

OPERATING
INSTRUCTIONS FOR
HOUSEHAM DEMOUNT



SAFETY FIRST

- 1/ Never attempt to operate sprayer until you have read this book .
- 2/ Never use spraying equipment unless you have been properly trained .
- 3/ Always wear correct protective clothing when working with chemicals.
- 4/ Always read product label and make sure you understand it .
- 5/ Remove overhauls and wash exposed skin after work and before meals .
- 6/ When opening and closing booms , first take note of any obstructions.
- 7/ Never place your self where hydraulic failure could cause injury .
- 8/ Before carrying out any maintenance or repair the spraying circuit must be rinsed .
- 9/ Do not weld on sprayers that have been used with ammonium nitrate
- 10/ Entering the tank for any reason is prohibited

OPERATING THE BOOM

OPENING FOR WORK

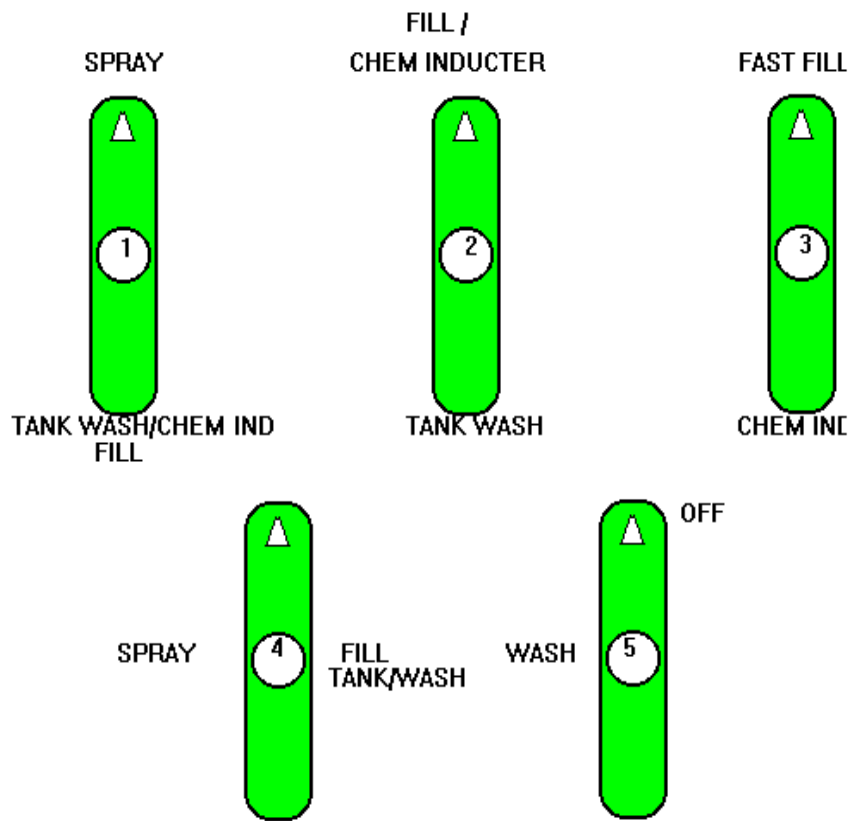
- 1/ Fully raise the boom .(Remember look for obstructions)
- 2/ Activate both boom inner and outer fold switches together until nearly fully open,then fully open the outer section followed by the inner .
To spray at 12 m, operate the inner boom switch only until this boom switch is fully open . The other sections remain folded behind inner section .
- 3/ Lower the boom to the required operating height above the crop, this will depend on the type of nozzles used etc .

CLOSING FOR TRANSPORT

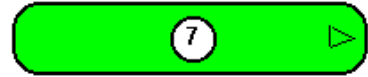
- 1/ Fully raise the boom.
- 2/ Activate both inner and intermediate boom fold sections together until boom is fully folded .
- 3/ Lower the boom onto the rests . Make sure that enough pressure has been released from the lift cylinders to allow the boom to sit properly on the rests .



