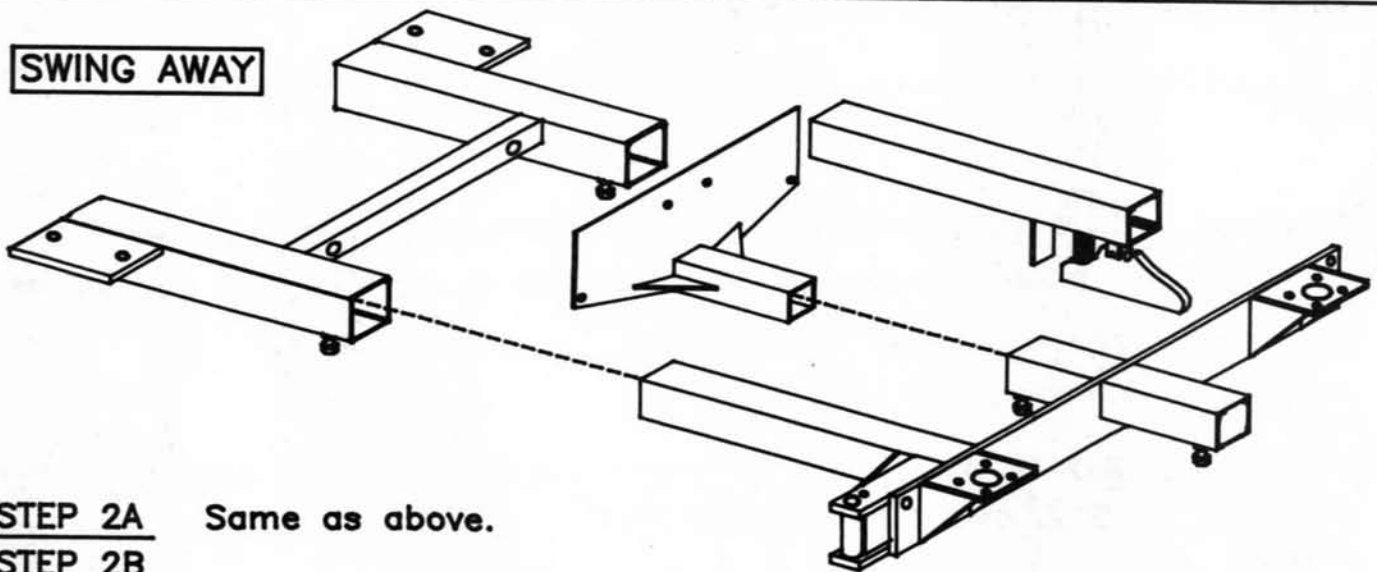
STEP 2
DOUBLE



STEP 2A Slide the tube of the front shield mount into the motor mount about 4" and tighten the set screw.

STEP 2B Slide the motor mount tubes 9" to 10" into the axle mount. Tighten and lock the two set screws on the bottom of mount.

SWING AWAY



STEP 2A Same as above.

STEP 2B

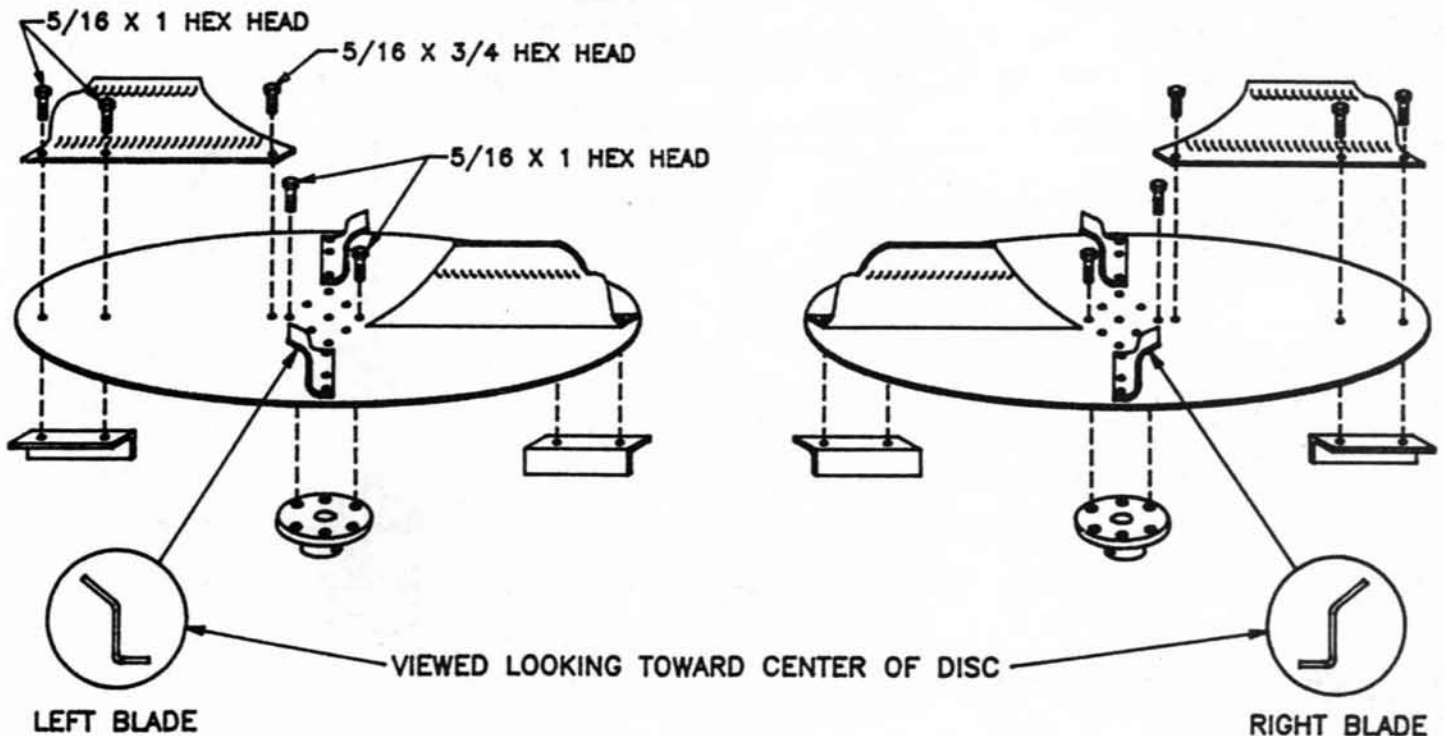
Slide the motor mount arm, with the spring loaded latch, approximately 9-10 inches into the right axle mount tube (latch mechanism down), and tighten and lock the set screw on the bottom of the right axle mount tube. Next, slide the remaining motor mount tube (with the hinged connection) into the left axle mount tube. Engage the latch and adjust so that the motor mount is square with the axle mount. Snug tighten and lock the left axle mount set screw. Unlatch motor mount and swing it clear open. Now, tighten and lock the left axle mount set screw. **NOTE:** When you swing the motor mount closed it will strike high and will require considerable down pressure to close and latch. This is an intended pre-load condition and will latch properly when unit is fully assembled.

STEP 3 DOUBLE

STEP 3A

There are four right-hand and four left-hand blades. Bolt the four right-hand blades to one disc and the four left-hand blades to the other disc. Bolt the blades on by using three $5/16''$ X $3/4''$ bolts and locknuts per blade on two opposing blades. Use one $5/16''$ X $3/4''$ and two $5/16''$ X $1''$ bolts and locknuts with the trashwipers on the bottom side of the disc on the other two opposing blades.

****Locknuts must be used with hub and discs.****

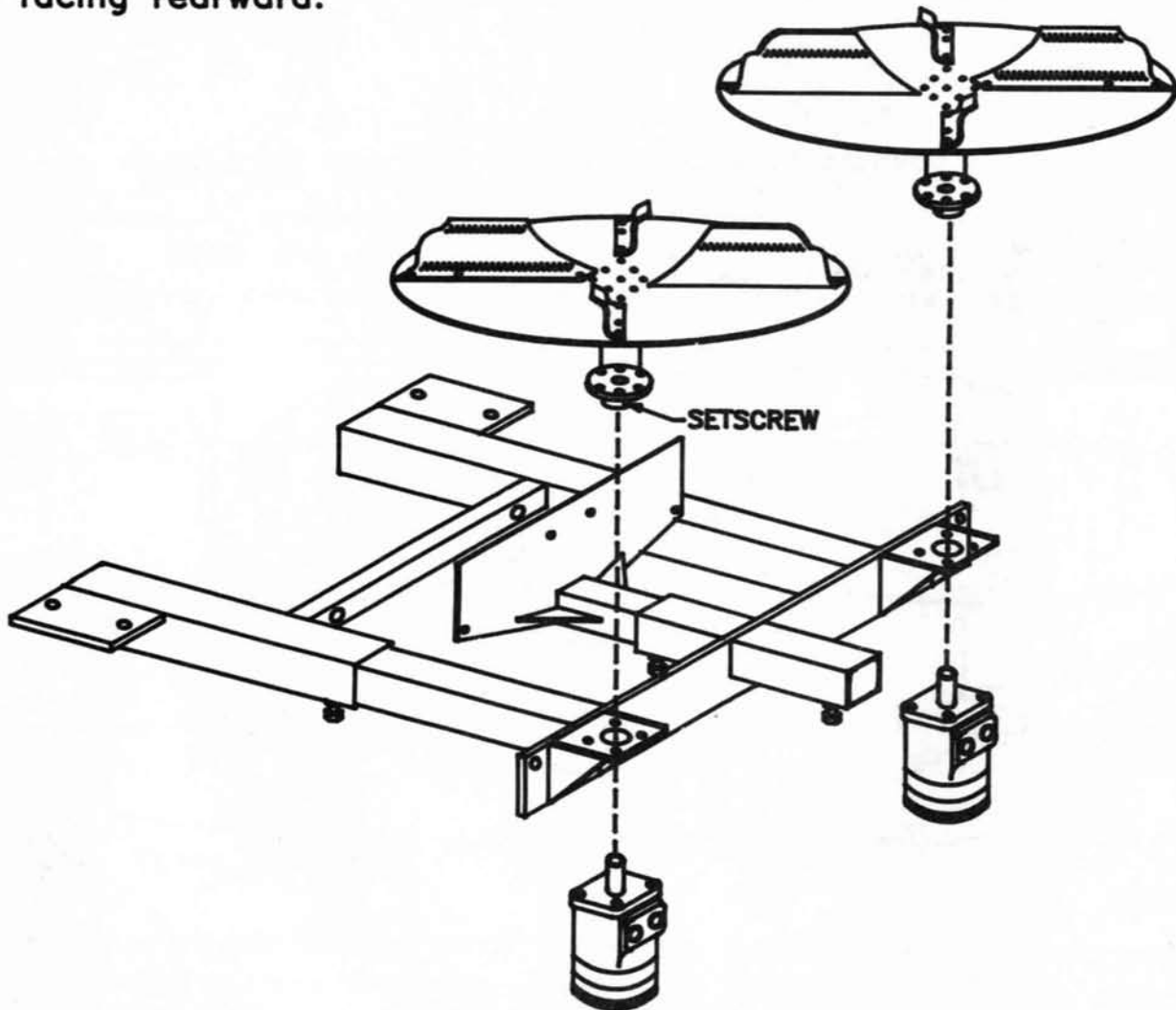


STEP 3B

Bolt the hub for the hydraulic motor to the spreader disc (on opposite side of the spreader blades) using six $5/16''$ x $1''$ bolts and locknuts. Center the hub during assembly by looking through the hub and centering the center hole of the disc.

