

HAWKEYE ON APPLICATORS – GENERIC

Hawkeye System Components:

NOTE:

Plumbing components such as nozzle bodies, tees, check valves, and strainers are not supplied by Raven (see page 4)

1. Base kit (includes node, node cable, flowmeter, transducer, & master valve) (see page 2)
2. ISO power cable (see page 2)
3. Hawkeye nozzle control valves, O-rings, and service kit (see page 3)

QTY of Hawkeye valves = (# of Crop Rows) + 1

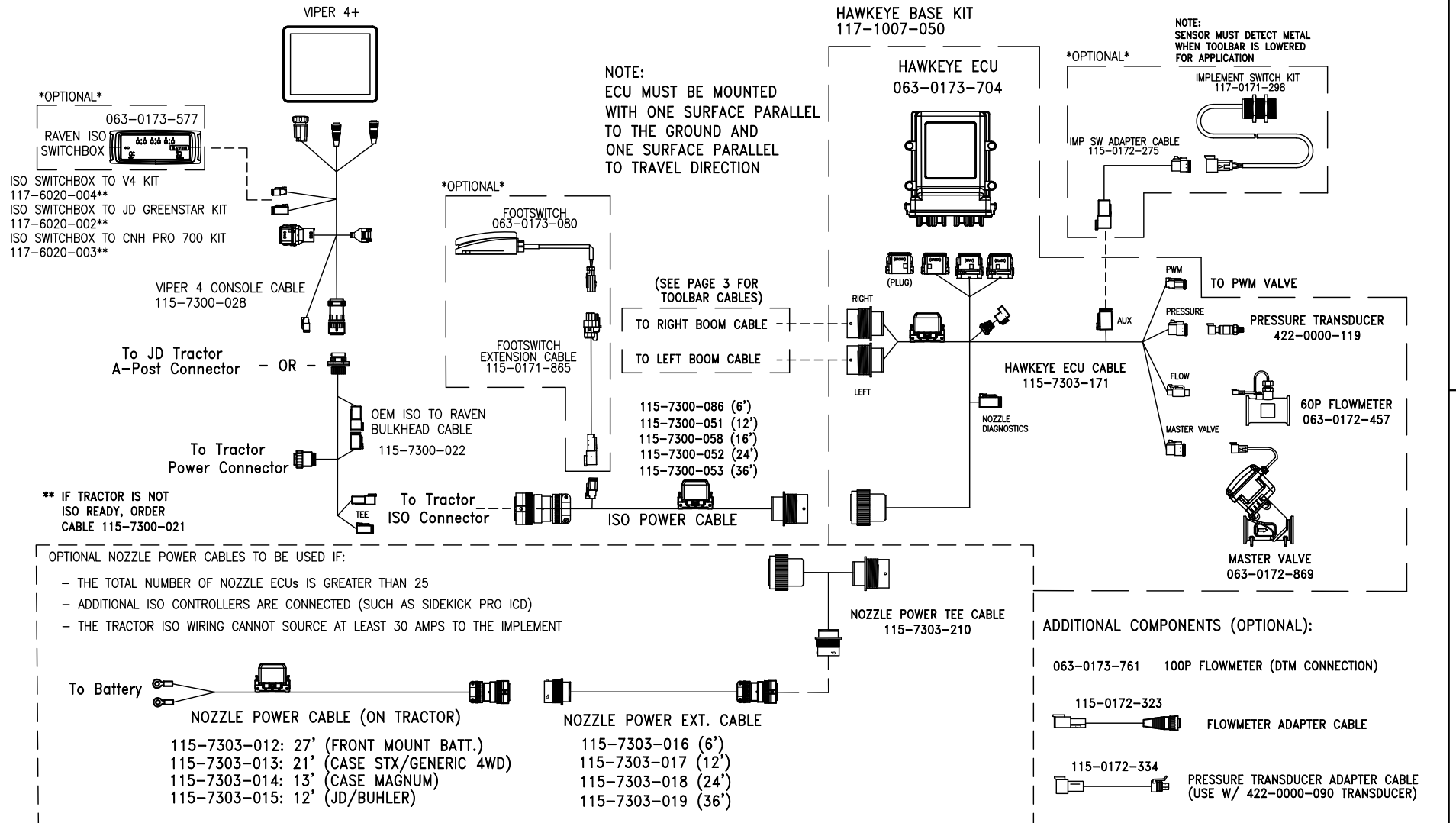
Ex. Whether it has 15 or 17 coulter, a 16 row toolbar requires 17 total Hawkeye valves

