



8-SERIES (S,W)

OIL FIRED BOILER

ELECTRICAL WIRING DIAGRAMS

WARNING: Only qualified licensed service contractors should perform electrical work on this boiler. The electrical connections to this boiler must be made in accordance with all applicable local codes and the latest revision of the National Electrical Code, ANSI/NFPA-70. Installation should also conform to CSA C22.1 Canadian Electrical Code Part 1 if installed in Canada. Install a separate 120 volt 15 amp circuit for the boiler. The boiler must be grounded in accordance with the authority having jurisdiction, or if none, the latest revision of the National Electrical Code, ANSI/NFPA-70.

CAUTION: Label all wires prior to disconnection when servicing controls. Wiring errors can cause improper and dangerous operation! Verify proper operation after servicing!

If any of the original wire as supplied with the appliance must be replaced, it must be replaced with type 105C° wire or its equivalent.

**INSTALLER, THESE INSTRUCTIONS TO BE AFFIXED ADJACENT TO THE BOILER.
CONSUMER, RETAIN THESE INSTRUCTIONS FOR FUTURE REFERENCE PURPOSES.**

In the interest of product improvement we reserve the right to make changes without notice.



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8-SERIES WIRING DIAGRAMS

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NOTES:

1. These wiring diagrams are for boilers with the Burner Connector Plug produced after April 2002.
2. The Hydrolevel CG450-2060 probe low water cut-off is used after August 2003 on steam boilers Without the tankless coil, and has a 20-minute run cycle and a 60-second still water test cycle. Clean probe yearly.
3. The Hydrolevel CG-450 probe low water cut-off was used prior to August 2003 on steam boilers With and Without the tankless coil. The CG-450 had a 10-minute run cycle and a 90-second still water test cycle. Consult these pages for the correct wiring diagrams. The CG450-2060 can be used as a direct replacement for the CG450. Clean probe yearly.
4. The Hydrolevel CGT450-2060 was introduced on steam boilers With tankless coils only during September 2003. The Hydrolevel CGT450-2060 probe low water cut-off has a 20-minute run cycle and a 60-second still water test cycle. These units, during domestic hot water production, suspend the cycling feature and still water test while still checking for a dangerous low water condition. Clean probe yearly.
5. The float low water cut-off needs to be blown out weekly, tested and inspected annually.

Warning Of Potential Wiring Error When Substituting Burner Controls.

Warning: It is recommended that identical burner controls be used as replacements when servicing Smith 8-Series boilers. These boilers have a Beckett GeniSys 7505 or Carlin 60200 or Honeywell 7184B or Riello 530SE/C burner control. Pay attention to the part number and the part number suffix when replacing controls.

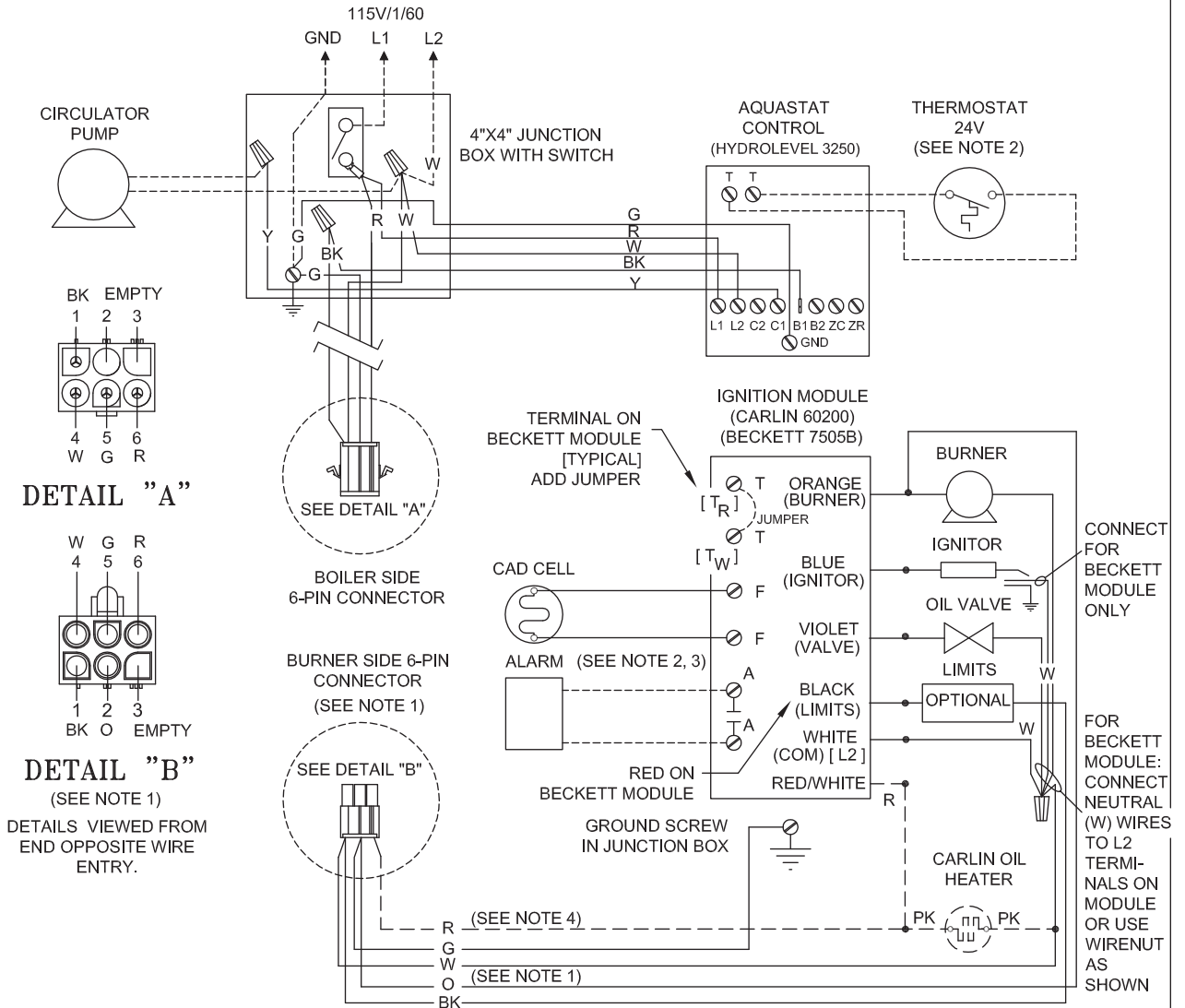
Wiring errors can occur when substituting the Honeywell 8184P or a 7184P burner control in place of the Carlin 60200 or Honeywell 7184B controls provided with these boilers. The Honeywell 8184P and 7184P and Carlin 60200 are pre-purge/post-purge controls. In order for the post purge function to work a constantly powered wire must be connected to the control.

When connecting the Carlin 60200 control the red wire with a white trace needs to be connected to the L1 constant power input. (Boiler red wire) The black wire connects to the safety limit circuit, as shown in the diagrams in this book. (Boiler black wire)

If a Honeywell 8184P or 7184P control were to be used the black wire needs to connect to the L1 constant power input.(Boiler red wire) The red wire would be connected to the limit circuit. (Boiler black wire) Honeywell uses two different wire color schemes so if a substitute control must be used follow the wiring instructions from the control manufacturer for that particular control. Very dangerous operating conditions will occur if constant power is connected to the limit circuit on any of these controls. The burner will start and run without any limits to shut it down. Always test all safety limit controls to be sure the boiler is functioning properly after any service work is completed. If in doubt do not operate the boiler and contact a heating contractor or qualified electrician.

The burner side connector harness supplied with Beckett burners that utilize the Beckett GeniSys 7505 or Honeywell 7184B control do not have the extra power wire required for post purge controls. It will not be possible to correctly wire the Beckett GeniSys 7505 or Honeywell 8184P or 7184P controls to this harness without modification.