- 1/ NEVER OPEN OR CLOSE BOOM WHEN MACHINE IS MOVING .
- 2/ NEVER TRY TO FOLD BOOMS WHEN LOWERED , OR DAMAGE TO THE TRACTOR WILL OCCUR .

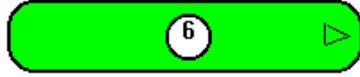


OFF



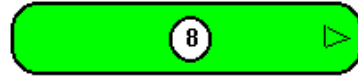
AGGITATE

OFF

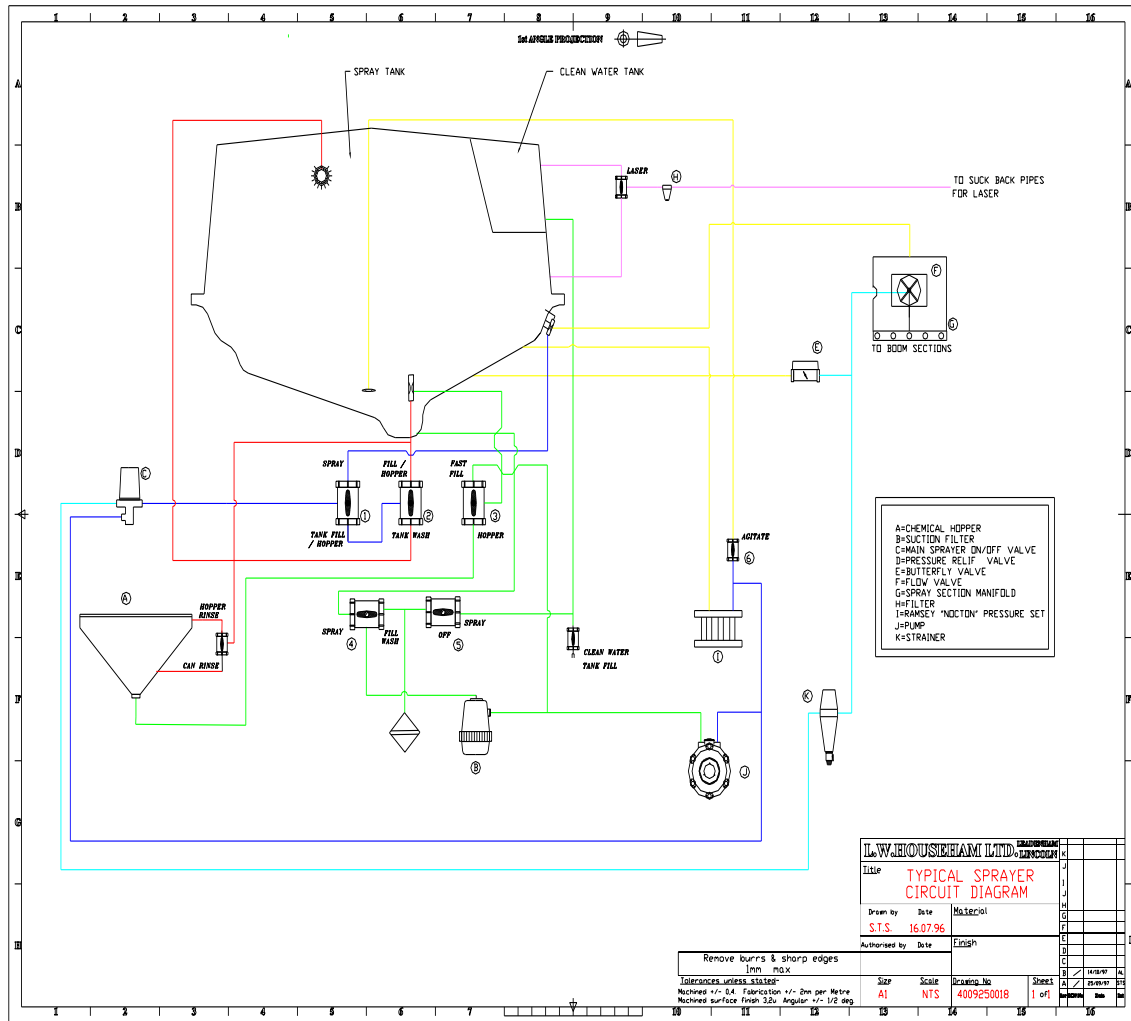


WASH/FILL

SPRAY



CLEAN
WATER



OPERATING THE SPRAYER

(REFER TO SPRAY PANEL DIAGRAM)