STEP 4
DOUBLE

STEP 4A CAUTION: Feel the bottom side of the motor mount plate with your fingers to check for foreign material, such as beads of weld spatter. Remove any foreign material found (failure to do so will cause a hairline fracture in the top plate of hydraulic motor when the motor is bolted in place, and hydraulic oil will leak during operation). Bolt the hydraulic motor to the motor mount bracket using the 3/8" x 3/4" bolts already in the motor. The ports should be facing rearward.



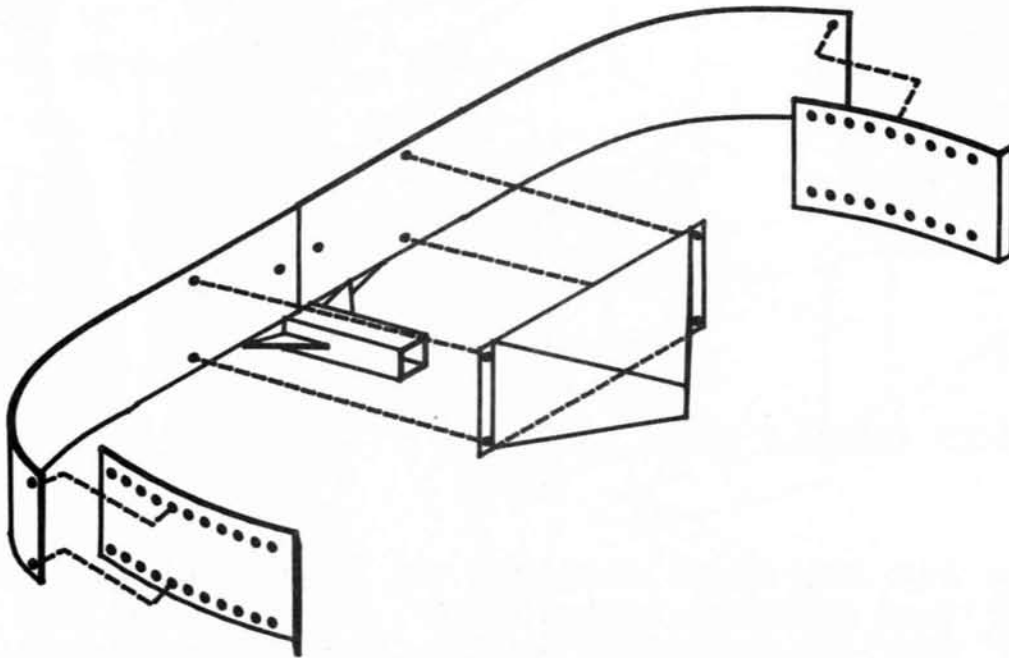
STEP 4B Slide the hub for the left-hand motor (with disc attached) down over the shaft and shear key of the left-hand motor. Bolt through the center of the disc into the end of the hydraulic motor shaft with one 1/4" x 3/4" bolt with lock washer and flat washer. Tighten the set screw in the hub keyway. Repeat for right motor.

NOTE: Failure to assemble with shear key installed, or failure to tighten either the set screw or top bolt may result in damage to the hub, motor shaft, and possibly combine, if not caught in time.

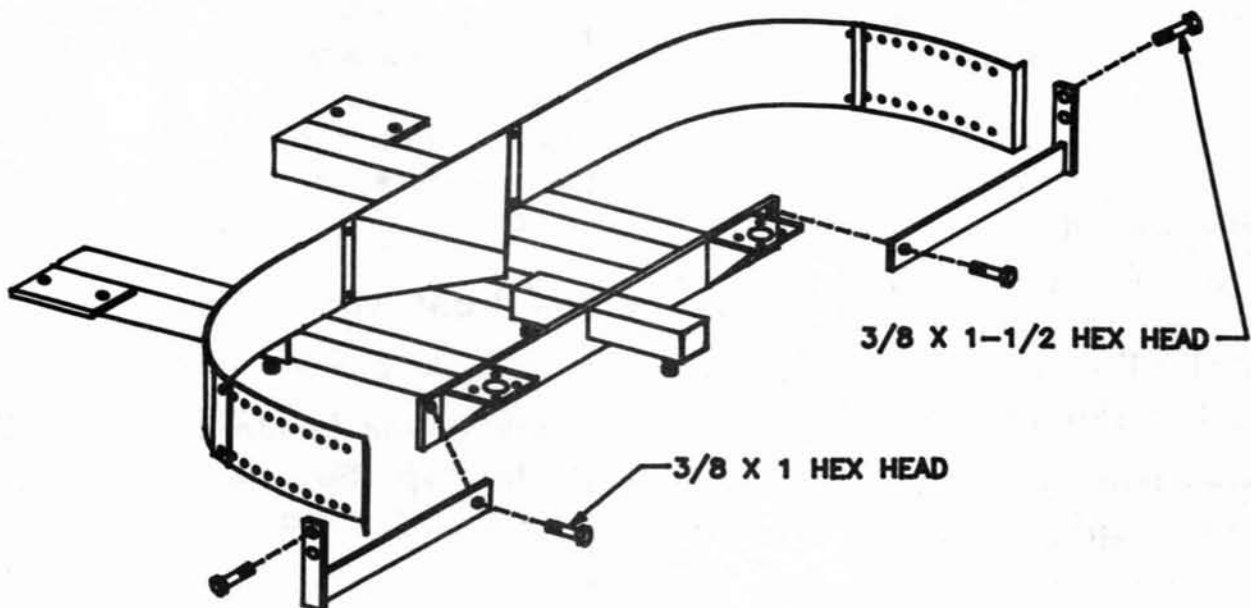
STEP 5
DOUBLE

STEP 5A Bolt front shield halves and nose cone to front shield Mount bracket using $3/8"$ X $1"$ bolts.

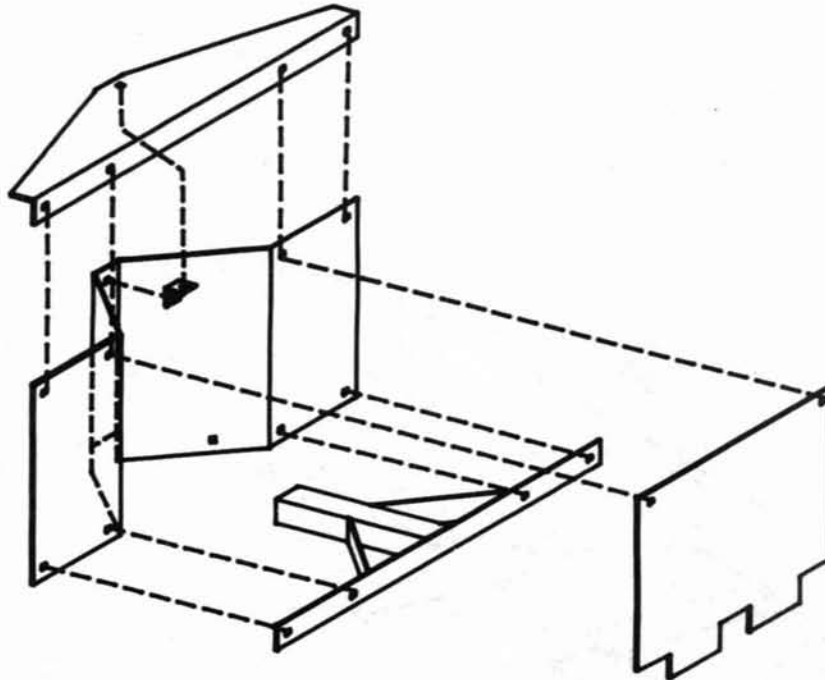
STEP 5B Bolt front shield slide to each side of front shield using two $3/8"$ X $1"$ bolts per side. The slides should be adjusted so that no chaff is being thrown at the rear tires.



STEP 5C Bolt the front shield braces to motor mount using $3/8"$ X $1"$ bolts. Bolt to front shield using $3/8"$ X $1\ 1/2"$ bolts.



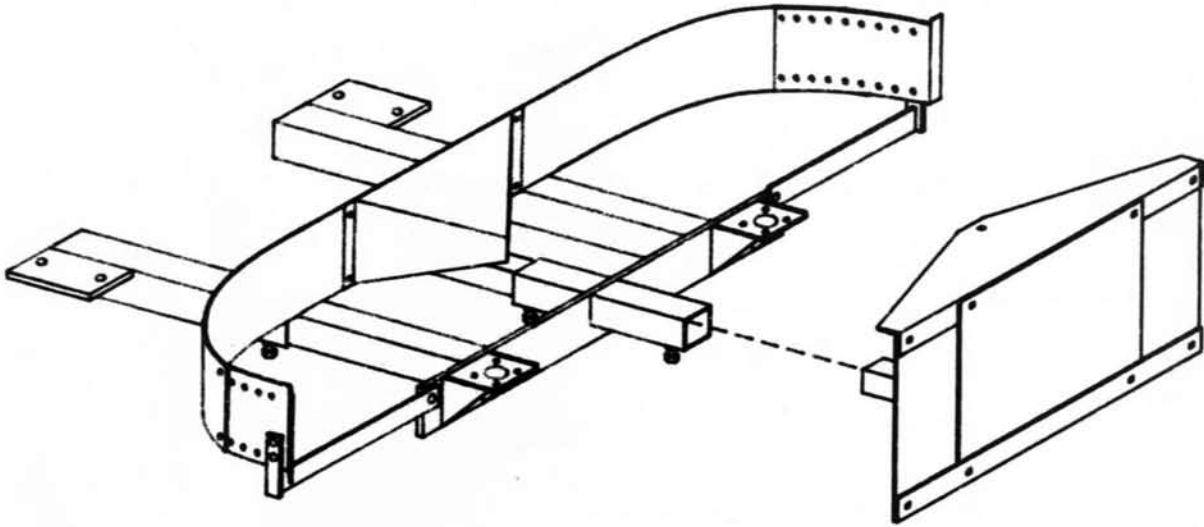
STEP 6
DOUBLE



BOLT TOGETHER DOUBLE REAR SHIELD

1. Take the bolt bag which contains: six 5/16" flat washers, twelve 5/16" lock washers, twelve 5/16"-18 hex nuts, and twelve 5/16"-18 x 3/4" carriage bolts and lay the mounting weldment in front of you.
2. Set the formed sheet metal deflector on weldment. The notch will fit over the square tube and 6 carriage bolts, lock washers, and nuts will secure the deflector to the weldment. All nuts should be opposite the side of the extended square tube.
3. Set the top plate over the deflector and secure it to the deflector using 2 carriage bolts, flat washers, lock washers and nuts. Bolt only the two ends at this time.
4. Use the L-shaped bracket in the front with a bolt in both the top plate and the deflector.
5. Slide the notched side of the back cover inside the mounting weldment, aligning the two holes at the top. Secure the back cover with 2 bolts, flat washers, lock washers and nuts.