**CARLIN AND BECKETT BURNERS,
CONNECTION DIAGRAM,
WATER BOILERS
WITHOUT TANKLESS COIL**



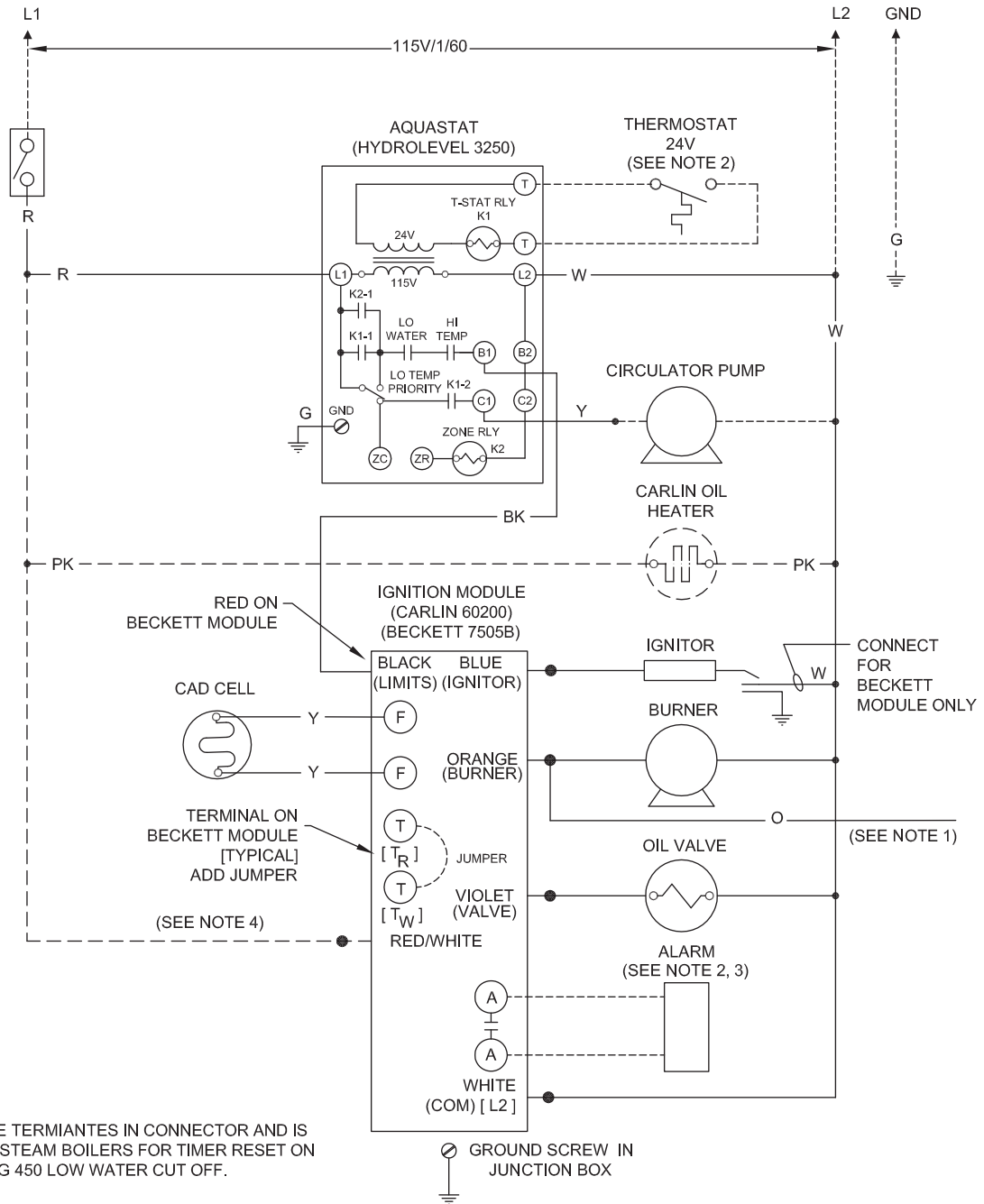
NOTES:

1. ORANGE WIRE TERMINATES IN CONNECTOR AND IS ONLY USED ON STEAM BOILERS FOR TIMER RESET ON HYDROLEVEL CG 450 LOW WATER CUT OFF.
2. BY OTHERS.
3. BURNER LOCKOUT ALARM: DRY ALARM CONTACTS RATED 24V AC/DC, 2A.
4. CARLIN IGNITION MODULE USES CONSTANT POWER FROM RED WIRE.
5. DRAWING NUMBER: 102-19-B-1-D.

LEGEND:

-----	CARLIN WIRING
—————	FACTORY WIRING
.....	FIELD WIRING

**CARLIN AND BECKETT BURNERS,
LADDER DIAGRAM,
FOR WATER BOILERS
WITHOUT TANKLESS COIL**



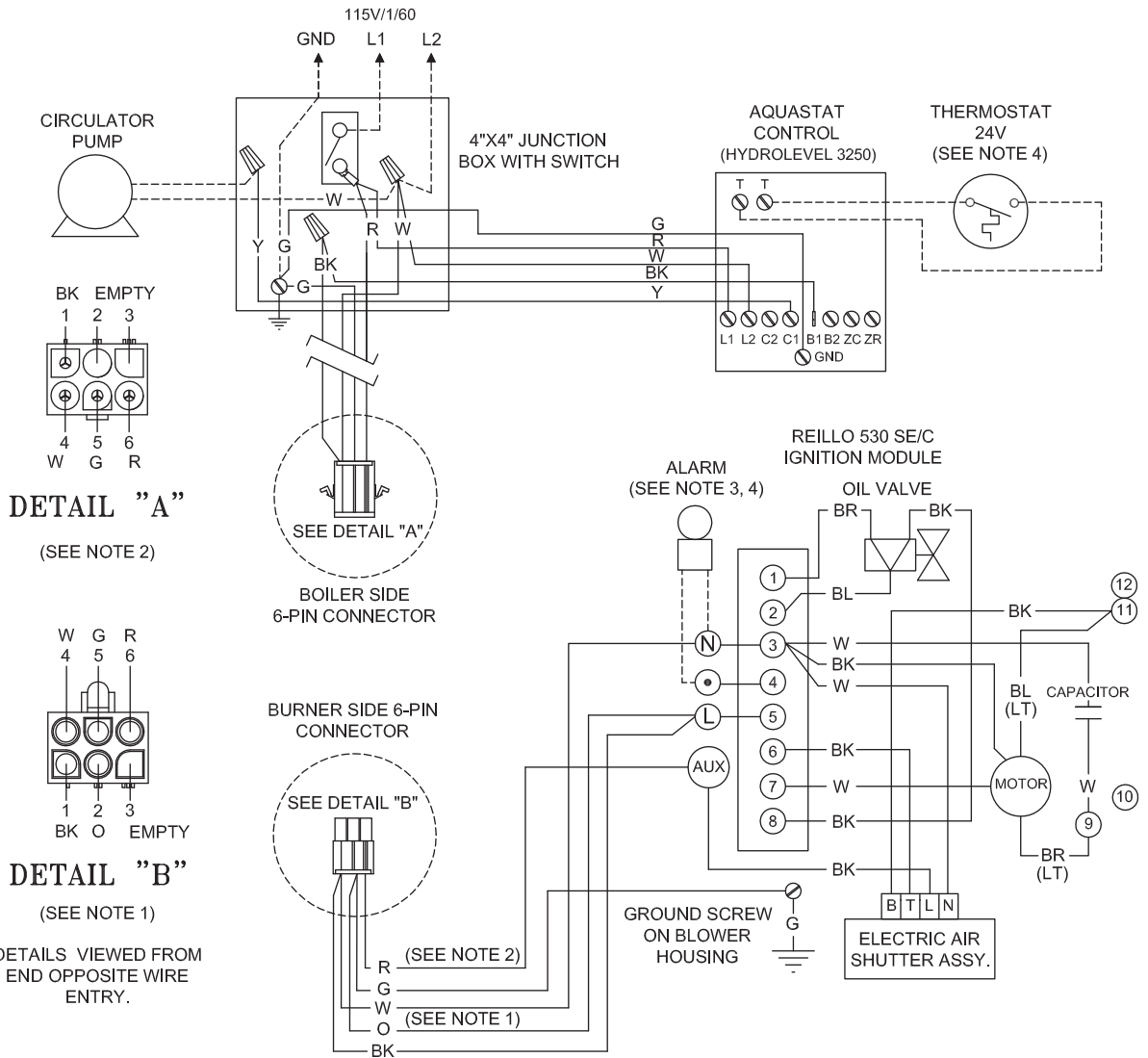
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1. ORANGE WIRE TERMINATES IN CONNECTOR AND IS ONLY USED ON STEAM BOILERS FOR TIMER RESET ON HYDROLEVEL CG 450 LOW WATER CUT OFF.
2. BY OTHERS.
3. DRY ALARM CONTACTS RATED 24V AC/DC, 2A.
4. CARLIN IGNITION MODULE USES CONSTANT POWER FROM RED WIRE.
5. DRAWING NUMBER: 102-19-B-2-D.

LEGEND:

-----	CARLIN WIRING
—————	FACTORY WIRING
-----	FIELD WIRING

**RIELLO BURNER
WITH ELECTRIC SHUTTER,
CONNECTION DIAGRAM,
FOR WATER BOILERS
WITHOUT TANKLESS COIL**



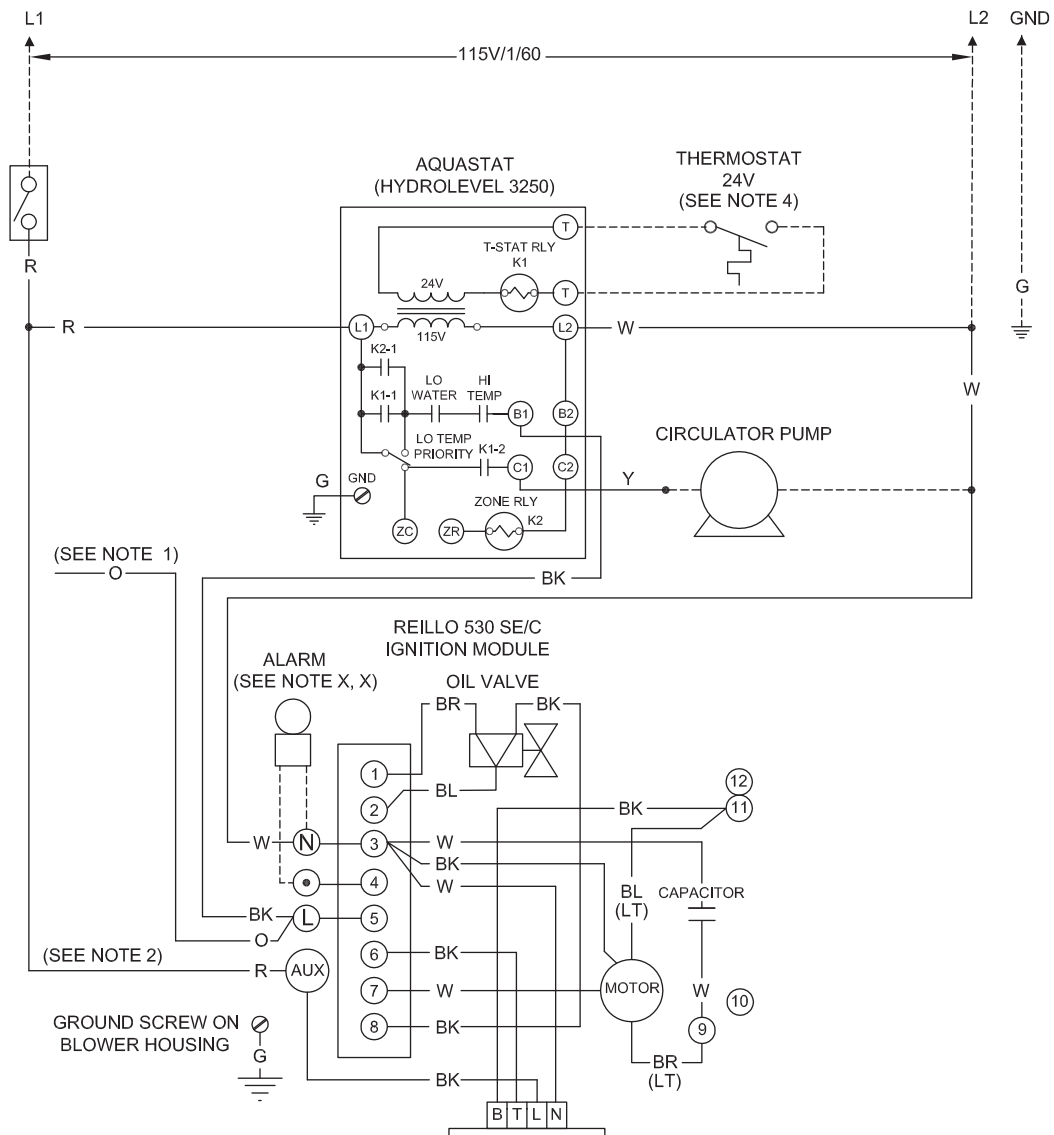
NOTES:

1. ORANGE WIRE TERMINATES IN BURNER CONNECTOR AND IS ONLY USED ON STEAM BOILERS FOR TIMER RESET ON HYDROLEVEL CGT450 LOW WATER CUT OFF.
2. RED WIRE TERMINATES IN BURNER JUNCTION BOX FOR RIELLO BURNERS WITH HYDRAULIC SHUTTER CONTROL. RED WIRE PROVIDES CONSTANT POWER FOR ELECTRIC SHUTER ACTIVATION.
3. FOR BURNER LOCKOUT ALARM USE TERMINALS 3, 4. THESE TERMINALS ARE CONNECTED TO CONTACTS ACTIVATED DURING LOCKOUT WHICH SUPPLY 120 VAC RATED FOR 1 A.
4. BY OTHERS.
5. DRAWING NUMBER: 102-20-B-1-E.

LEGEND:



**RIELLO BURNER
WITH ELECTRIC SHUTTER,
LADDER DIAGRAM,
FOR WATER BOILERS
WITHOUT TANKLESS COIL**



NOTES:

1. ORANGE WIRE TERMINATES IN BURNER CONNECTOR AND IS ONLY USED ON STEAM BOILERS FOR TIMER RESET ON HYDROLEVEL CGT450 LOW WATER CUT OFF.

2. RED WIRE TERMINATES IN BURNER JUNCTION BOX FOR RIELLO BURNERS WITH HYDRAULIC SHUTTER CONTROL. RED WIRE PROVIDES CONSTANT POWER FOR ELECTRIC SHUTTER ACTIVATION.

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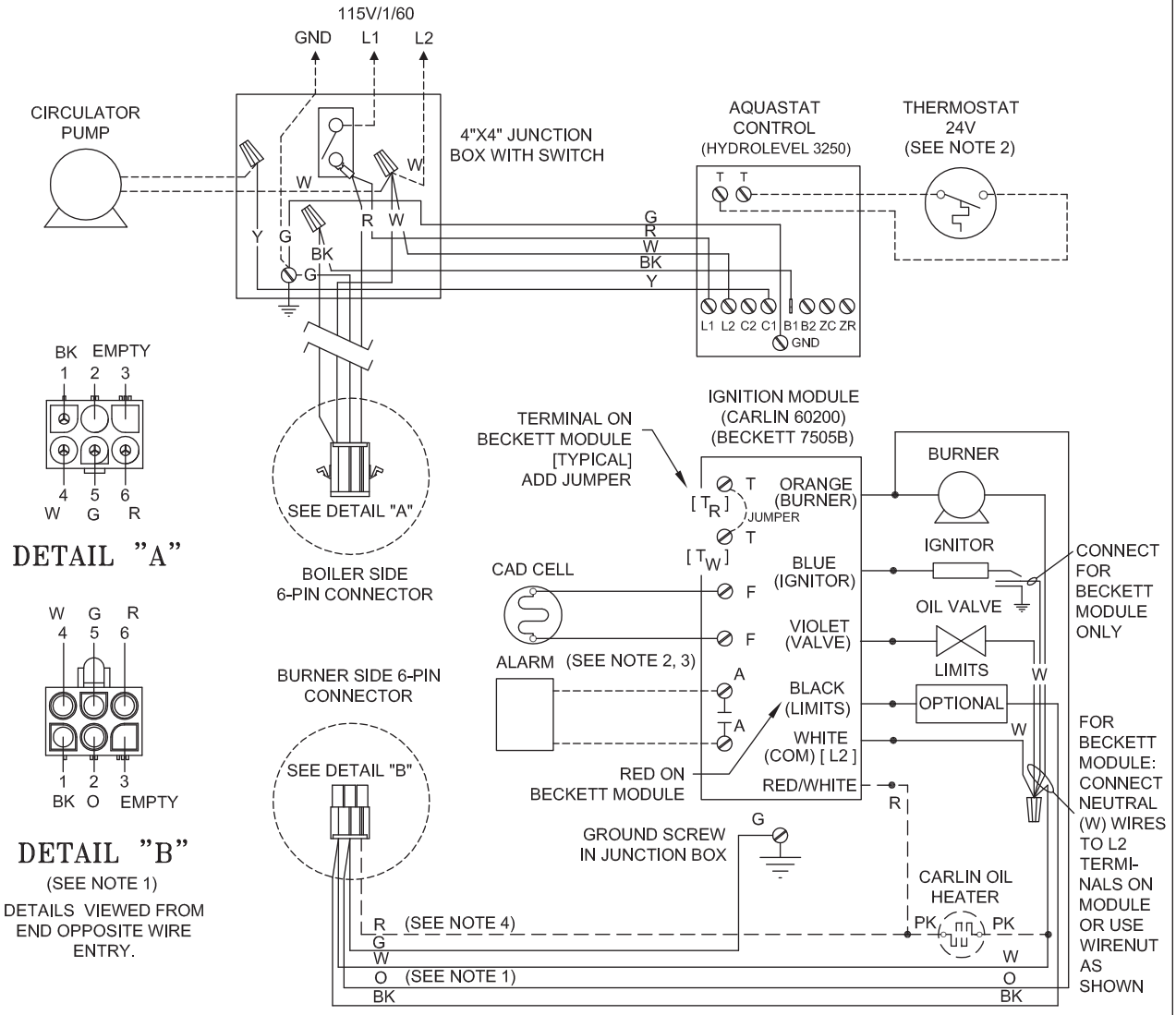
4. BY OTHERS.

5. DRAWING NUMBER: 102-20-B-2-E.

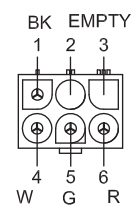
LEGEND:

	FACTORY WIRING
	FIELD WIRING

**CARLIN AND BECKETT BURNERS
CONNECTION DIAGRAM
FOR WATER BOILERS
WITH TANKLESS COIL**

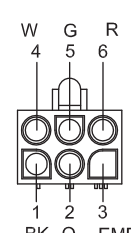


DETAIL "A"



BOILER SIDE 6-PIN CONNECTOR

DETAIL "B"