4. Toolbar cables, jumpers, and terminators (see page 3)
5. Master switch (see page 2 for switch options)
6. PWM valve components (if applicable) (see page 5)
7. Additional power cables (if applicable) (see page 2)
 - if the total number of nozzle valves is greater than 25
 - if additional ISO controllers are on the implement (such as ICD Injection)
 - if the tractor ISO wiring cannot source at least 30 amps
8. Parts to support narrow operation (if applicable) (see page 3)
9. Other options (see page 2)
 - Viper 4 components
 - Adapter cables
 - 100P flowmeter

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NOTE: AT LEAST ONE OF THE *OPTIONAL* SWITCH METHODS (FOOT SWITCH, ISO SWITCHBOX, OR IMPLEMENT SWITCH) IS REQUIRED. CHOOSE THE OPTION BEST SUITED FOR THE SYSTEM BEING DESIGNED.



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HAWKEYE TOOLBAR CABLING – GENERIC

** THE QUANTITY OF HAWKEYE NOZZLE VALVES DEPENDS ON THE NUMBER OF CROP ROWS COVERED BY THE TOOLBAR, NOT THE NUMBER OF COULTERS OR KNIVES.

QTY OF HAWKEYE NOZZLE VALVES = (# OF CROP ROWS) + 1

EXAMPLE 1: A 16 ROW TOOLBAR WITH 17 COULTERS REQUIRES 17 HAWKEYE VALVES

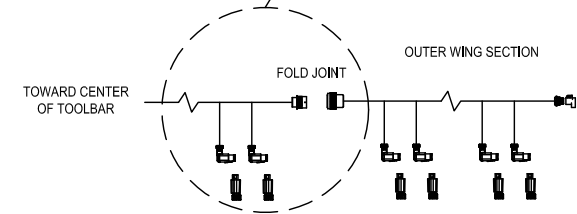
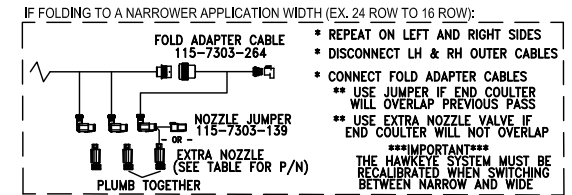
EXAMPLE 2: A 16 ROW TOOLBAR WITH 15 COULTERS REQUIRES 17 HAWKEYE VALVES (THE EXTRA VALVES ARE TEED INTO THE END COULTERS TO ACHIEVE 1.5X RATE)