FILLING THE TANK WITH WATER

The sprayer uses the main pump (with the help of a venturi) to fill itself with water . F.E.P.A. Regulations prohibit the use of this method for filling from rivers or other water courses due to the risk of pollution . If you do have to fill from rivers a separate pump should be used. Extreme care should be used not to over fill .

- 1/ Couple the suction hose to the 2" cam lock coupling .
- 2/ Start the engine and run at approx. 2000 rpm . Engage pump via PTO switch on cab dash . (Or remote control if fitted *)
- 3/ Turn taps 1 , 2 & 4 to the " FILL " position . This will fill the tank .
When there is about 200 L In the tank turn tap 3 to fast fill . (This will improve filling time)
If the tank is filling before all the chemical is in either :
 - a/ Turn tap 3 toward Ind (this will slow down filling time)
 - b/ Turn tap 4 to spray (this will stop tank filling)
- 4/ To fill wash tank , connect hose pipe supply to the hand wash adapter . Turn tap 6 to " HANDWASH/FILL " . When wash tank is full turn tap to off and remove hose

FILLING WITH CHEMICAL

- 1/ Read the product label and make sure there are no special mixing requirements
- 2/ Do not add any chemical until the tank is approximately half full .
(Unless the label says otherwise)

TO OPERATE THE INDUCTION HOPPER

- 1/ Lower the hopper to working position .
- 2/ Run the engine at 2000 rpm with the pto engaged
- 3/ Turn taps 1&2 to " CHEM/IND " . Turn tap 4 to fill/tank wash if you are using the hopper while you are filling with water or turn it to spray if you are using water that is already in the tank .
- 3/ Turn hopper tap to either rim wash or rinse and allow the hopper to half fill .
- 4/ Turn tap 3 to CHEM/IND to empty hopper.
To maintain the desired level in the hopper turn tap 3 between " CHEM/IND & FAST FILL " . Add chemical to the circulating water and it will be mixed as it is drawn into the tank . Powders usually mix better with the rim wash off and the sides of the hopper dry .

Continued :

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- 5/ Remember to allow time for the chemical to agitate , this should be done with the engine at 2000 RPM .
- 6/ If required , turn tap 7 to " AGITATE " for better agitation . (Take care with products that are prone to frothing).



- 1/ IF THE HOPPER IS ALLOWED TO SUCK AIR THE TANK COULD FROTH .
- 2/ LEAVING THE AGITATOR JETS ON COULD CAUSE SOME CHEMICALS TO FROTH .

SPRAYING

- 1/ Set all the taps on panel to spray position . Spray is now supplied to the main ON / OFF valve and is dumped back to tank until main spray switch on joy stick (or foot switch) is pressed .
Switch on desired boom spray sections before main spray switch is pressed .
- 2/ For instructions of how to operate spray computer refer to manufacturers hand book . (Supplied) .

AUTOMATIC TANK WASH

To clean tank using automatic tank wash proceed as follows :-

- 1/ Drain any residue chemicals from sprayer .
- 2/ Make sure there is plenty off water in the wash tank
- 3/ Run engine at 1000 rpm and switch on PTO .
- 4/ Turn taps " 1 + 2 + 4 + 5 " to " TANK WASH ".(Ensure cap is on filler inlet)
- 5/ Run until tank wash tank is empty .
- 6/ Turn all taps back to " SPRAY " and spray out through spray lines .
- 7/ A cleaning fluid can be added through the hopper at any time during step 4 by turning 3 to " CHEM / IND " .
Remember to turn tap 3 back to " SPRAY " to carry on with tank wash .