BURNER SIDE 6-PIN CONNECTOR

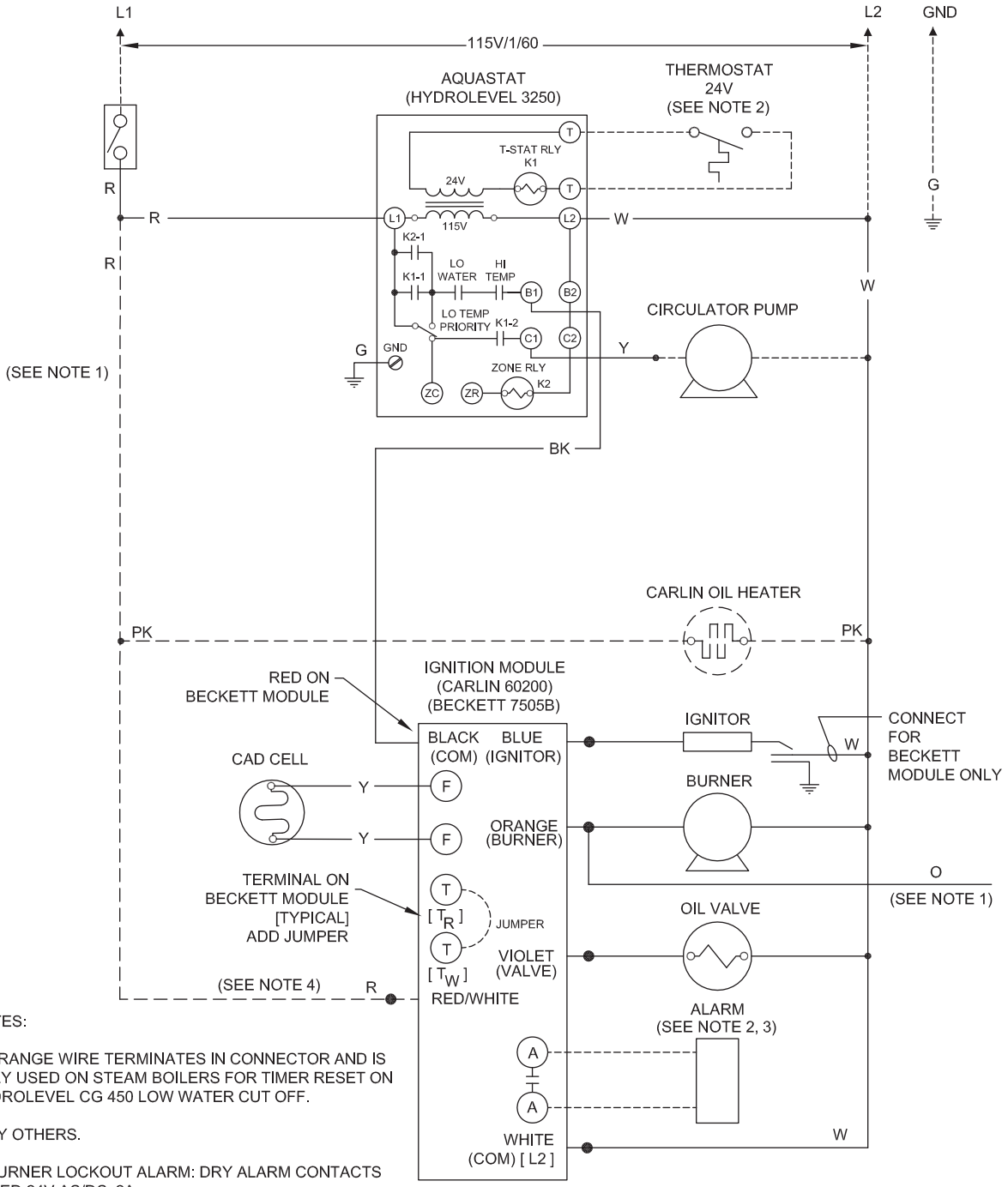
(SEE NOTE 1)
DETAILS VIEWED FROM
END OPPOSITE WIRE
ENTRY.

- NOTES:**
1. ORANGE WIRE TERMINATES IN CONNECTOR AND IS ONLY USED ON STEAM BOILERS FOR TIMER RESET ON HYDROLEVEL CG 450 LOW WATER CUT OFF.
 2. BY OTHERS.
 3. BURNER LOCKOUT ALARM: DRY ALARM CONTACTS RATED 24V AC/DC, 2A.
 4. CARLIN IGNITION MODULE USES CONSTANT POWER FROM RED WIRE.
 5. DRAWING NUMBER: 102-21-B-1-C

LEGEND:

---	CARLIN WIRING
—	FACTORY WIRING
- - - -	FIELD WIRING

**CARLIN AND BECKETT BURNERS
LADDER DIAGRAM
FOR WATER BOILERS
WITH TANKLESS COIL**

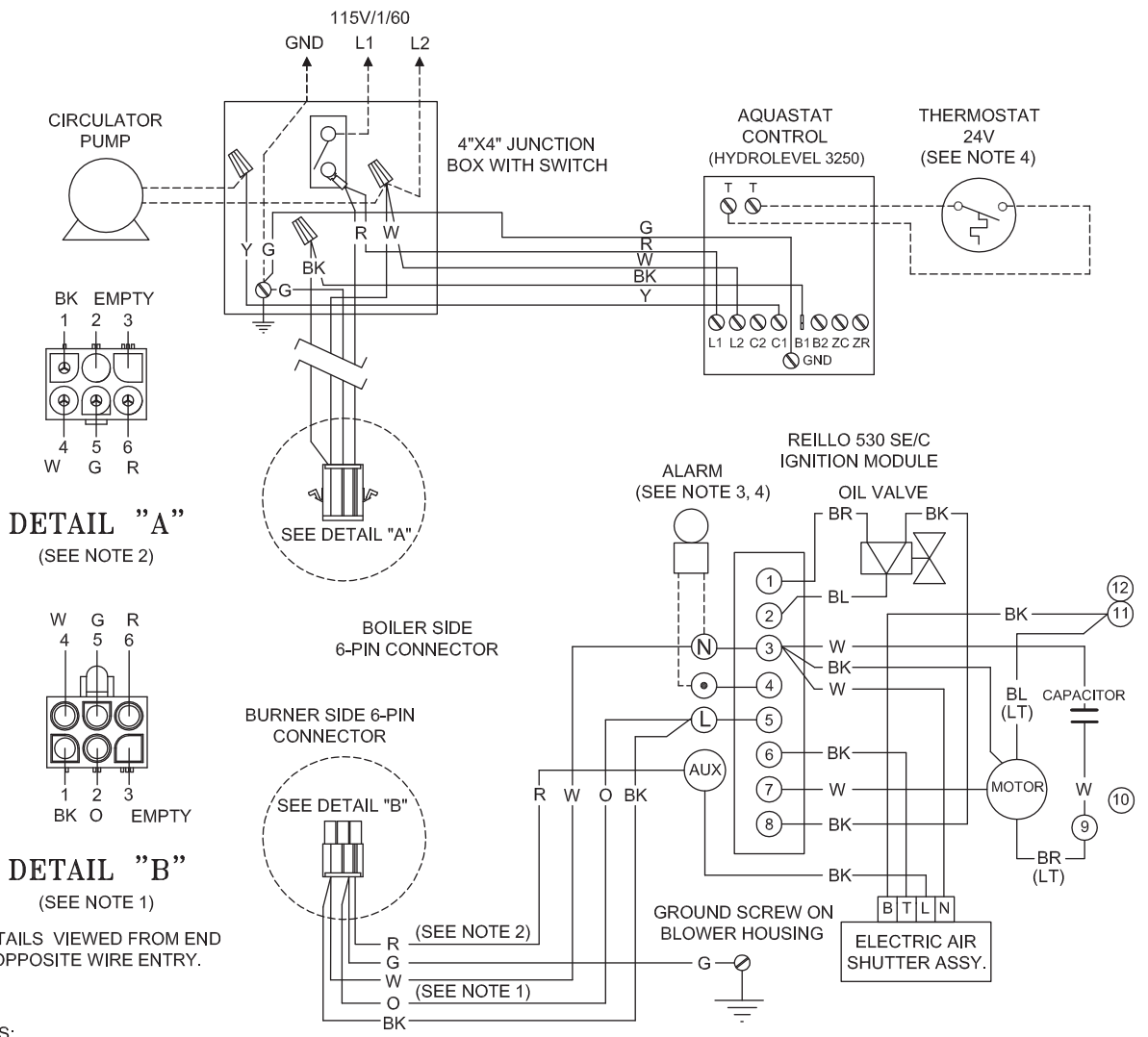


- NOTES:**
1. ORANGE WIRE TERMINATES IN CONNECTOR AND IS ONLY USED ON STEAM BOILERS FOR TIMER RESET ON HYDROLEVEL CG 450 LOW WATER CUT OFF.
 2. BY OTHERS.
 3. BURNER LOCKOUT ALARM: DRY ALARM CONTACTS RATED 24V AC/DC, 2A.
 4. CARLIN IGNITION MODULE USES CONSTANT POWER FROM RED WIRE.
 5. DRAWING NUMBER: 102-21-B-2-C

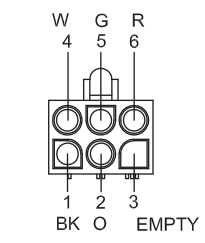
LEGEND:

- CARLIN WIRING
- FACTORY WIRING
- FIELD WIRING

**RIELLO BURNER
WITH ELECTRIC SHUTTER
CONNECTION DIAGRAM
FOR WATER BOILERS
WITH TANKLESS COIL**



DETAIL "A"
(SEE NOTE 2)



DETAIL "B"
(SEE NOTE 1)

DETAILS VIEWED FROM END
OPPOSITE WIRE ENTRY.