** USE COMBINATIONS OF GENERIC NOZZLE CABLES TO ADEQUATELY COVER THE TOOLBAR. REFER TO THE TABLE AND DRAWINGS BELOW.

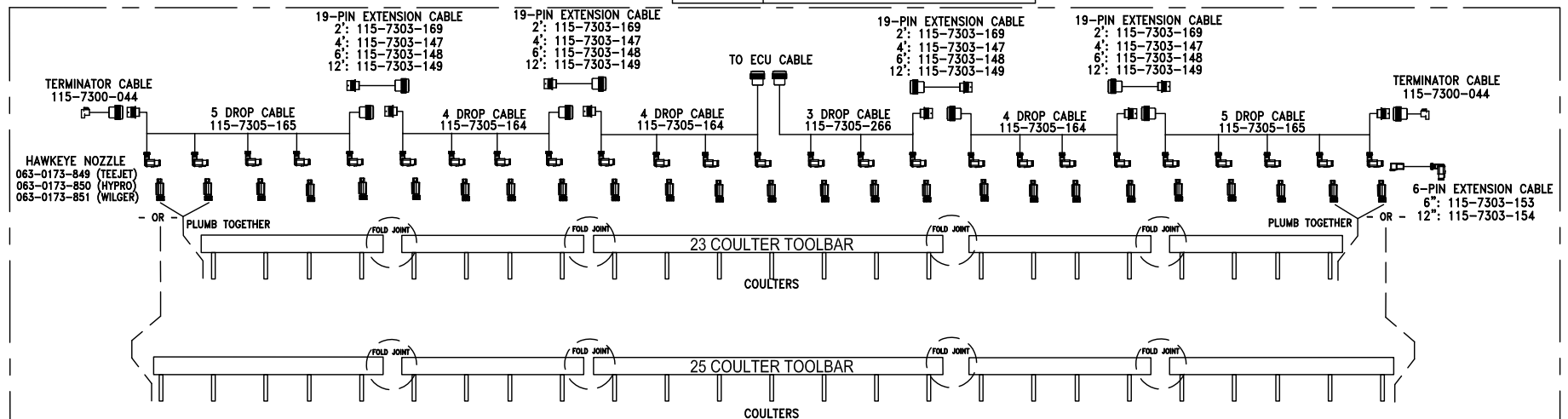
** ANY UNUSED NOZZLE CONNECTIONS MUST HAVE A JUMPER PLUG (P/N 115-7303-139) INSTALLED.

** IF INTENDING TO ALTERNATE BETWEEN NARROW AND WIDE APPLICATION (EX. FOLDING FROM 24 ROWS TO 16 ROWS), ADDITIONAL COMPONENTS ARE REQUIRED. REFER TO THE DRAWING TO THE RIGHT OF THE TABLE.

GENERIC TOOLBAR CABLING			
DESCRIPTION	20" SPACING	22" SPACING	30" SPACING
3 NOZZLE DROPS	115-7305-150	115-7305-288	115-7305-266
4 NOZZLE DROPS	N/A	N/A	115-7305-164
5 NOZZLE DROPS	N/A	N/A	115-7305-165
6 NOZZLE DROPS	115-7305-151	115-7305-269	N/A
7 NOZZLE DROPS	N/A	N/A	115-7305-166
9 NOZZLE DROPS	115-7305-152	115-7305-270	115-7305-267
19-PIN EXTENSION	115-7303-147 (4 ft), 115-7303-148 (6 ft), 115-7303-149 (12 ft), 115-7303-169 (2 ft) (QTY AS NEEDED)		
6-PIN EXTENSION	115-7303-153 (6 inch), 115-7303-154 (12 inch) (QTY AS NEEDED)		
TERMINATOR CABLE	115-7300-044 (QTY 2)		
JUMPER	115-7303-139 (QTY AS NEEDED)		
HAWKEYE NOZZLE	063-0173-849 (TEEJET), 063-0173-850 (HYPRO), 063-0173-851 (WILGER) QTY = # OF CROP ROWS + 1		
SERVICE KIT	117-1005-062 (TEEJET), 117-1005-063 (HYPRO), 117-1005-064 (WILGER) QTY 1		
O-RINGS	219-1005-115M (HYPRO) QTY 1 (pack of 56) 219-1005-116M (TEEJET & WILGER)		



EXAMPLE: GENERIC CABLES ON 24 ROW / 30 INCH TOOLBAR (23 OR 25 COULTERS)



NOTE: THE HAWKEYE NOZZLE VALVE AT EACH END OF THE TOOLBAR WILL ALWAYS PROVIDE 1/2 THE TARGET RATE

IF THE TOOLBAR DOES NOT OVERLAP PASSES (EX. 23 COULTER SYSTEM FROM ABOVE)

THE END NOZZLE VALVE (1/2 RATE) IS TEED WITH THE NEXT VALVE (FULL RATE) TO ACHIEVE 1.5X RATE AT THE END COULTER

IF THE TOOLBAR OVERLAPS PASSES (EX. 25 COULTER SYSTEM FROM ABOVE)

THE END NOZZLE VALVE (1/2 RATE) IS THE ONLY VALVE FEEDING THE END COULTER. THE REMAINING 1/2 RATE IS APPLIED ON THE NEXT PASS.