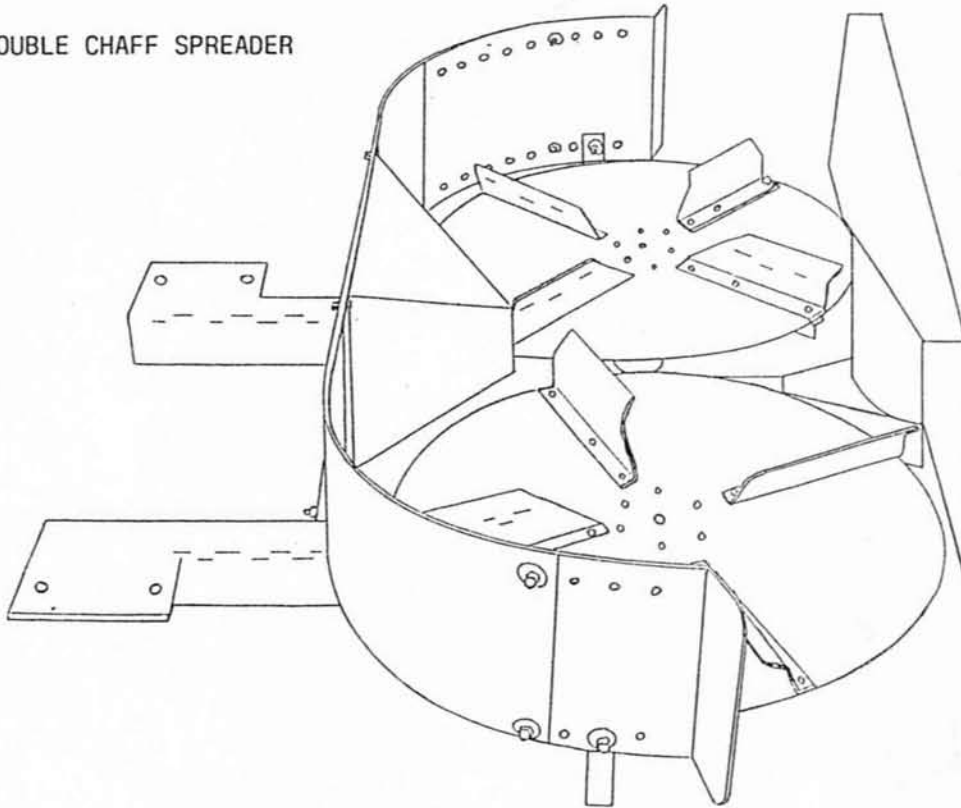
STEP 7
DOUBLE



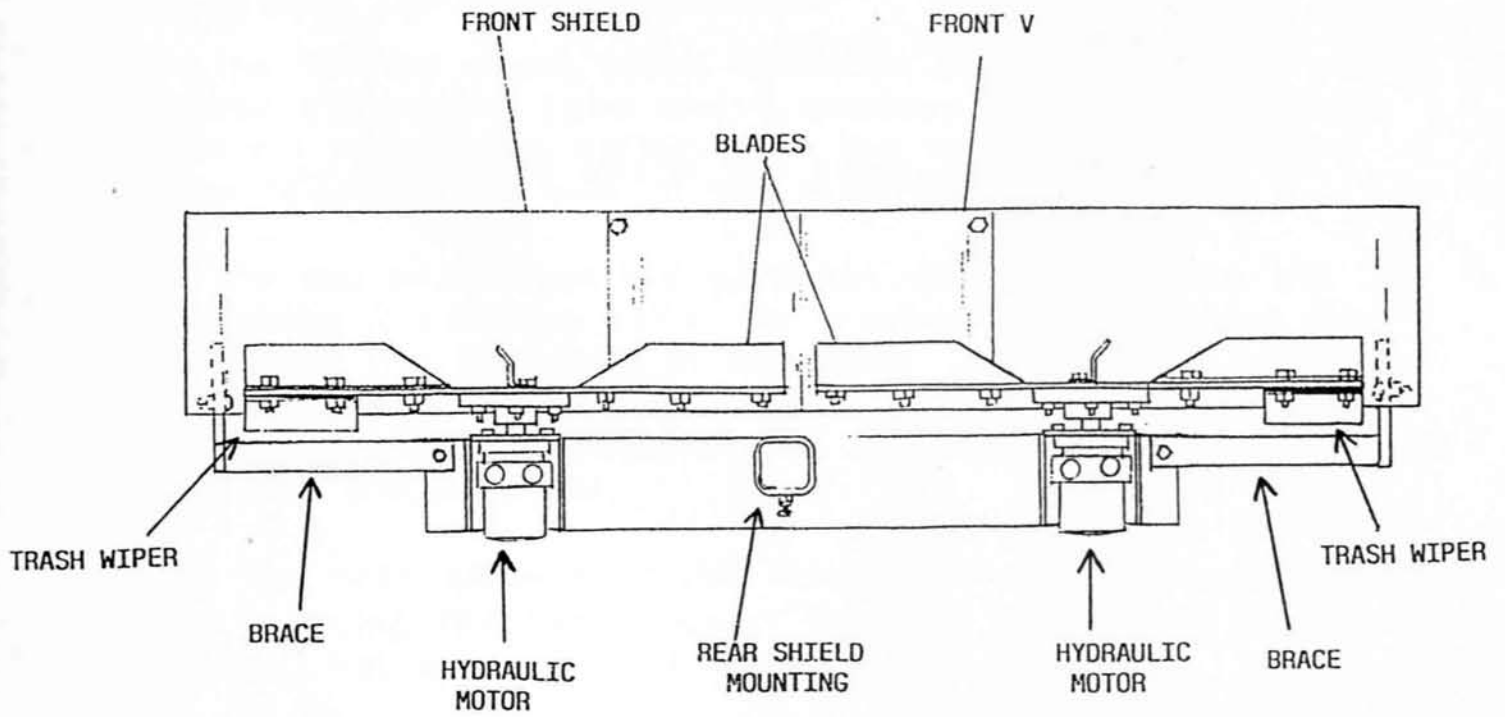
Slide the rear shield tube into the motor mount rear tube, adjust for approximately 1" clearance between the shield and the disc, and tighten the set screw.

****Double discs not shown for clarity.****

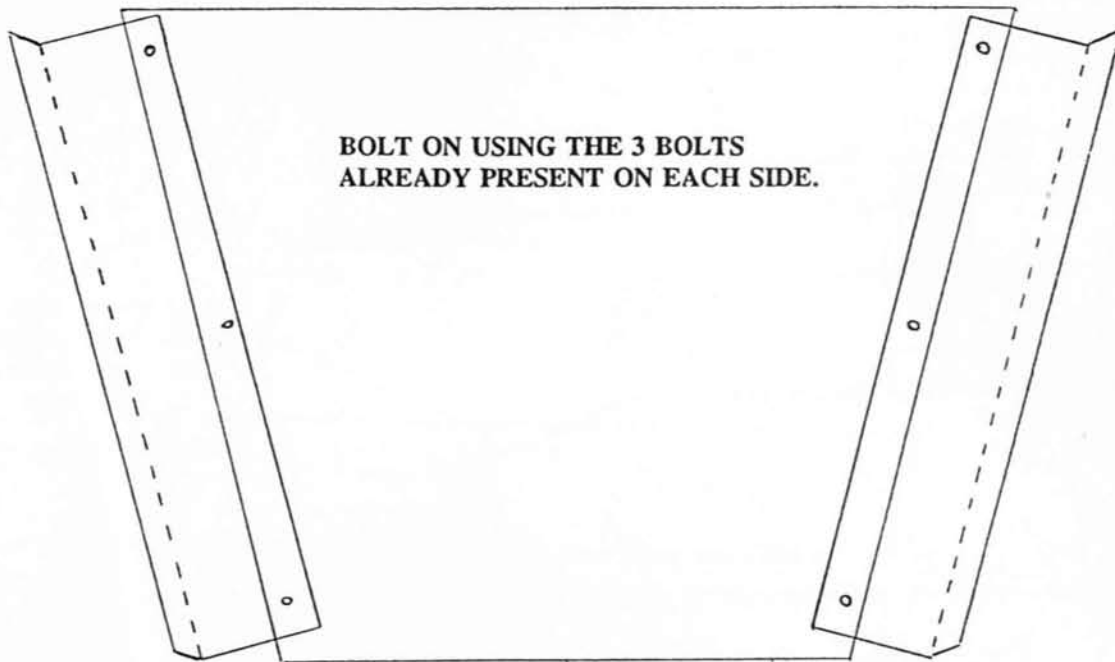
VITTETOE DOUBLE CHAFF SPREADER



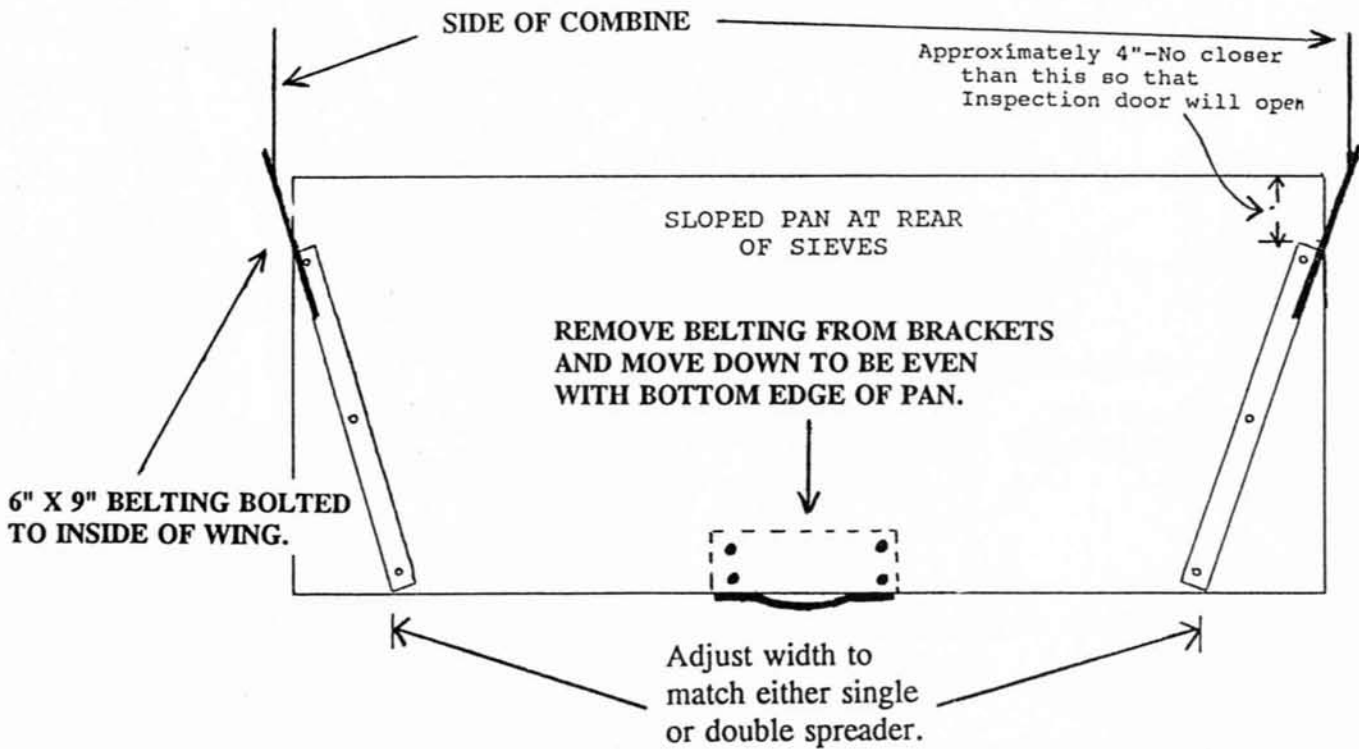
VITTETOE DOUBLE CHAFF SPREADER
REAR VIEW