FLUSHING SPRAY LINES ONLY WITH CLEAN WATER .

(FOR MACHINES FITTED WITH LASER MOVE TO NEXT CHAPTER)

- 1/ Turn taps 1 + 3 + 5 to tank wash .
- 2/ Turn Tap 6 " AGITATE "to off
- 3/ Run engine at tick over with PTO OFF
- 4/ Put computer on manual and press " + " for 30 seconds
- 5/ Switch on all boom sections and main ON / OFF .
- 6/ Switch on PTO , Machine should now spray clean water through spray lines .
- 7/ When wash tank is empty or you are satisfied that boom is clean switch off PTO .
- 8/ Turn taps to "SPRAY " and computer to auto ,the machine is now ready for spraying .

**ALL WASHINGS AND RINSINGS MUST BE DISPOSED OF SAFELY .
WHERE SULFONYLUREA HERBICIDES HAVE BEEN USED IT IS RECOMMENDED THAT DUPONT ALL CLEAR IS USED AS MANUFACTURERS INSTRUCTIONS .**

FOR MACHINES FITTED WITH LASER SYSTEM .

Sprayers fitted with Knight recirculation system .

The Laser system works Automatically as the main spray on/off button is pressed .When the sprayer is switched off liquid is sucked back from the tank through the lines and back to tank . The liquid is filtered through a small line filter at the rear of the spray tank .

This eliminates the need to purge the lines after washing out or changing chemical .

Ensure that main Spray button is off and the Pump is running for 5 minutes to ensure the liquid in the lines as fully recirculated .

To wash the spray lines with clean water from the wash tank turn tap 8 to CLEAN WATER . This will suck the water from the wash tank , through the spray lines and back to main spray tank .

Note . This will not wash the spray pump and the pipe work .

REMEMBER TO PERIODICALLY CLEAN LINE FILTER .

SERVICE AND MAINTENANCE

OPERATE THE MACHINE WITH CLEAN WATER BEFORE ADDING CHEMICAL TO FAMILIARISE YOURSELF WITH THE CONTROLS .

CHECKS WHILE NEW

- 1/ Check for blocked nozzles as small pieces of plastic can become dislodged and cause blockages . these bits will soon flush out after a few hours use .
- 2/ Check for water leaks and loose fittings .
- 3/ Check tightness of nuts and bolts .

ROUTINE MAINTENANCE .

- 1/ Clean pressure and suction filters regularly .

Although pressure filter is self flushing ,the element should be inspected frequently for damage and contamination .

Before removing suction filter turn tap no" 4 " to the off position.

- 2/ Check oil level in spray pump / hydraulic motor/gearbox unit .
- 3/ Adjust and lubricate booms as instructions on pages 10 to 14 .



BE SURE TO WEAR PROTECTIVE CLOTHING .NEVER CLEAN NOZZLES BY BLOWING THROUGH WITH MOUTH OR BY POKING WITH WIRE OR PINS .

YEARLY MAINTENANCE AND CHECKS

- 1/ Examine all water hoses for signs of perishing and chaffing and replace if necessary.
- 2/ Examine all hydraulic hoses for chaffing and hydraulic fittings for leaks , repair/replace if necessary.
- 3/ Examine all hydraulic cylinders for leaks and re-seal if needed .
- 4/ Examine all steel work for signs of cracking and stress and take appropriate action .
- 5/ Examine all pins and hinge bolts and replace if needed .
- 6/ Change oil in spray pump and hydraulic motor g/box unit .
- 7/ Check nozzles for signs of wear and replace if necessary .
It is recommended that nozzles are changed yearly .If any advice is needed contact L W Househam Ltd .



REMEMBER TO TAKE FROST PRECAUTIONS IN WINTER

If sprayer is stood for any length of time in winter it is advised to flush system through with anti freeze .(remember hopper) . Remove end stops from each spray line .