115-7305-*** AND 115-7303-***
CABLES ARE INTERCHANGABLE

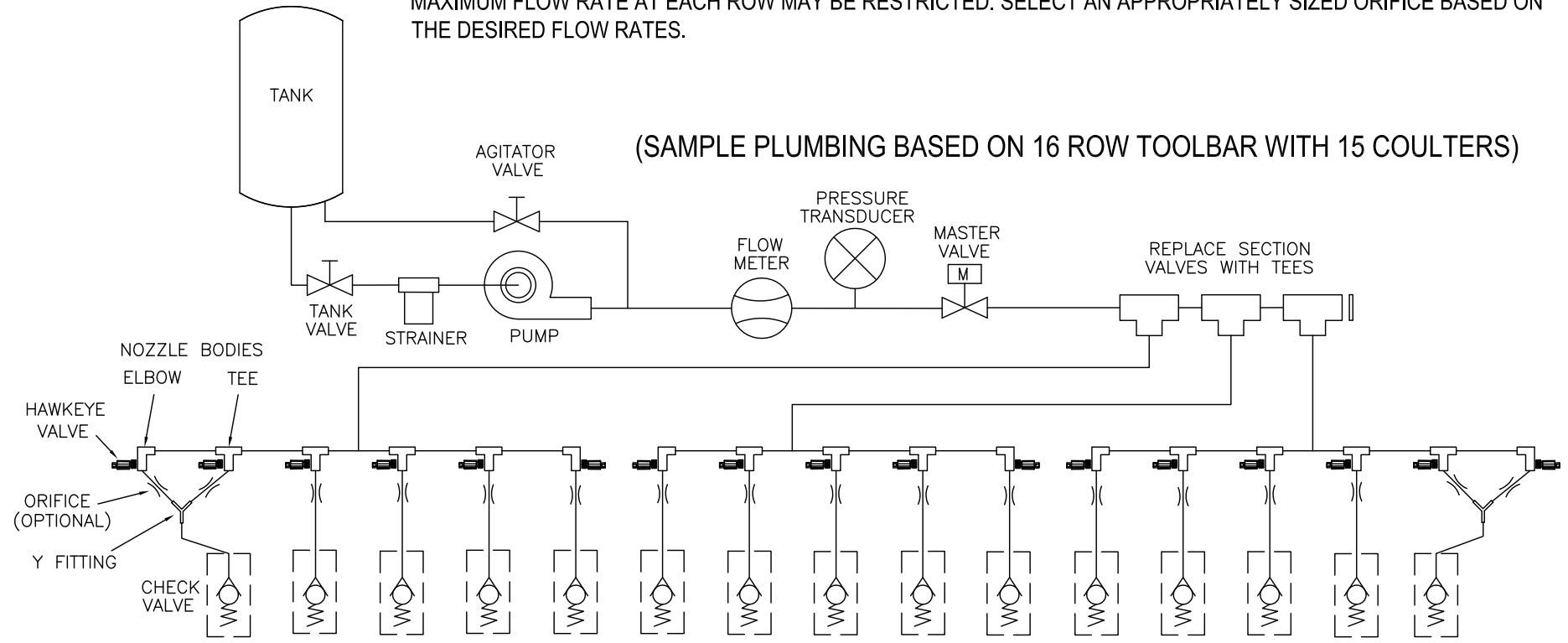
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HAWKEYE PLUMBING ON FERTILIZER APPLICATORS