IH PAN WING PLACEMENT

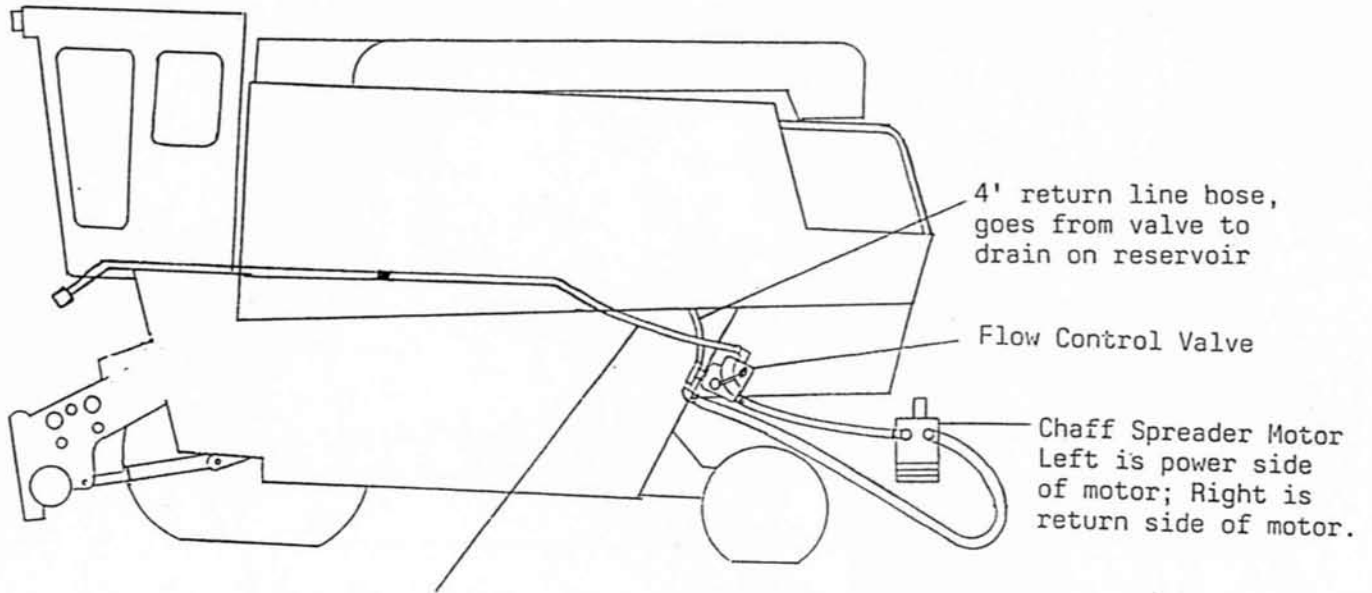


IH EXTENDED SIEVE WING PLACEMENT

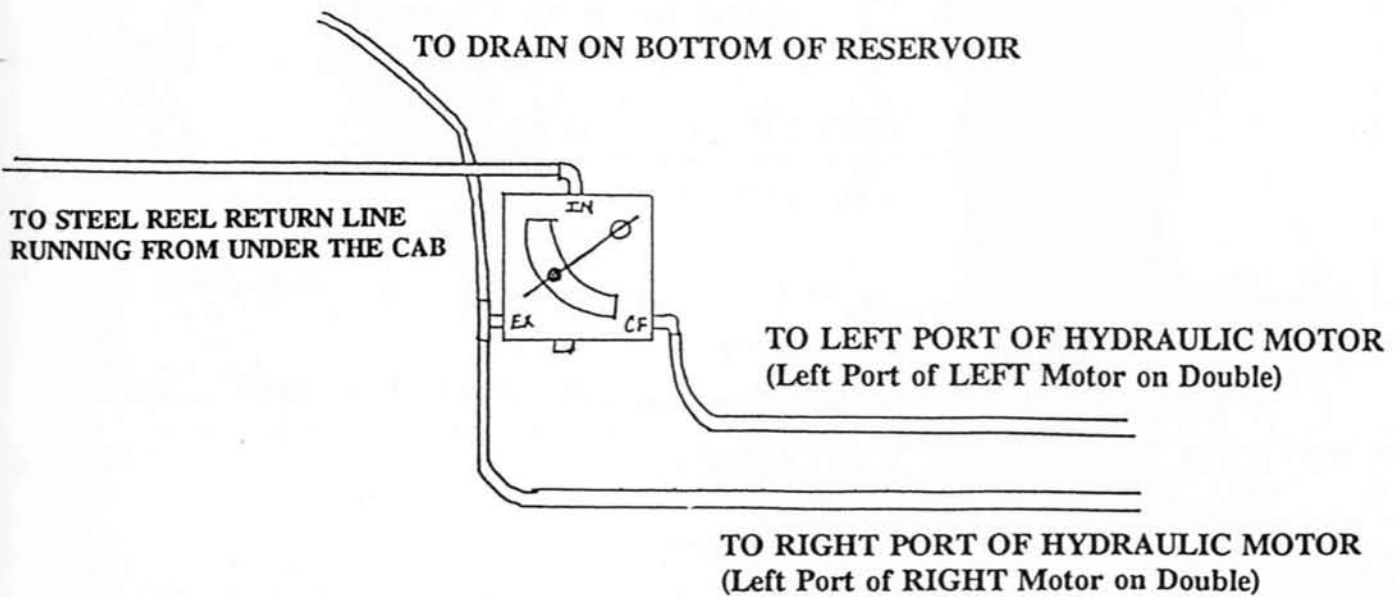


3 HOLES MUST BE DRILLED IN EACH SIDE OF THE PAN TO MOUNT THE WINGS AS DIAGRAMMED.

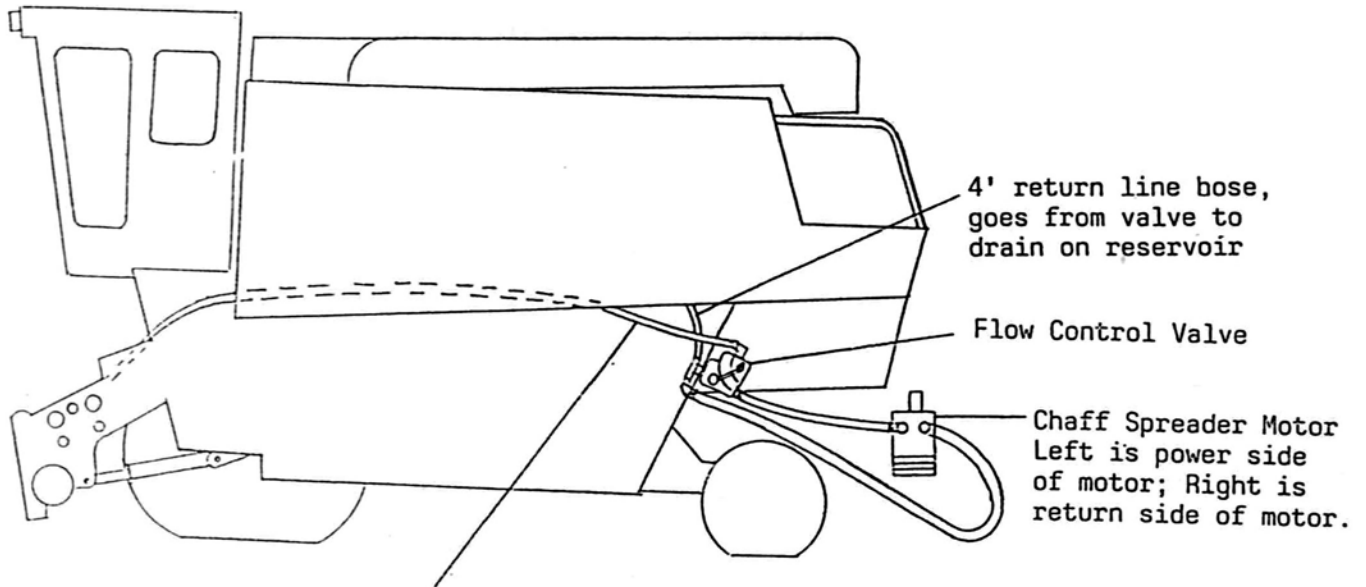
IH 14 SERIES COMBINES



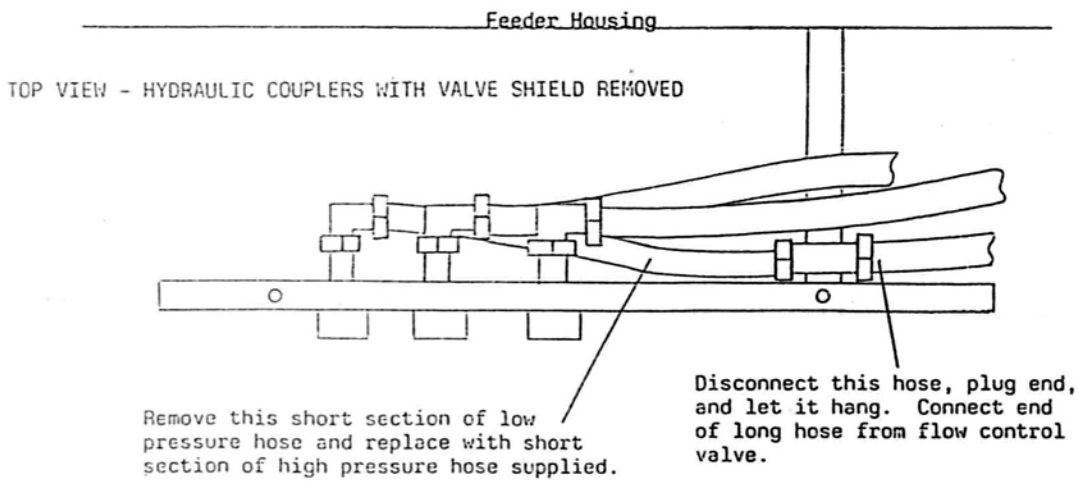
TO STEEL REEL RETURN LINE RUNNING FROM UNDER THE CAB



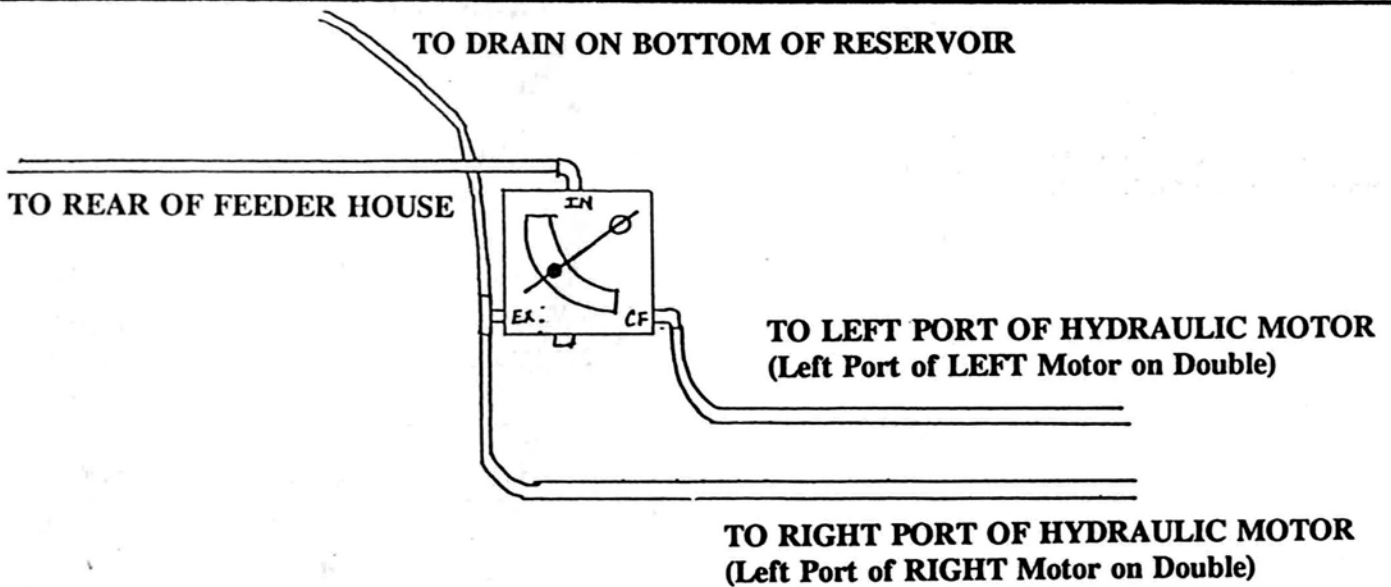
**CASE-IH 16 SERIES COMBINES
(1680's Before Serial #172-004-7918)**