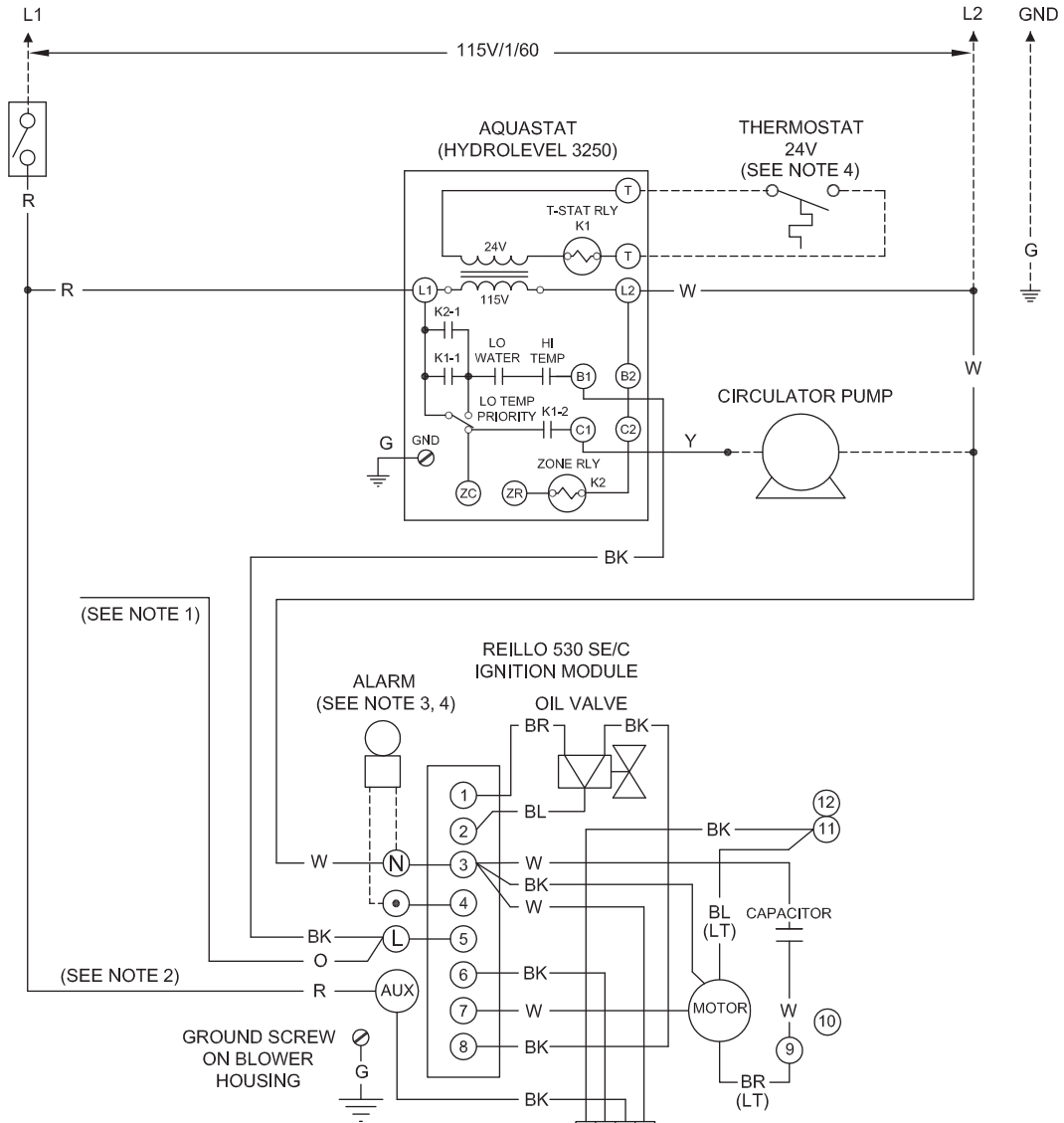
NOTES:

1. ORANGE WIRE TERMINATES IN BURNER CONNECTOR AND IS ONLY USED ON STEAM BOILERS FOR TIMER RESET ON HYDROLEVEL CG 450 LOW WATER CUT OFF.
2. RED WIRE TERMINATES IN BURNER JUNCTION BOX FOR RIELLO BURNERS WITH HYDRAULIC SHUTTER CONTROL. RED WIRE PROVIDES CONSTANT POWER FOR ELECTRIC SHUTTER ACTIVATION.
3. FOR BURNER LOCKOUT ALARM USE TERMINALS 3, 4. THESE TERMINALS ARE CONNECTED TO CONTACTS ACTIVATED DURING LOCKOUT WHICH SUPPLY 120 VAC RATED FOR 1 A.
4. BY OTHERS
5. DRAWING NUMBER: 102-22-B-1-D.

LEGEND:



**RIELLO BURNER
WITH ELECTRIC SHUTTER
LADDER DIAGRAM
FOR WATER BOILERS
WITH TANKLESS COIL**



NOTES:

1. ORANGE WIRE TERMINATES IN BURNER CONNECTOR AND IS ONLY USED ON STEAM BOILERS FOR TIMER RESET ON HYDROLEVEL CGT450 LOW WATER CUT OFF.

2. RED WIRE TERMINATES IN BURNER JUNCTION BOX FOR RIELLO BURNERS WITH HYDRAULIC SHUTTER CONTROL. RED WIRE PROVIDES CONSTANT POWER FOR ELECTRIC SHUTTER ACTIVATION.

3. FOR BURNER LOCKOUT ALARM USE TERMINALS 3, 4. THESE TERMINALS ARE CONNECTED TO CONTACTS ACTIVATED DURING LOCKOUT WHICH SUPPLY 120 VAC RATED FOR 1A.

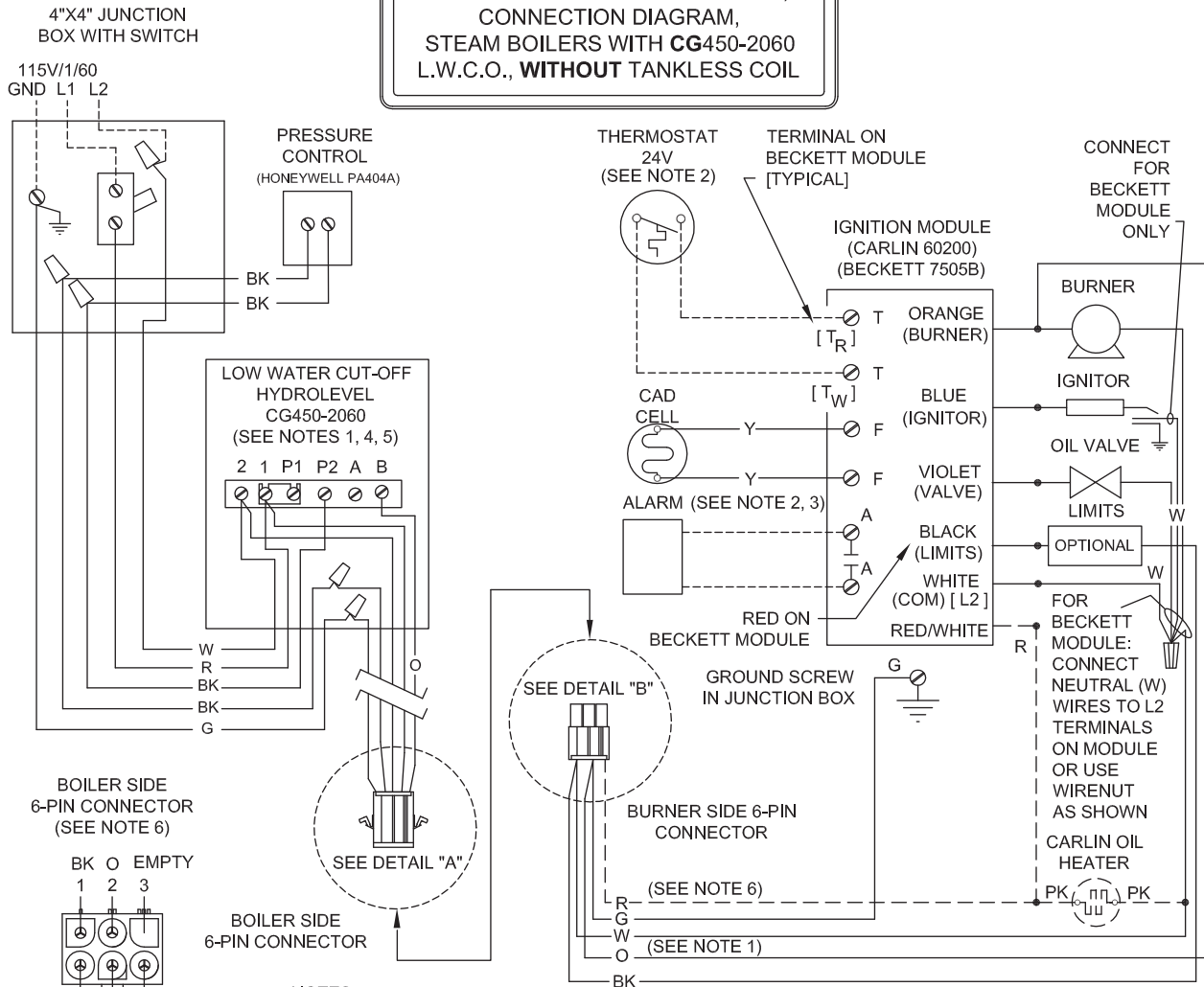
4. BY OTHERS.

5. DRAWING NUMBER: 102-22-B-2-D.

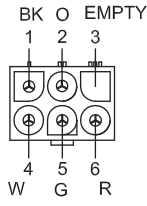
LEGEND:



**CARLIN AND BECKETT BURNERS,
CONNECTION DIAGRAM,
STEAM BOILERS WITH CG450-2060
L.W.C.O., WITHOUT TANKLESS COIL**

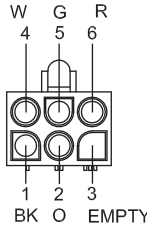


**BOILER SIDE
6-PIN CONNECTOR
(SEE NOTE 6)**



DETAIL "A"

**BURNER SIDE
6-PIN CONNECTOR
(SEE NOTE 1)**



DETAIL "B"

DETAILS VIEWED FROM END
OPPOSITE WIRE ENTRY.