- ** THOROUGHLY FLUSH THE SYSTEM PRIOR TO INSTALLING THE HAWKEYE NOZZLE VALVES
- ** INSTALL FLOW METER, PRESSURE TRANSDUCER, AND MASTER VALVE (ALL REQUIRED FOR HAWKEYE)
- ** IF THE TOOLBAR DOES NOT OVERLAP FROM PASS TO PASS (EX. 15 COULTERS ON A 16 ROW BAR), TWO HAWKEYE NOZZLES MUST BE TEED INTO EACH END COULTER
- ** REPLACE SECTION VALVES WITH TEE FITTINGS
- ** INSTALL NOZZLE BODIES AT EVERY COULTER DROP
- ** 80 MESH STRAINER IS RECOMMENDED
- ** CHECK VALVES ARE RECOMMENDED TO REDUCE PRODUCT LOSS AT THE COULTERS
- ** ORIFICES OR TIPS MAY BE INSTALLED, BUT ARE NOT REQUIRED. IF ORIFICES OR TIPS ARE INSTALLED, THE MAXIMUM FLOW RATE AT EACH ROW MAY BE RESTRICTED. SELECT AN APPROPRIATELY SIZED ORIFICE BASED ON THE DESIRED FLOW RATES.

NOT INCLUDED IN HAWKEYE KITS

(SAMPLE PLUMBING BASED ON 16 ROW TOOLBAR WITH 15 COULTERS)

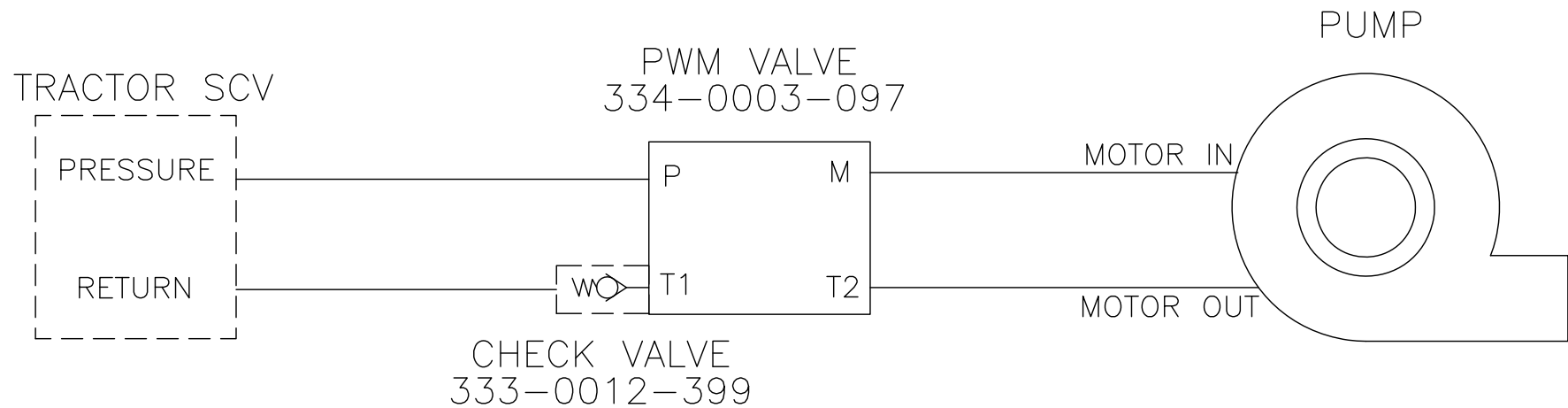


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HYDRAULIC PWM VALVE PLUMBING

***** HAWKEYE REQUIRES A HYDRAULIC PWM VALVE TO CONTROL THE PRODUCT PUMP *****

- * IF THE IMPLEMENT ALREADY HAS A PWM HYDRAULIC VALVE, NO ADDITIONAL PLUMBING IS NEEDED.
- * IF THE IMPLEMENT DOES NOT HAVE A PWM VALVE, INSTALL A RAVEN PWM VALVE AND CHECK VALVE AS SHOWN IN THE DIAGRAM.
- * THE RAVEN PWM VALVE IS FLOW COMPENSATED TO 11 GPM. IF THE IMPLEMENT HAS AN EXISTING COMPENSATOR VALVE, REMOVE IT AND CONNECT THE HOSES AS INDICATED BELOW.



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