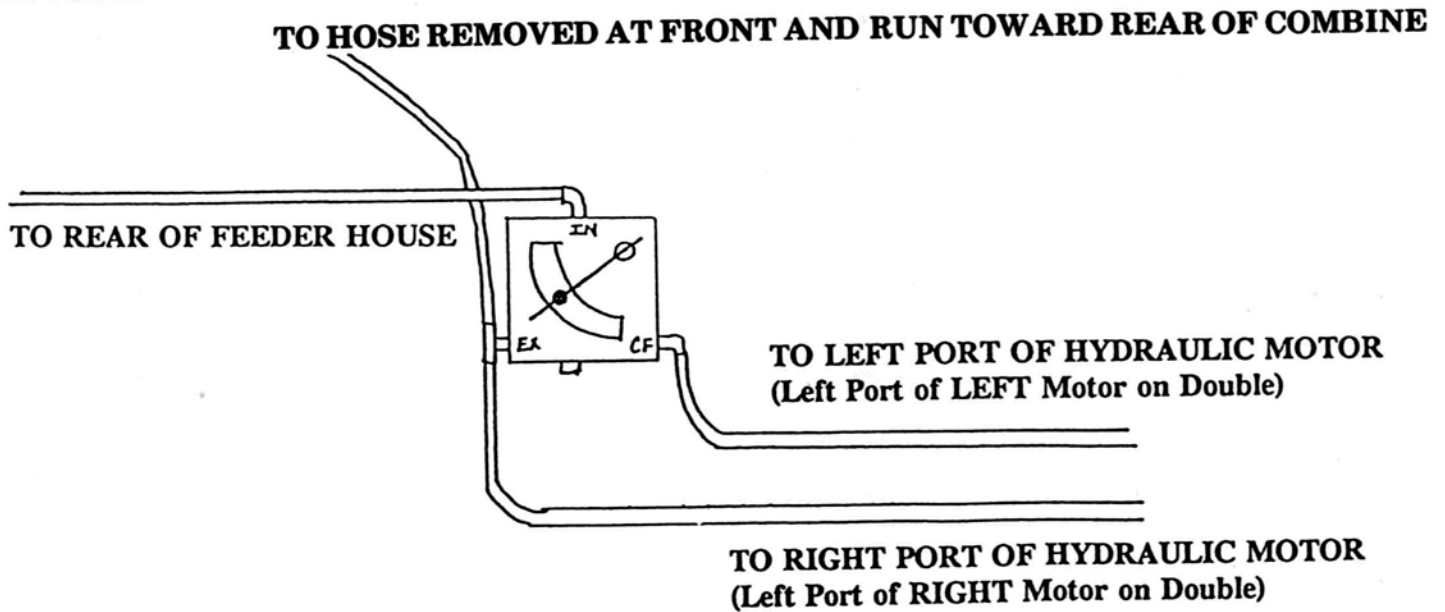
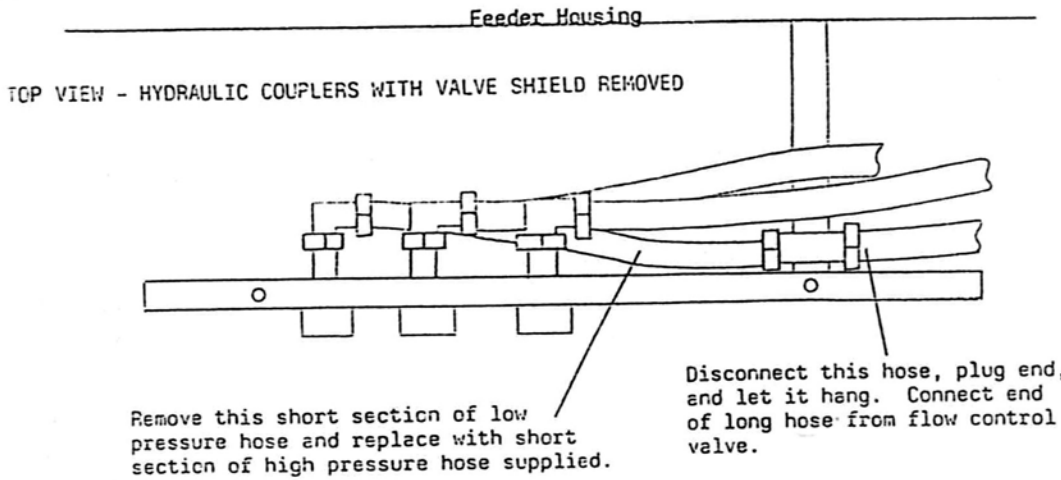
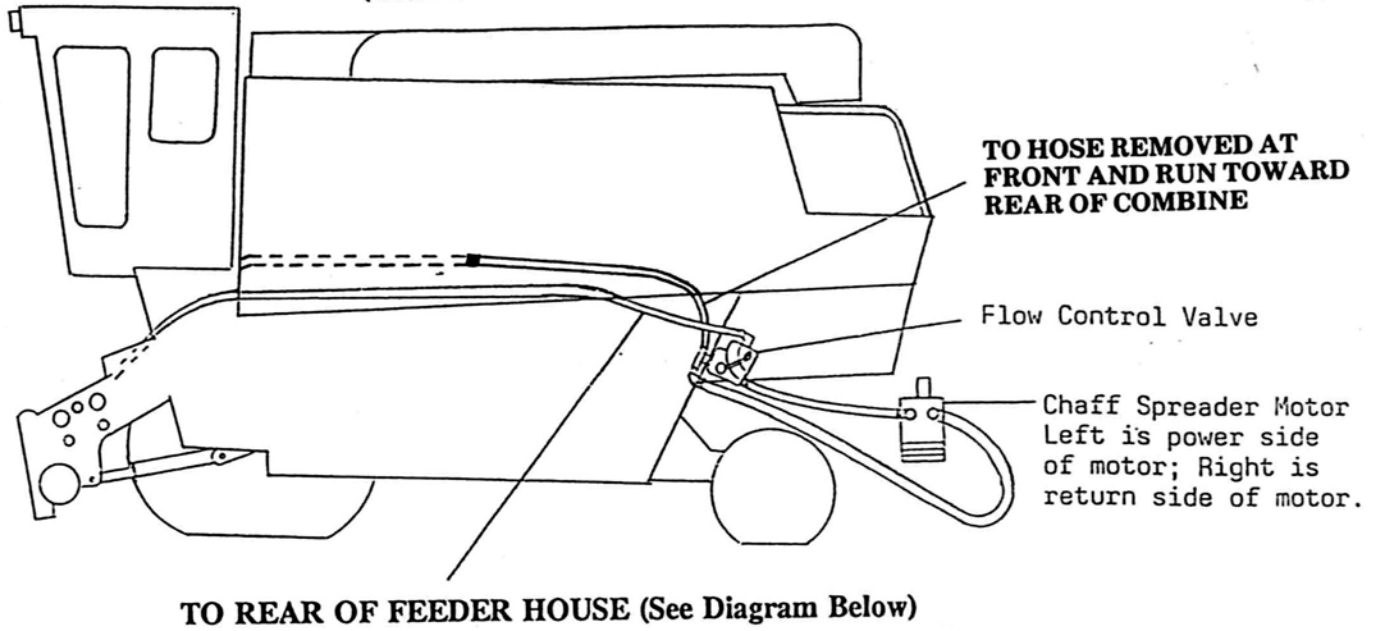
TO REAR OF FEEDER HOUSE (See Diagram Below)