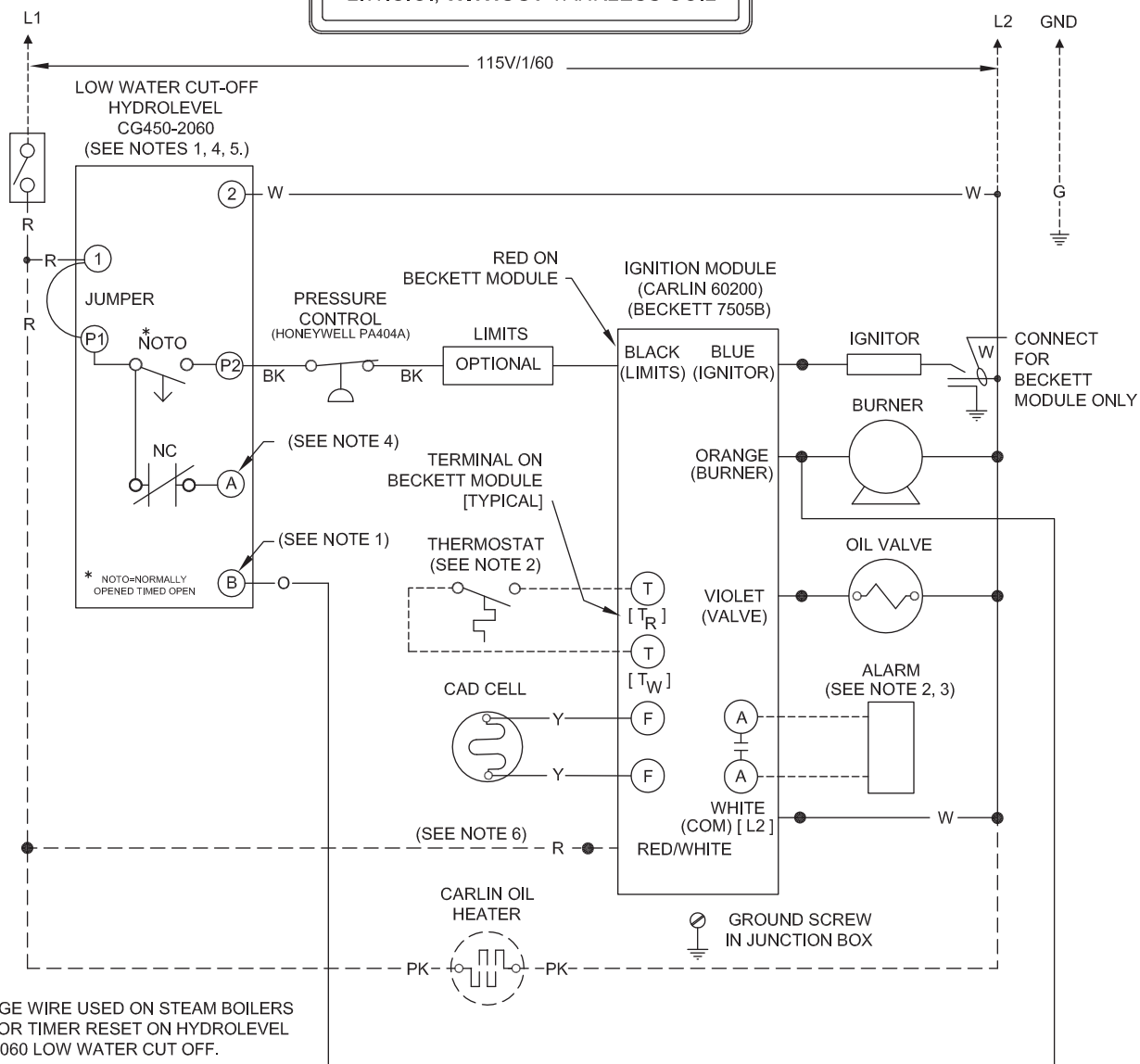
NOTES:

1. ORANGE WIRE USED ON STEAM BOILERS ONLY. FOR TIMER RESET ON HYDROLEVEL CG450-2060 LOW WATER CUT OFF.
2. BY OTHERS.
3. BURNER LOCKOUT ALARM: DRY ALARM CONTACTS RATED 24V AC/DC, 2A.
4. CONTACT "A" FOR LOW WATER ALARM OR AUTOMATIC WATER FEED. USE ONLY HYDROLEVEL APPROVED WATER FEED SYSTEMS, OR FLOODING COULD OCCUR.
5. THE HYDROLEVEL PROBE CIRCUIT IS NORMALLY OPEN UNTIL THE PROBE IS CONTACTED BY BOILER WATER OR FOAM. THE PROBE CIRCUIT IS TIMED TO OPEN, SHUTTING DOWN THE BOILER, AT REGULAR INTERVALS PROVIDING A STILL WATER TEST. THE STILL WATER TEST ALLOWS ANY FOAM TIME TO SETTLE PROVIDING AN ACCURATE WATER LEVEL READING. THE PROBE CIRCUIT TIMER IS RESET EACH TIME THE BURNER MOTOR ACTIVATES. THIS PROVIDES A FULL RUN TIME CYCLE EACH TIME THE BURNER FIRES. THE CG450-2060 HAS A 20 MINUTE RUN TIME, 60 SECOND STILL WATER TEST. (NOTO = NORMALLY OPENED TIMED OPEN)
6. CARLIN IGNITION MODULE USES CONSTANT POWER FROM RED WIRE.
7. DRAWING NUMBER: 102-17-B-1-E

LEGEND:



**CARLIN AND BECKETT BURNERS,
LADDER DIAGRAM,
STEAM BOILERS WITH CG450-2060
L.W.C.O., **WITHOUT** TANKLESS COIL**



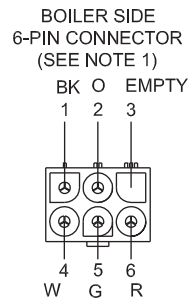
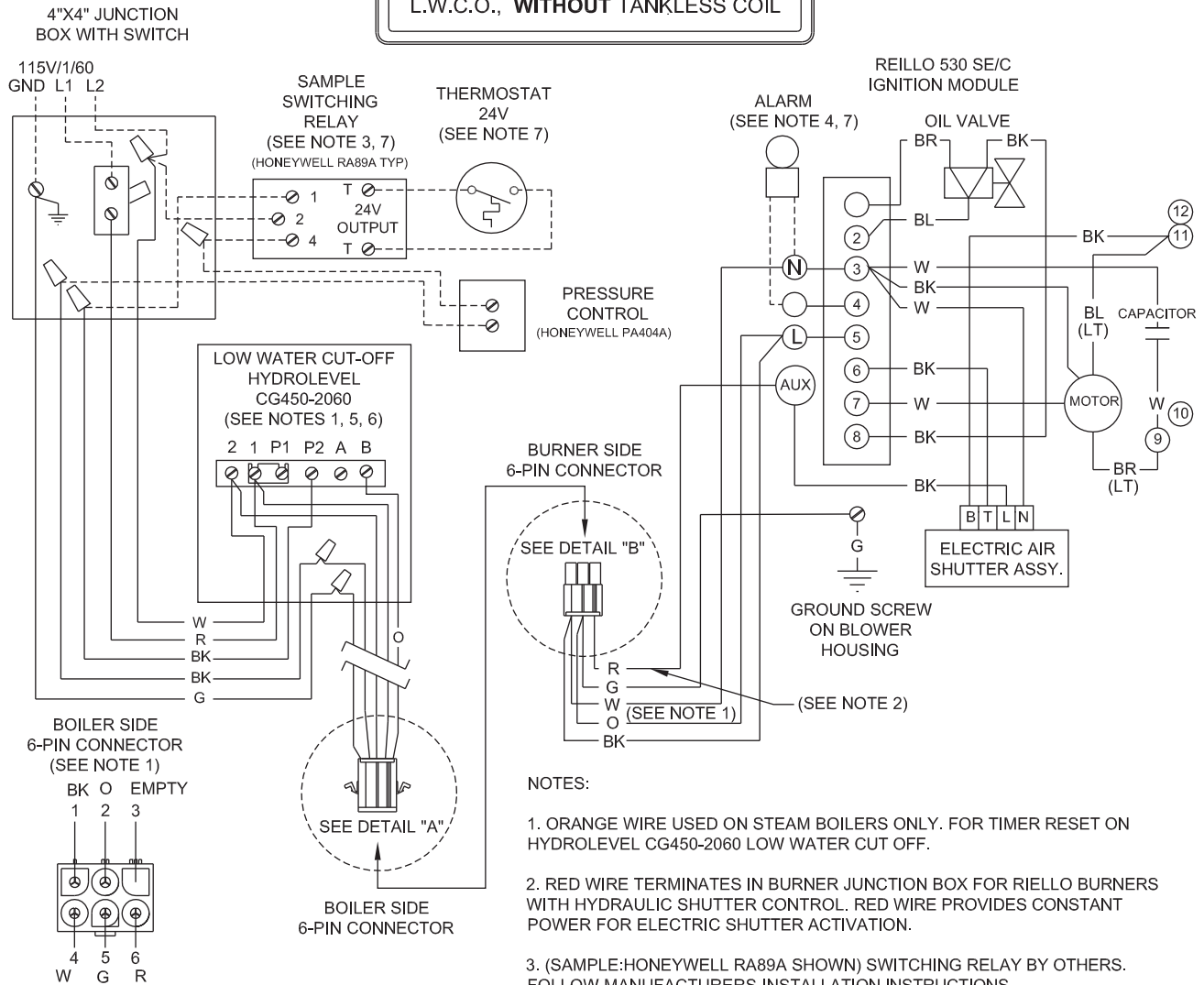
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6. CARLIN IGNITION MODULE USES CONSTANT POWER FROM RED WIRE.
7. DRAWING NUMBER: 102-17-B-2-E

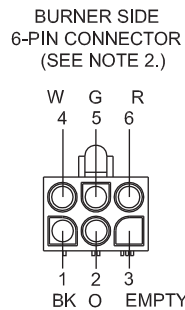
LEGEND:

-----	CARLIN WIRING
—————	FACTORY WIRING
-----	FIELD WIRING

RIELLO BURNER WITH ELECTRIC SHUTTER, CONNECTION DIAGRAM, STEAM BOILERS WITH CG450-2060 L.W.C.O., WITHOUT TANKLESS COIL



DETAIL "A"



DETAIL "B"

DETAILS VIEWED FROM END OPPOSITE WIRE ENTRY.