LUBRICATION

Refer to lubrication diagrams on pages 10 & 11 .

Grease WEEKLY the points marked thus on lubrication diagrams .

- 1/ Mast Inner Rollers .
- 2/ Mast Outer Rollers .
- 3/ Inner Boom Pivots - Upper .
- 4/ Inner Boom Pivots - Lower .
- 5/ Face of Yaw Isolator Plate . (smear lightly) .
- 6/ Rear Centre Pivot .
- 9/ Break Back Ball Joint .
- 10/ Intermediate Boom Link Pivot .
- 11/ Intermediate Boom Pivots .
- 12/ Intermediate Boom Link Pivot .
- 13/ Intermediate Boom Cylinder Pivot .
- 14/ Intermediate Boom Link Pivot .
- 15/ Intermediate Boom Cylinder Pivot .
- 16/ Boom Opening Cylinder Pivot (Rod End) .
- 17/ Boom Opening Cylinder Pivot (Cylinder End) .

Also Grease Chemical Induction Hopper Linkage .

BOOM RIDE AND ALIGNMENT ADJUSTMENTS

Refer to diagrams on pages 10 & 11 Marked thus .

- 1/ (a) Adjust tilt springs tension until the gap between the coils is approximately 2 mm . (Equally both sides of the level Cylinder) .
(b) Operate the level Cylinder fully in both directions , and then readjust until boom tilts the same on both sides .
- 2/ Adjust the rod length such that the aeon rubber buffers are nominally compressed by 2 mm onto the rubbing face . (This is a guide only and adjustments should be made to suit your own conditions)
- 3/ Inner Boom fold Cylinder L/H .
With Cylinder fully extended adjust cylinder length . (By screwing the ball joint in or out of the cylinder rod .) Until inner boom and rear frame are in line
Repeat for R/H . (It is preferred to have booms slightly leading forward)
- 4/ Where fitted ,after aligning inner booms with cylinders fully extended , adjust stop bolt until the bolt head is just in contact with pad .
- 5/ Adjust stop until intermediate and inner booms are in line and then lock .
- 6/ With boom sections aligned , adjust bump pad stop until the bump pad is compressed by approx. 15 mm . i . e . compressed length 36 mm .
- 7/ Adjust break back ball joint until then bottom edge of the lower rail aligns with the lower rail of the intermediate section .
- 8/ Adjust breakaway spring tension until a gap of 2mm exists between the spring coils .
- 9/ If play develops in the intermediate pivot , adjust tie rod until all play is eliminated . (Take care that boom still folds correctly) .
- 10/ To adjust boom droop , slacken off lock nuts and then lower unfolded booms (on pallets or similar) until level . Then tighten lock nuts .
It is recommended that boom ends are slightly higher than the centre .

BOOM RIDE AND ALIGNMENT ADJUSTMENTS

(refer to diagram on pages 10 & 11 marked thus)

FIELD SETTING

BOOM STABILITY - TILT .

- 1/ If the boom responds harshly to bumps ,reduce the tension on the level springs equally.
If the boom sways loosely then tighten the level springs equally .

BOOM STABILITY - YAW

- 2/ If the boom sways loosely in the yaw mode adjust the tie rod so that the aeon rubber buffers compress on the rubbing plates .
Adjust until boom yaw is satisfactory .

INTERMEDIATE BOOM FOLD

- 6/ Observe intermediate boom fold action . If boom final alignment is harsh , adjust stop to further cushion closure .

BREAKAWAY

- 8/ Breakaway springs should be tight enough to hold breakbacks positively to boom with out flapping .

FAULT FINDING 1

ELECTRICAL

- 1/ If booms will not lift or fold , check centre fuse in cab fuse box
- 2/ If all spray sections fail to operate , check fuse and/or electrical sockets on chassis
- 3/ If individual boom section fails , check :-
 - (a) plugs and sockets on sprayer and tractor chassis and in junction box on sprayer back frame .
 - (b) Lubricate inside ball valve electrical motor with WD 40 or similar product .
- 4/ If spray computer fails to work, look at single fuse and holder on individual red wire near positive battery terminal

HYDRAULIC .