TO DRAIN ON BOTTOM OF RESERVOIR

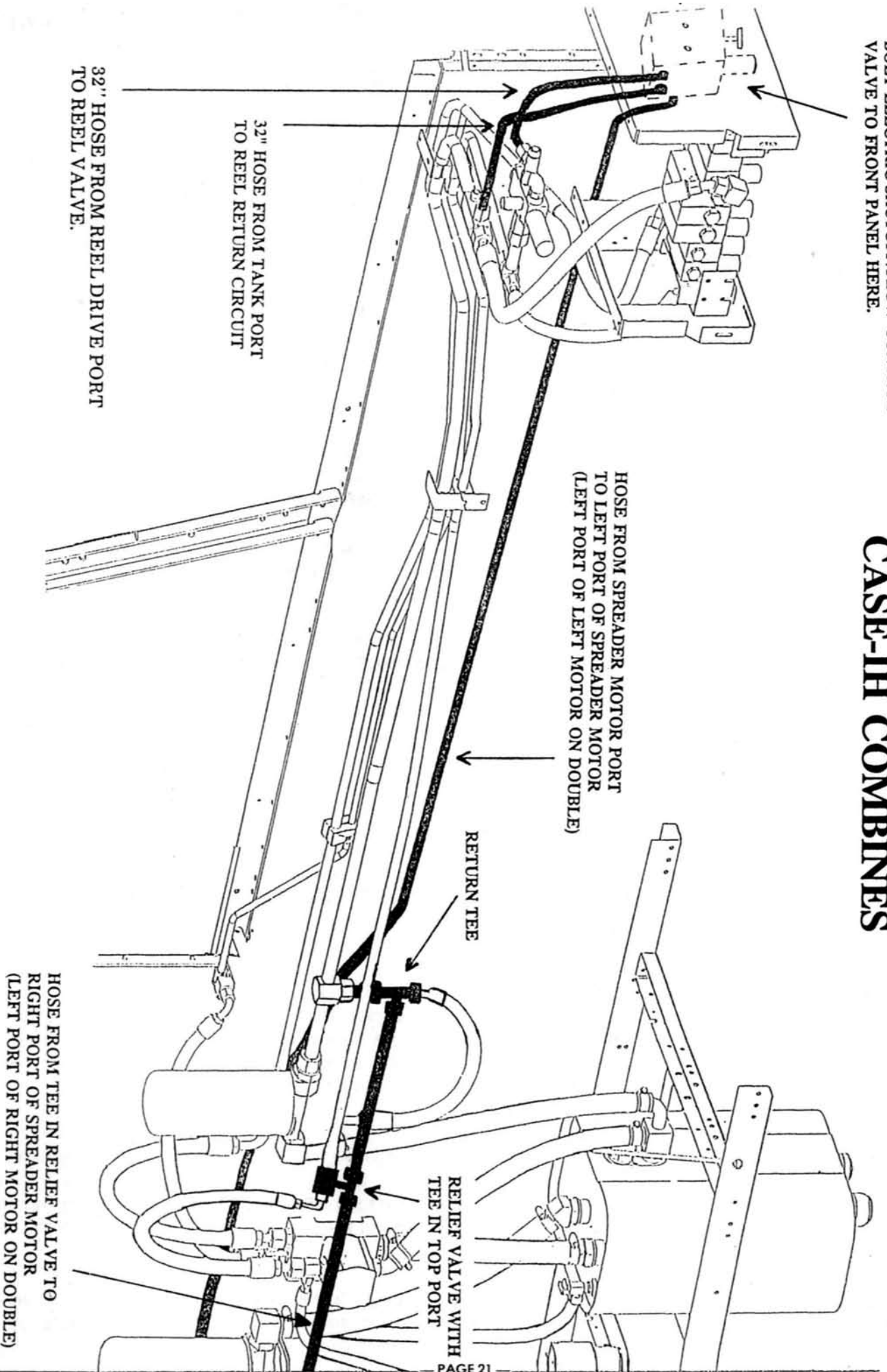


**CASE-IH 1680'S W/EXTERNAL FILTER
(After Serial #172-004-7918)**



BOLT ELECTRIC SHUTOFF/FLOW CONTROL VALVE TO FRONT PANEL HERE.

1992 & LATER CASE-IH COMBINES



CASE-INTERNATIONAL 1991 & BEFORE

SINGLE HYDRAULIC HOOKUP

HYDRAULIC DIAGRAMS ON PAGES 18, 19, 20.

Step A: Bolt valve bracket to front or rear side of angle iron behind sieve agitator arms on the left rear of combine using bolt hole spacing of 3-5/8".

Step B: Screw the third leg of the tee into the exhaust port of the flow control valve.

Step C: Bolt the flow control valve to the valve mounting plate using two 1/4" x 2 1/2" bolts. Position the valve with the tee on the lower left (toward the front of the combine) and the controlled flow (CF) port to the lower right (toward rear of combine).

Step D: Screw 7/8"-14 JIC female swivel end of 8-1/2' hose onto the lower end of the tee in the exhaust port of the flow control valve. Screw the 7/8" 90° o-ring male swivel on the other end of this hose into the right port of the hydraulic motor (left and right determined by standing behind combine looking forward).

Step E: Take the 8 1/2' hose with two 90° 7/8" o-ring male swivel fittings and screw one end into the CF Port of the flow control valve. Screw the fitting on the other end of this hose into the left port of the hydraulic motor.

Step F: Screw 7/8" 90° o-ring male swivel end of 21' hose with 7/8"-14 JIC female swivel on the other end into the IN port of the flow control valve. Run hose along left side of machine to feeder housing.

NOTE: ON THE 14 SERIES COMBINES THIS HOSE WILL BE 9' LONG AND WILL REACH A LITTLE OVER HALF THE WAY FORWARD ALONG THE LEFT SIDE OF THE COMBINE

"1990" 1680's AFTER SERIAL #172-004-7918 (W/EXTERNAL HYDRAULIC FILTER) - GO TO "STEP I". ALL OTHER COMBINES - GO TO "STEP G".

Step G: Screw 7/8"-14 JIC female swivel end of 4' hose onto top end of tee in exhaust port of valve. Clamp rubber reservoir drain hose so it won't leak when plug is removed. Remove reservoir drain plug and screw on 7/8"-14 JIC female swivel that is on the other end of 4' hose. REMOVE CLAMP from drain hose.

USE THE "STEP H" WHICH APPLIES TO YOU.

14 SERIES COMBINES:

Step H: Trace the steel return line (with the female quick coupler) from under the cab, back along the left side of the combine. Almost half way back, there is a connection which you will disconnect. Plug the return line with 7/8" male plug. Screw the 7/8"-14 JIC fitting on end of 9' hose, (which was run toward the front of the combine) to the steel line coming from under the cab. GO TO STEP K.

16 SERIES COMBINES:

Step H: Remove cover on left top of feeder housing. Remove hose from rear side of automatic ground-to-reel speed control box and plug with 7/8" male plug provided. Connect the end of the 21' hose from the IN port of the valve where you disconnected the hose you plugged. Replace short hose running from top front quick coupler to the front side of the automatic ground-to-reel speed control box with the high pressure hose provided. GO TO STEP K.

Step I: ("1990" 1680 Combines with External Hydraulic Filter.) Screw 7/8"-14 JIC female swivel end of 7' hose with 7/8"-14 JIC male fitting on the other end onto top end of tee in exhaust (EX) port of valve. Run hose along upper left side of machine towards front of machine.

CASE-INTERNATIONAL 1991 & BEFORE

Step J: Remove cover on left top of feeder housing. Remove short hose running to top front quick coupler and replace with short high pressure hose provided. Disconnect return line hose from rear side of automatic ground-to-reel speed control box (pinch it with vise grips to keep oil from leaking out of reservoir). Remove it from cable ties and thread it back and connect to the hose running to the tee in the flow control valve. Connect the 21' hose running to the In port of the valve where you disconnected the return hose.

Step K: Secure hoses safely out of the way using the black plastic cable ties provided.

Note 1: (Early 14 Series Combines): Long non-shaking pan needs to be cut off so that it extends no more than 2" over the front shield.

Note 2: (1420 & 1620 Combines): An extension (supplied with kit) will have to be bolted to the rear of the pan.

SET FLOW CONTROL VALVE ON "3" AND ADJUST UP AS NECESSARY TO THROW CHAFF ONLY AS WIDE AS THE HEAD. SETTING FOR CORN WILL BE LOWER THAN THAT REQUIRED FOR BEANS.

CAUTION: BE CERTAIN THE HYDRAULIC CONNECTIONS ARE CORRECT OR DAMAGE MAY BE DONE TO THE HYDRAULIC MOTOR SEALS. CHECK TO SEE THAT THE HOSE FROM THE CF PORT OF THE FLOW CONTROL VALVE RUNS TO THE LEFT PORT OF THE HYDRAULIC MOTOR. THEN WITH THE ENGINE AT AN IDLE AND THE HEAD ENGAGED, CHECK TO SEE THAT THE DISC IS TURNING CLOCKWISE (LOOKING DOWN FROM ABOVE). IF THE DISC IS TURNING CLOCKWISE THEN ALL HYDRAULIC CONNECTIONS ARE CORRECT. IF THE DISC IS TURNING COUNTER CLOCKWISE THEN THE INPUT HOSE AND THE RETURN HOSE NEED TO BE REVERSED AT THE FLOW CONTROL VALVE. DO NOT REVERSE THE HOSES GOING TO THE MOTOR TO CORRECT A DIRECTIONAL PROBLEM.

CIH 1992 & 1993 SINGLE

1640 After Serial # 97190
1660 After Serial # 103800
1680 After Serial # 117060
1644, 1666, 1688

SINGLE HYDRAULIC HOOKUP

1992 CIH HYDRAULIC DIAGRAM ON PAGE 21.

Step A: Bolt solenoid/flow control valve inside valve box, beside cab, next to platform (valve bolts to front panel of box). Refer to drawing.

Step B: Disconnect both ends of tube which runs from reel valve to return line and remove. Refer to drawing.

Step C: Screw 90° male boss o-ring end of 32" hose into the IN port of the valve and attach the 3/4" flat faced o-ring end to reel valve where metal tube was disconnected.

Step D: Screw 90° male boss o-ring end of other 32" hose into exhaust or bypass port of valve and attach the 3/4" flat faced o-ring end to the return line where the metal tube was removed.

Step E: Screw 90° male boss o-ring end of 26' hose into controlled flow port of valve. Feed the hose back along the left side of combine so it will not interfere with or rub on other components. This hose goes to rear of machine and the 90° 7/8" male o-ring boss end connects to the left port of the hydraulic motor on the chaff spreader. (Left and right determined by standing behind combine looking forward.)

Step F: Screw 90° 7/8" male o-ring boss fitting of 15 1/2" hose into the right port of the hydraulic motor and feed the hose forward along the left side of combine to the pressure line connection just above the front external filter.

Step G: At the pressure line fitting on top of the front external filter mounting plate, install in line the 3000 PSI pressure relief using 2-3/4" flat face adapters. To the relief port on top, attach the tee provided. To one leg of the tee, attach the hose from the hydraulic motor return (15 1/2' hose), and to the other leg attach the remaining jumper hose (2' hose). See attached drawing.

Step H: Slightly forward of the front external filter, disconnect the fitting on the vertical return line, and install in line the return tee (with 3/4" flat faced legs). To the third leg, attach the loose end of the short 2' jumper hose.

Step I: Secure hoses safely out of the way using the black plastic cable ties provided.

Step J: Connect eyelet connector on black wire of valve to ground. Feed 10' red wire lead of valve through the small hole at bottom rear left corner of cab.

Step K: Remove panel on right side of cab. Pull wire through under cab, attach spade terminal and connect to female lead attached to threshing unit switch. Replace the panel on right side of cab.

TURN VALVE ADJUSTMENT COUNTER CLOCKWISE TO INCREASE SPEED AS NECESSARY TO THROW CHAFF ONLY AS WIDE AS THE HEAD. SETTING FOR CORN WILL BE LOWER THAN THAT REQUIRED FOR BEANS.

INTERNATIONAL 815-915

HYDRAULIC HOOKUP

Step A: Bolt valve bracket to front or rear side of angle iron behind sieve agitator arms on the left rear of combine using bolt hole spacing of 3-5/8".

Step B: Screw the third leg of the tee into the exhaust (EX) port of the flow control valve.

Step C: Bolt the flow control valve to the valve mounting plate using two 1/4" x 2 1/2" bolts. Position the valve with the tee on the lower left (toward the front of the combine) and the controlled flow (CF) port to the lower right (toward rear of combine).

Step D: Screw 7/8"-14 JIC female swivel end of 8-1/2' hose into the lower end of the tee in the exhaust port of the flow control valve. Screw the 7/8" 90° o-ring male swivel on the other end of this hose into the right port of the hydraulic motor (left and right determined by standing behind combine looking forward).

Step E: Take the 8 1/2' hose with two 90° 7/8" o-ring male swivel fittings and screw one end into the CF Port of the flow control valve. Screw the fitting on the other end of this hose into the left port of the hydraulic motor.

Step F: Screw 7/8" 90° o-ring male swivel end of 14' hose with 7/8"-14 JIC female swivel on the other end into the IN port of valve. Run hose along left side of machine to feeder housing.

Step G: Screw 7/8"-14 JIC female swivel end of 14' hose, with 7/8"-14 JIC male swivel on other end, onto the tee in the exhaust port of the flow control valve. Run hose along left side of machine to the feeder housing.

Step H: At front of combine, remove the female quick coupler from your reel return hose. Screw this female quick coupler onto our hose running to the IN port of our valve.