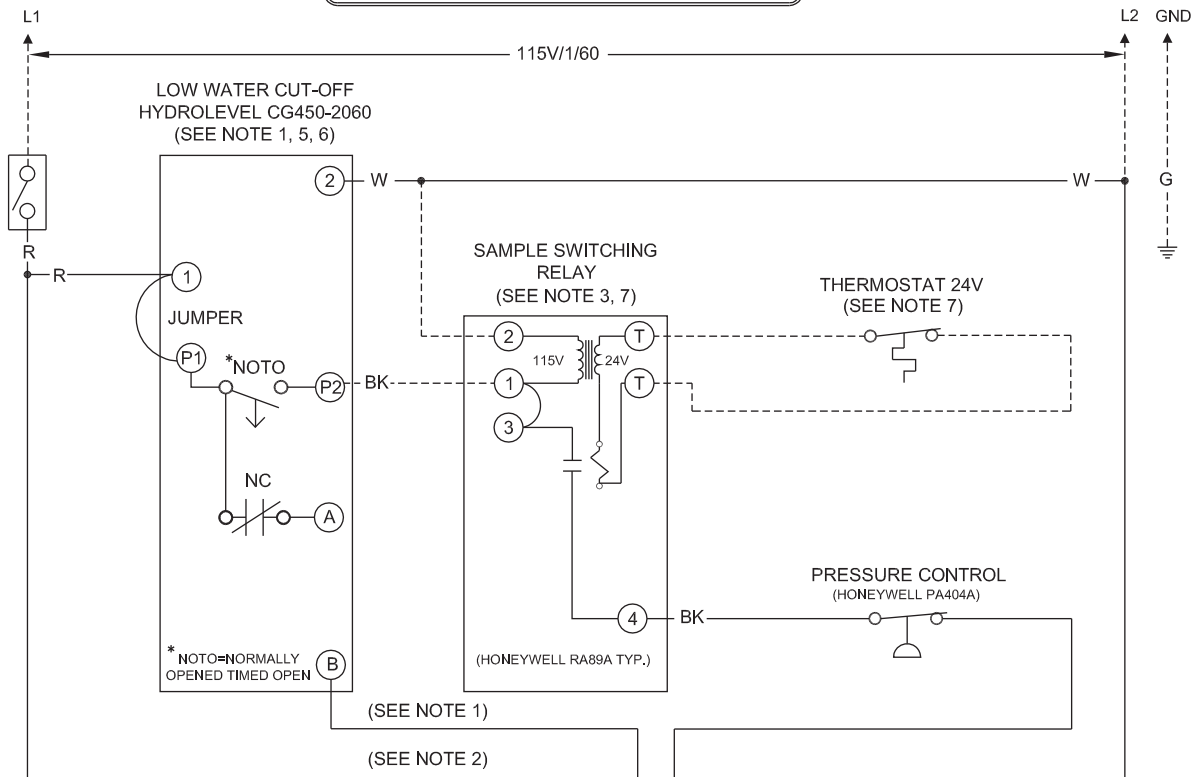
LEGEND:



NOTES:

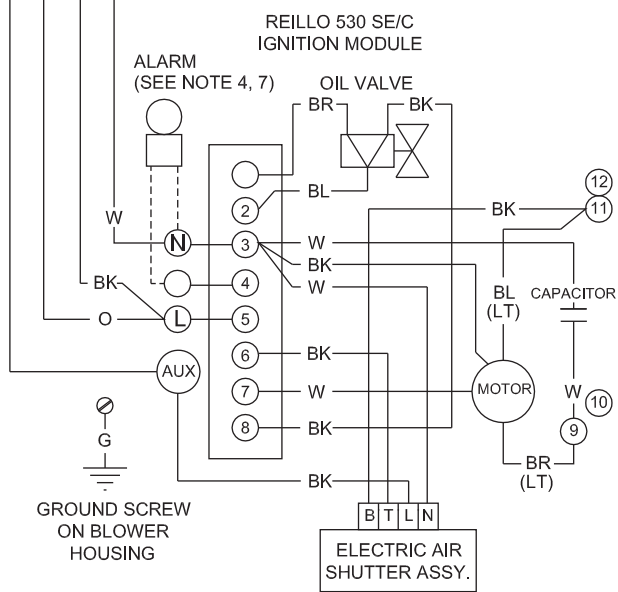
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2. RED WIRE TERMINATES IN BURNER JUNCTION BOX FOR RIELLO BURNERS WITH HYDRAULIC SHUTTER CONTROL. RED WIRE PROVIDES CONSTANT POWER FOR ELECTRIC SHUTTER ACTIVATION.
3. (SAMPLE:HONEYWELL RA89A SHOWN) SWITCHING RELAY BY OTHERS. FOLLOW MANUFACTURERS INSTALLATION INSTRUCTIONS.
4. FOR BURNER LOCKOUT ALARM USE TERMINALS 3, 4. THESE TERMINALS ARE CONNECTED TO CONTACTS ACTIVATED DURING LOCKOUT WHICH SUPPLY 120 VAC RATED FOR 1 A.
5. CONTACTS FOR LOW WATER ALARM OR AUTOMATIC WATER FEED. USE ONLY HYDROLEVEL APPROVED WATER FEED SYSTEMS, OR FLOODING COULD OCCUR.
6. THE HYDROLEVEL PROBE CIRCUIT IS NORMALLY OPEN UNTIL THE PROBE IS CONTACTED BY BOILER WATER OR FOAM. THE PROBE CIRCUIT IS TIMED TO OPEN, SHUTTING DOWN THE BOILER, AT REGULAR INTERVALS PROVIDING A STILL WATER TEST. THE STILL WATER TEST ALLOWS ANY FOAM TIME TO SETTLE PROVIDING AN ACCURATE WATER LEVEL READING. THE PROBE CIRCUIT TIMER IS RESET EACH TIME THE BURNER MOTOR ACTIVATES. THIS PROVIDES A FULL RUN TIME CYCLE EACH TIME THE BURNER FIRES. THE CG450-2060 HAS A 20 MINUTE RUN TIME, 60 SECOND STILL WATER TEST. (NOTO = NORMALLY OPENED TIMED OPEN)
7. BY OTHERS.
8. DRAWING NUMBER: 102-18-B, SHT 1 OF 2, REV 5.

RIELLO BURNER WITH ELECTRIC SHUTTER, LADDER DIAGRAM, STEAM BOILERS WITH CG450-2060 L.W.C.O., **WITHOUT** TANKLESS COIL



NOTES:

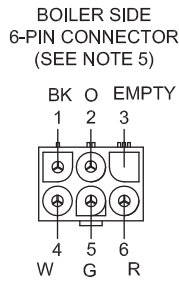
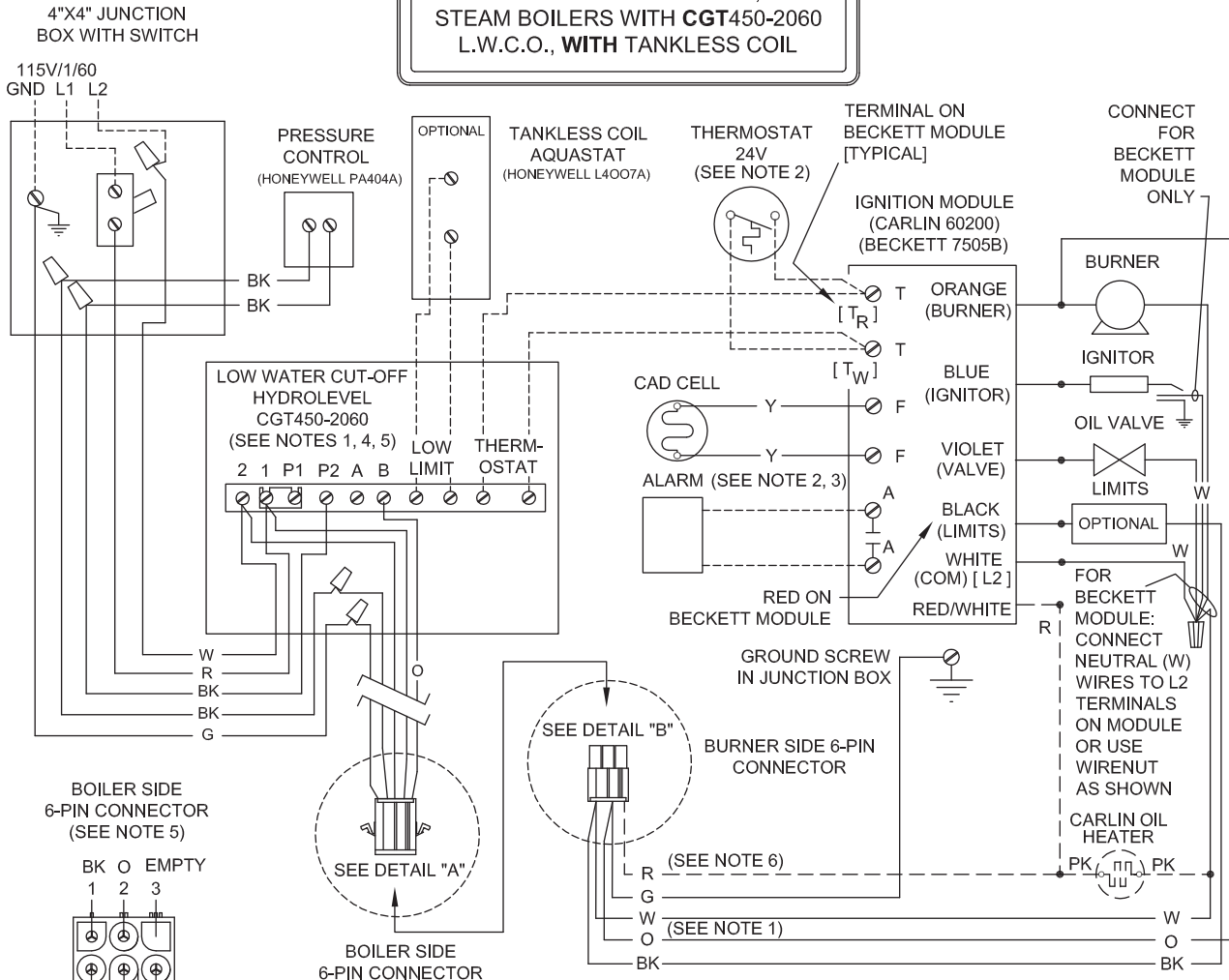
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7. BY OTHERS.
8. DRAWING NUMBER: 102-18-B, SHT 2 OF 2, REV 5.