- 1/ If booms fail to open / lift etc ,
 - (a) check quick release fittings at hydraulic spool block on left hand side tractor and make sure that the probes are fully connected .
 - (b) Inspect restrictors in hydraulic cylinder fittings for dirt .
BEFORE REMOVING FITTING FROM BOTTOM OF LIFT RAM
SUPPORT BACK FRAME TO STOP SPRAYER DROPPING

WATER AND SPRAY PROBLEMS

Although sprayers are getting by design more complicated the majority of faults in the sprayer are simple and basic problems and are usually easy to fix .
Always check the obvious before getting to complicated .

If you cannot get enough spray out of your booms Remember , either the pump is not producing enough water or it is returning back to tank from valves

FAULT FINDING 2

IF SPRAY WILL NOT COME OUT OF BOOMS OR THE CORRECT AMOUNT CAN NOT BE REACHED CHECK FOR THE FOLLOWING FAULTS.

- (a) Double check all taps and valves are in the correct position (page 3).
- (b) Make sure spray pump is turning .
- (c) Clean suction and pressure filters .
- (d) Check if spray computer is working properly .(If computer is suspected switch to manual and press pressure +) .
- (e) Make sure spray lines are not blocked .
- (f) Determine if excess water is returning back to tank ,if so find from which valve and repair/replace .
- (g) Examine pump diaphragms and valves .
(If AR 230 is fitted look at oil reservoir for contamination as this is a sign that pump needs attention .
- (h) Look for any leaks . (If pump is pulsating it is a sign that the pump is sucking air) .
- (i) Look for any blockages or obstructions in the pipe work .(most problems are found on the suction side) .

IF YOU HAVE ANY TECHNICAL PROBLEMS WITH ANY HOUSEHAM MACHINE WE CAN BE CONTACTED ON ANY OF THE FOLLOWING NUMBERS .

JIM DICKINSON

WORK 01400 276003
MOBILE 07977 930278

GRAHAM LEGGATE

WORK 01400 276041
MOBILE 07970 859922

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NOTE !

FOR MACHINES FITTED WITH HYPRO CENTRIFUGAL PUMPS.

Machines fitted with this pump have an extra tap which is fitted above the chemical inductor.

This tap is marked as FAST FILL / SPRAY . (See diagram below)

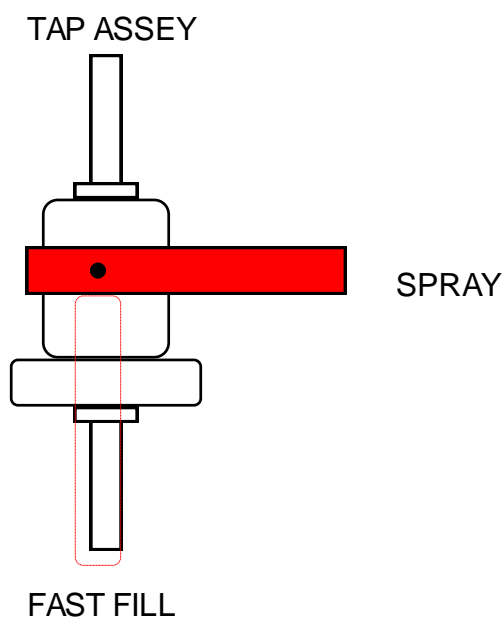
When the tap is in fast fill position it will greatly increase filling time.

Please note that when the tap is in the fast fill position the chemical inductor will be very slow to empty, or even not empty at all.

This tap is also to be used in the fast fill position when the pump has been run dry as it will help the pump to bleed quicker.

The tap must always be in spray position when spraying.

REMEMBER IF SPRAY PRESSURE CAN NOT BE REACHED CHECK THAT THIS TAP IS IN SPRAY POSITION.



MEMO 1