Step I: Connect the other hose (running to the tee in our valve) to the hose you took the quick coupler off of.

CAUTION: BE CERTAIN THAT THIS HOSE IS CONNECTING TO THE RETURN LINE FROM THE HYDRAULIC REEL MOTOR. SOMEONE MAY HAVE PREVIOUSLY SWITCHED THE MALE AND FEMALE FITTINGS ON THE TWO HOSES AND DAMAGE COULD OCCUR. CHECK TO SEE IF THE HOSE GOING FROM THE CF PORT OF THE FLOW CONTROL VALVE IS CONNECTED TO THE LEFT PORT OF THE HYDRAULIC MOTOR, AND THE DISC TURNS CLOCKWISE (LOOKING DOWN FROM ABOVE IT), THEN YOUR HYDRAULIC CONNECTIONS AT THE FRONT ARE CORRECT. IF THE DISC TURNS COUNTER CLOCKWISE, THEN THE CONNECTIONS AT THE FRONT NEED TO BE REVERSED.

Step J: Secure hoses safely out of the way using the black plastic tie downs provided.

NOTE: Long non-shaking pan needs to be cut off so that it extends no more than 2" over the front shield.

SET FLOW CONTROL VALVE ON "3" AND ADJUST UP AS NECESSARY TO THROW CHAFF ONLY AS WIDE AS THE HEAD. SETTING FOR CORN WILL BE LOWER THAN THAT REQUIRED FOR BEANS.

INTERNATIONAL PULL TYPE (1482-1682)

Step A: Bolt valve bracket to front or rear side of angle iron behind sieve agitator arms on the left rear of combine using bolt hole spacing of 3-5/8".

Step B: Screw the third leg of the tee into the exhaust (EX) port of the flow control valve.

Step C: Bolt the flow control valve to the valve mounting plate using two 1/4" x 2 1/2" bolts. Position the valve with the tee on the lower left (toward the front of the combine) and the controlled flow (CF) port to the lower right (toward rear of combine).

Step D: Screw 7/8"-14 JIC female swivel end of 8-1/2' hose onto the lower end of the tee in the exhaust port of the flow control valve. Screw the 7/8" 90° o-ring male swivel on the other end of this hose into the right port of the hydraulic motor (left and right determined by standing behind combine looking forward).

Step E: Lay the 8 1/2' hose with two 90° 7/8" o-ring male swivel fittings beside the left rear of the combine. Screw the front fitting into the CF port of the flow control valve. Screw the rear fitting of the hose into the left port of the hydraulic motor.

Step F: Screw 7/8" 90° o-ring boss swivel end of 37' hose into the IN port of the flow control valve.

CAUTION: Be certain that this hose is connecting to the supply line from the tractor, or damage could occur. Check to see if the hose going from the CF port of the flow control valve is connected to the left port of the hydraulic motor, and the disc turns clockwise (looking down from above it), then your hydraulic connections at the front are connect. If the disc turns counter clockwise, then the connections at the front need to be reversed.

Step G: Screw 7/8" JIC female swivel end of the other 37' hose into the top side of the tee in the flow control valve.

Step H: Run these hoses along the left side of the machine up to the rear of the tractor. Put quick couplers on the ends of these hoses and hook them to the tractor.

Step I: Secure hoses safely out of the way using the black plastic tie-downs provided.

SET FLOW CONTROL VALVE ON "3" AND ADJUST UP AS NECESSARY TO THROW CHAFF ONLY AS WIDE AS THE HEAD.

WITHOUT FLOW CONTROL VALVE: Connect the 7/8" 90° o-ring ends of the two 45' hoses into the two ports of the motor. Run the hoses forward along the left side to the tractor. Put quick couplers on the hose ends and connect to the tractor. If the spreader turns counter clockwise, then reverse the hoses at the tractor.

CASE-IH 1991 & BEFORE - DOUBLE SPINNER

HYDRAULICS DIAGRAMS ON PAGES 18, 19, 20.

Step A: Run the 2' hose, with two 7/8" 90° o-ring male swivel ends, from the right port of the right motor to the right port of the left motor.

Step B: Bolt valve bracket to front or rear side of angle iron behind sieve agitator arms on the left rear of combine using bolt hole spacing of 3-5/8".

Step C: Screw the third leg of the tee into the exhaust (EX) port of the flow control valve.

Step D: Bolt the flow control valve to the valve mounting plate using two 1/4" x 2 1/2" bolts. Position the valve with the tee on the lower left (toward the front of the combine) and the controlled flow (CF) port to the lower right (toward rear of combine).

Step E: Screw 7/8"-14 JIC female swivel end of 8-1/2' hose onto the lower end of the tee in the exhaust port of the flow control valve. Screw the 7/8" 90° o-ring male swivel on the other end of this hose into the left port of the right hydraulic motor (left and right determined by standing behind combine looking forward).

Step F: Lay the 8 1/2' hose with two 90° 7/8" o-ring male swivel fittings beside the left rear of the combine. Screw the front fitting into the CF port of the flow control valve. Screw the rear fitting of the hose into the left port of the left hydraulic motor.

Step G: Screw 7/8" 90° o-ring male swivel end of 21' hose with 7/8"-14 JIC female swivel on the other end into the IN port of the flow control valve. Run hose along left side of machine to feeder housing.

NOTE: ON THE 14 SERIES COMBINES THIS HOSE WILL BE 9' LONG AND WILL REACH A LITTLE OVER HALF THE WAY FORWARD ALONG THE LEFT SIDE OF THE COMBINE

"1990" 1680's AFTER SERIAL #172-004-7918 (W/EXTERNAL HYDRAULIC FILTER) - GO TO "STEP J". ALL OTHER COMBINES - GO TO "STEP H".

Step H: Screw 7/8"-14 JIC female swivel of 4' hose onto top end of tee in exhaust port of valve. Clamp rubber reservoir drain hose so it won't leak when plug is removed. Remove reservoir drain plug and screw on 7/8"-14 JIC female swivel that is on the other end of 4' hose. REMOVE CLAMP from drain hose.

USE THE "STEP I" WHICH APPLIES TO YOU.

14 SERIES COMBINES:

Step I: Trace the steel return line (with the female quick coupler) from under the cab, back along the left side of the combine. Almost half way back there is a connection which you will disconnect. Plug the return line with 7/8" male plug. Screw the 7/8"-14 JIC fitting on end of 9' hose, (which was run toward the front of the combine) to the steel line coming from under the cab. **GO TO STEP K.**

16 SERIES COMBINES:

Step I: Remove cover on left top of feeder housing. Remove hose from rear side of automatic ground-to-reel speed control box and plug with 7/8" male plug provided. Connect the end of the 21' hose (from the IN port of the valve) where you disconnected the hose you plugged. Replace the 10 1/2" hose (running from top front quick coupler to the front side of the automatic ground-to-reel speed control box) with the high pressure hose provided. **GO TO STEP K.**

Step J: ("1990" 1680 Combines with External Hydraulic Filter.) Screw 7/8"-14 JIC female swivel end of 7' hose with 7/8"-14 JIC male fitting on the other end into top end of tee in exhaust (EX) port of valve. Run hose along upper left side of machine towards front of machine.

CIH 1991 & BEFORE DOUBLE

Step K: Secure hoses safely out of the way using the black plastic cable ties provided.

CAUTION: BE CERTAIN THE HYDRAULIC CONNECTIONS ARE CORRECT OR DAMAGE MAY BE DONE TO THE HYDRAULIC MOTOR SEALS. CHECK TO SEE THAT THE HOSE FROM THE CF PORT OF THE FLOW CONTROL VALVE RUNS TO THE LEFT PORT OF THE LEFT HYDRAULIC MOTOR. THEN WITH THE ENGINE AT AN IDLE AND THE HEAD ENGAGED, CHECK TO SEE THAT THE LEFT DISC IS TURNING CLOCKWISE AND THE RIGHT DISC IS TURNING COUNTER CLOCKWISE (LOOKING DOWN FROM ABOVE). IF THE LEFT DISC IS TURNING CLOCKWISE THEN ALL HYDRAULIC CONNECTIONS ARE CORRECT. IF THE LEFT DISC IS TURNING COUNTER CLOCKWISE THEN THE INPUT HOSE AND THE RETURN HOSE NEED TO BE REVERSED AT THE FLOW CONTROL VALVE. DO NOT REVERSE THE HOSES GOING TO THE MOTORS TO CORRECT A DIRECTIONAL PROBLEM

Note 1 (Early 14 Series Combines): Long non-shaking pan needs to be cut off so that it extends no more than 2" over the front shield.

Note 2 (1420 & 1620 Combines): An extension (supplied with kit) will have to be bolted to the rear of the pan.

SET FLOW CONTROL VALVE ON "3" AND ADJUST UP AS NECESSARY TO THROW CHAFF ONLY AS WIDE AS THE HEAD. SETTING FOR CORN WILL BE LOWER THAN THAT REQUIRED FOR BEANS.

CASE-IH 1992 & 1993 DOUBLE SPINNER

1640 After Serial # 97190
 1660 After Serial # 103800
 1680 After Serial # 117060
 1644,1666,1688

HYDRAULICS DIAGRAM ON PAGE 21.

Step A: Run the 2' hose, with two 7/8" 90° o-ring male swivel ends, from the right port of the right motor to the right port of the left motor.

Step B: Bolt solenoid/flow control valve inside valve box, beside cab, next to platform. Valve bolts to front panel of box. Refer to drawing.

Step C: Disconnect both ends of tube which runs from reel valve to return line and remove. Refer to drawing.

Step D: Screw 90° male boss o-ring end of 32" hose into the IN port of the valve and attach the 3/4" flat faced o-ring end to reel valve where metal tube was disconnected.

Step E: Screw 90° male boss o-ring end of other 32" hose into exhaust or bypass port of valve and attach the 3/4" flat faced o-ring end to the return line where the metal tube was removed.

Step F: Screw 90° male boss o-ring end of 26' hose into controlled flow port of valve. Feed the hose back along the left side of combine so it will not interfere with or rub on other components. This hose goes to rear of machine and the 90° 7/8" male o-ring boss end connects to the left port of the left hydraulic motor on the chaff spreader. (Left and right determined by standing behind combine looking forward.)

Step G: Screw 90° 7/8" male o-ring boss fitting of 15 1/2" hose into the left port of the right hydraulic motor and feed the hose forward along the left side of combine to the pressure line connection just above the front external filter.

Step H: At the pressure line fitting on top of the front external filter mounting plate, install in line the 3000 PSI pressure relief using 2-3/4" flat face adapters. To the relief port on top, attach the tee provided. To one leg of the tee, attach the hose from the hydraulic motor return (15 1/2' hose), and to the other leg attach the remaining jumper hose (2' hose). See attached drawing.

Step I: Slightly forward of the front external filter, disconnect the fitting on the vertical return line, and install in line the return tee (with 3/4" flat faced legs). To the third leg, attach the loose end of the short 2' jumper hose.

Step J: Secure hoses safely out of the way using the black plastic cable ties provided.

Step K: Connect eyelet connector on black wire of valve to ground. Feed 10' red wire lead of valve through the small hole at bottom rear left corner of cab.

Step L: Remove panel on right side of cab. Pull wire through under cab, attach spade terminal and connect to female lead attached to threshing unit switch. Replace the panel on right side of cab.

TURN VALVE ADJUSTMENT COUNTER CLOCKWISE AS NECESSARY TO THROW CHAFF ONLY AS WIDE AS THE HEAD. SETTING FOR CORN WILL BE LOWER THAN THAT REQUIRED FOR BEANS.

TROUBLE SHOOTING GUIDE

| PROBLEM | PROBABLE CAUSES | REMEDY |
|---|---|--|
| Chaff spreader throws more chaff to the right side of the combine than to the left. | Rear shield slide needs adjustment. | Adjust rear shield forward to reduce the amount of chaff thrown to the right and increase the amount thrown to the left. |
| | Disc adjusted to far back. | Move disc closer to front shield by loosening set screws and sliding motor mount tubes further into axle mount, re-tighten set screws. |
| Chaff spreader throws more chaff to the left side of the combine than to the right. | Rear shield slide needs adjustment. | Adjust rear shield slide back to increase the amount thrown to the right and decrease the amount thrown to the left. |
| | Disc adjusted to far forward. | Move disc away from front shield by loosening set screws and sliding motor mount tubes out of axle mount, re-tighten set screws. |
| Chaff is being thrown onto standing crop. | Flow control valve needs to be adjusted. | Adjust flow control valve to a lower number setting. |
| Chaff does not spread to edge of standing crop. | Flow control valve needs to be adjusted. NOTE: Under some field conditions chaff may be too light to be thrown this far. (3 to 4 is a normal setting for flow control valve) | Adjust flow control valve to a higher number setting. |
| Windrow directly behind combine. (IH w/chopper or in some dry conditions without chopper) | Straw off rotor is wind-rowing behind combine. | Add divider offered by CASE IH. Part # 1319485C1 Steel V Part # 1321019C1 Belting |
| Straw windrowing to the right side of combine. | CIH combines w/chopper: chopper is the culprit, not the spreader | Move CIH Internal Divider 2" to the right. |
| Chaff spreader disc spins backwards. (Counter-clockwise) | Check hydraulic hose attachments between flow control valve and hydraulic motor. | Re-route hydraulic hoses if incorrect connections were made. (Hose from control flow port has to go to left side of motor). |
| | Check hydraulic hose attachments between hydraulic reel and flow control valve. | Re-route hydraulic hoses if incorrect connections were made. |
| Chaff spreader spin disc wobbles. | Disc off center of hub. | Loosen hub bolts and hydraulic motor bolt, re-center disc and tighten bolts. |
| | Disc is bent. | Straighten or replace. |

| PROBLEM | PROBABLE CAUSES | REMEDY |
|--|--|--|
| Chaff spreader spin disc wobbles. (Continued) | Half moon key between hydraulic motor shaft & hub missing or sheared, hub loose, hub set screw loose. | Inspect hydraulic motor shaft and hub, replace if necessary. Re-assemble with new half moon key, bolt thru disc in end of hydraulic motor shaft, and tighten set screw on hub. |
| Hydraulic reel runs ok, but chaff disc may turn slow and plugs easily. | Drive belt on reel hydraulic pump is slipping. | Tighten belt. |
| | Reel hydraulic pump is weak and not putting out rated gallons per minute. | Rebuild or replace pump. |
| | Half moon key either sheared or missing between hydraulic motor shaft and disc hub. | Replace key. (Tighten set screw of hub) |
| | Oil leak or hole in hydraulic hose between header and chaff spreader. | Repair or replace. |
| | Flow control valve bypass is weak or stuck open (will generally make a squeal or chatter noise). | Replace flow control valve. |
| Both hydraulic reel and chaff spreader slow down and may even stop. | Drive belt on reel hydraulic pump may be slipping or broken. | Adjust or replace belt. |
| | Check hose connections between header and flow control valve for correct attachments. | Re-route if incorrect. |
| | Chaff spreader disc may be plugged or have an obstruction preventing it from turning. | Unplug or remove obstruction. |
| | Hydraulic motor may be seized. | Replace hydraulic motor. |
| | Belt, pulley, or pump failure. | Refer to CIH Service Bulletin Document No. NHESB 10890. |
| | Reel hydraulic pump may be weak and not putting out rated gallons per minute. | Repair or replace reel hydraulic pump. |
| Chaff spreader plugs. | Header is shut off too quickly when coming to the end of the field (this also turns off chaff spreader) while combine continues to operate. This will pile trash on spreader and prevent it from turning when header is started again. | Run header longer when coming to the end of the field, or shut head off only when machine is shut off. |

| PROBLEM | PROBABLE CAUSES | REMEDY |
|---|---|---|
| Chaff spreader plugs. (Continued) | Adjustable slide of the spreader rear shield is not close enough (within 1/4" at tip) to disc and material is jamming between disc and rear shield. | Bend rear shield if necessary to get leading edge of adjustable slide within 1/8" of disc. |
| | JD Combines without straw choppers: Straw spreaders may be throwing straw at front shield causing a jam between disc and front shield. | Adjust disc closer to or further away from front shield. Under worst field conditions it may be necessary to rig a shield to prevent straw spreader from throwing straw at the front shield. Add chopper. Install optional Vittetoe Chaff Spreader Monitor. |
| Hydraulic motor leaks oil. | Check fittings for tightness and cracked fittings. Check for leak around hydraulic motor shaft. Check for cracked motor mounting plate. | Tighten or replace fittings. Install seal kit or replace hydraulic motor. Replace motor mounting plate. |
| Spreader doesn't run while machine is operating, but parked. | Reel speed adjustment in cab is turned off. Ground to reel speed control. | Turn on reel speed. Adjust control or set on manual. |
| Header doesn't lift, power steering doesn't work. | Not a chaff spreader related problem, this is a separate hydraulic system. | Refer to combine operators manual trouble shooting section. |
| Chaff spreader needs to be removed. | For baling or any other reason. | Remove hoses with swivels at motor, and connect together with nipple (mark left and right hoses for reassembly). NOTE: Motor mount tube set screws can be loosened and unit can be slid out leaving axle mt mounted to axle. |
| Chaff spreader speed varies and, or plugs.(Especially CIH-1992: 1640, 1660, 1680) | Hydraulic hook-up not done per written installation instructions. | See Dealer to get chaff spreader hydraulics properly hooked up. |

NOTE: CHAFF SPREADER WARRANTY IS VOID IF HYDRAULIC HOOK-UPS ARE NOT MADE AS RECOMMENDED IN WRITTEN VITTETOE INSTALLATION INSTRUCTIONS.

Helpful Hint: 1992 CIH Recommended hydraulic hook-up, should have an electrically operated solenoid valve to turn spreader on and off with combine threshing unit, or

Alternate Hook-up: Use oil from hydraulic reel motor to drive chaff spreader hydraulic motor. If header is shut off too quickly when coming to the end of the field (this also turns off chaff spreader) while combine continues to operate. This will pile trash on spreader and prevent it from turning when header is started again.

TROUBLE SHOOTING GUIDE FOR DOUBLE SPREADERS

| PROBLEM | PROBABLE CAUSES | REMEDY |
|--|--|---|
| Material is not thrown evenly to both sides. | Check hose connections-left disc should spin clockwise, right disc should spin counter-clockwise. | Correct hose connections if necessary. |
| | Front shield wings are incorrectly adjusted or not set alike. | Adjust front shield wings. |
| Left disc turns, right disc doesn't. | Hydraulic leak between the two motors. | Check connections and hose, replace if necessary. |
| | Hub or right disc has sheared or missing shear key and set screw is not tightened. | Replace shear key and tighten set screw. |
| Right disc turns, left disc doesn't. | Hub on left disc has sheared or missing shear key and set screw is loose. | Replace shear key and tighten set screw. |
| IH 1660 & 1680 with straw choppers-chaff is spread evenly but straw is laid in windrow behind combine. | If your combine was manufactured between Nov. 1989 & Nov. 1990, it is missing an internal straw divider. | Add Divider IH part # 1319485C1 Steel V 1321019C1 Belting |
| Material hits tires | Front shield wings are adjusted too wide open. | Close wings so chaff can't hit the tire. |
| Buildup on rear shield plugging. | Beater/chopper tray is set for corn, not up for beans. | Set tray up so it throws straw to the straw spreader. |

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Mac-Don Headers

We do not recommend using a Vittetoe Chaff Spreader in conjunction with the Mac-Don Headers. There have been some problems in the past with blowing seals on hydraulic motors on the Mac-Don Headers. We do not warranty the motors on the Mac-Don Headers if you put on a Vittetoe Chaff Spreader using our usual hydraulic hookups. There are several alternative hydraulic connections that are successfully being used by some operators. We will be testing these to come up with a satisfactory way to enable you to use a Vittetoe Chaff Spreader in conjunction with a Mac-Don Header.

OPERATOR SAFETY PRECAUTIONS

READ BEFORE OPERATING COMBINE EQUIPPED WITH VITTETOE CHAFF SPREADER

1. Never approach the chaff spreader with the combine engaged or chaff spreader running. Anything that can conceivably come off the chaffer of the combine (grain, cobs, broken metal piece of combine) will be propelled with great speed and force when it drops on the chaff spreader. The heavier the object, the farther it will fly, and the greater the danger.
2. Never attempt to make any adjustments or repairs to the chaff spreader unless the combine motor is shut off.
3. Inspect chaff spreader daily, before operation, for loose or broken bolts, bent or broken shields, shields which need adjustment, and any hydraulic leaks. NOTE: The four blades on the disc were meant to be installed with self-locking nuts. If any of the blade bolts should work loose, all the blade nuts should be checked to insure that they are of the self-locking variety.
4. After making any adjustments, the chaff spreader disc should be turned at least one full revolution by hand to insure that no interference exist.
5. On the SWING-AWAY models, make sure units are fully latched before operating.
6. Be sure of proper hydraulic hookup that will disengage the chaff spreader when the separator or header is shut off.

The VITTETOE single and double disc chaff spreaders are intended for the spreading of the fine chaff and other crop residue which exits the combine over the chaffer and sieve, and is designed to be mounted on the rear axle or other framework of the combine.

DANGER DECALS

A "DANGER WHIRLING BLADES" decal with "pinch point" pictorial should be on the rear shield of your chaff spreader. If it is damaged, unreadable, or missing, it should be replaced with a new one.

A smaller "DANGER WHIRLING BLADES" decal without a pictorial should be on each side of the axle mount. If it is damaged, unreadable, or missing, it should be replaced with a new one.

WARRANTY INFORMATION

The hydraulic motors and valves on the Vittetoe Combine Chaff Spreader carry a one-year warranty. This warranty is one year from the original date of purchase.

If a motor or valve is found to be defective, please contact the dealer you purchased the unit from. The dealer should have a new part on hand to get your unit back into operation.

We will replace a defective part at no charge, but the customer must remove the defective part and return it to the dealer within 30 days of the shipment date of the replacement. We DO NOT pay for repairing defective parts or labor for replacement.

Any connections other than those authorized by Vittetoe, Inc. will void all warranties.

All other parts on the Vittetoe Chaff Spreader are inspected prior to shipment and are warranted against poor workmanship and material defect. If you have a defective part, we will send out a new one. However, the defective part must be returned to Vittetoe, Inc. for inspection. If we determine the returned part to be defective, there will be no charge for the replacement part.

Vittetoe, Inc. makes no guarantees nor will Vittetoe, Inc. be held liable for any real or imagined loss or liability which occurs as a result of using its products.