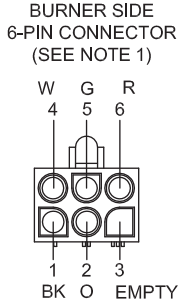
LEGEND:



**CARLIN AND BECKETT BURNERS,
CONNECTION DIAGRAM,
STEAM BOILERS WITH CGT450-2060
L.W.C.O., WITH TANKLESS COIL**



DETAIL "A"

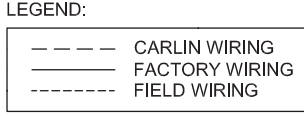


DETAIL "B"

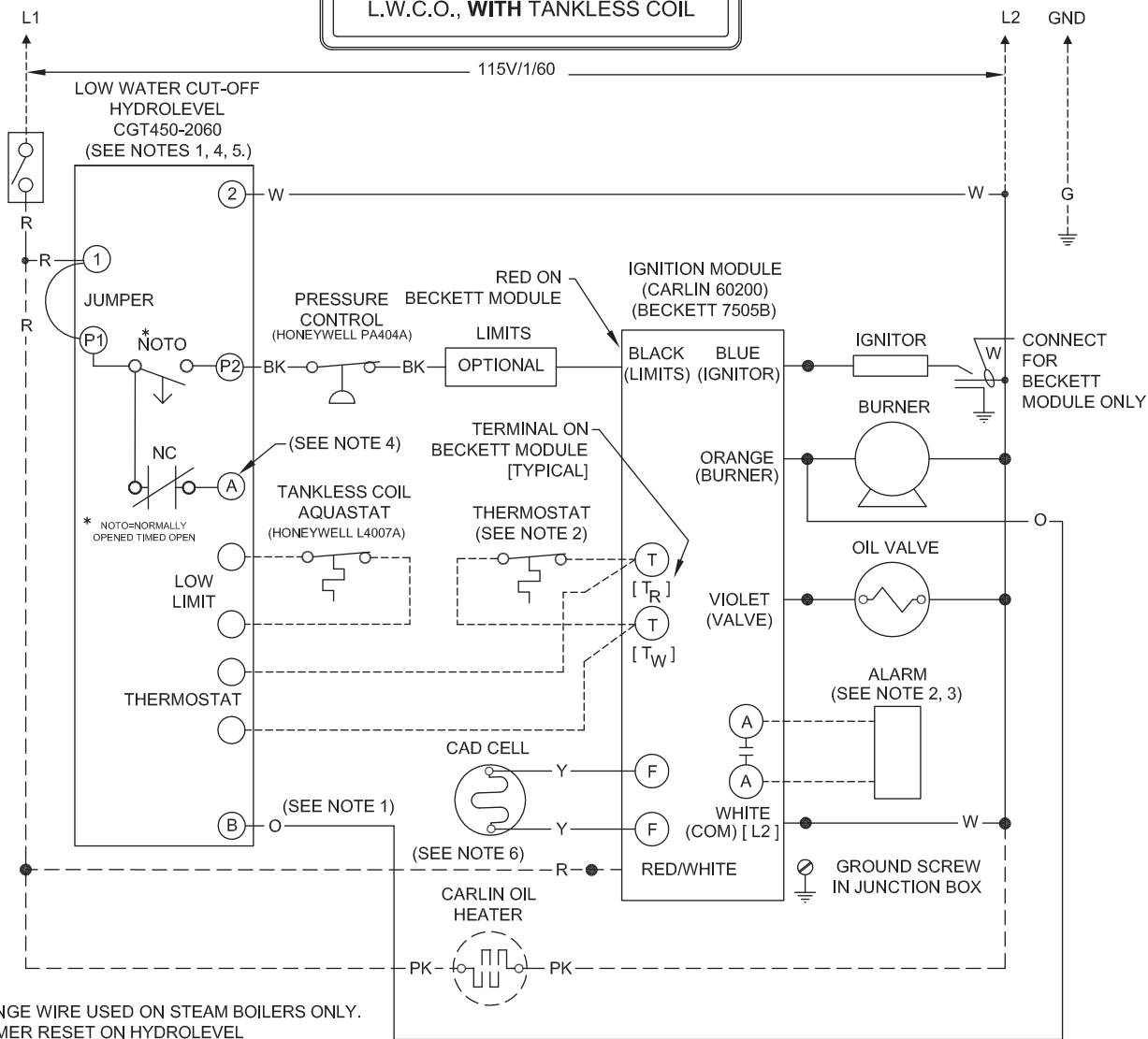
DETAILS VIEWED FROM END OPPOSITE WIRE ENTRY.

NOTES:

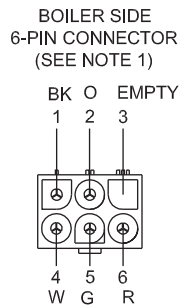
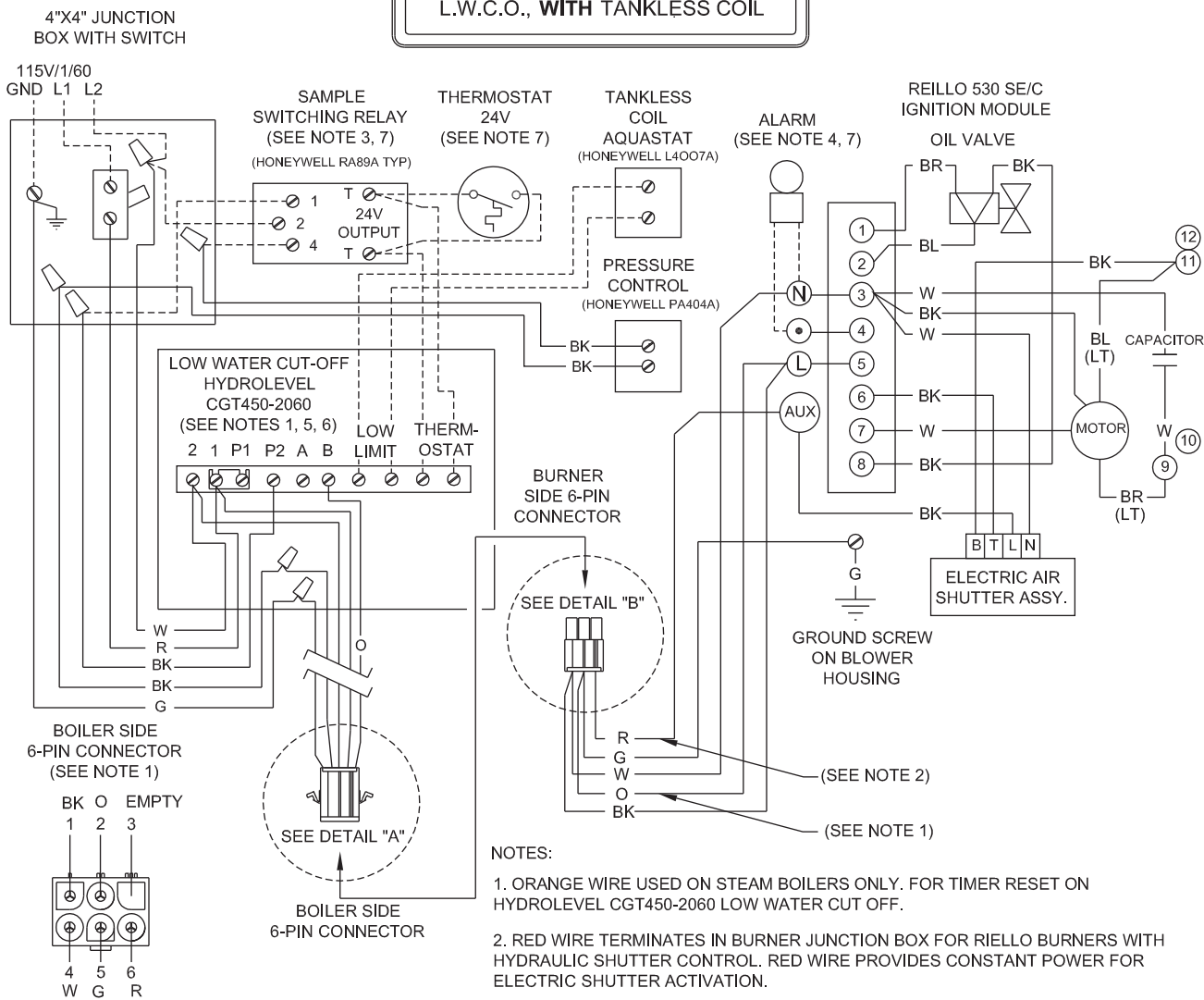
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3. BURNER LOCKOUT ALARM: DRY ALARM CONTACTS RATED 24V AC/DC, 2A.
4. CONTACT "A" FOR LOW WATER ALARM OR AUTOMATIC WATER FEED. USE ONLY HYDROLEVEL APPROVED WATER FEED SYSTEMS, OR FLOODING COULD OCCUR.
5. THE HYDROLEVEL PROBE CIRCUIT IS NORMALLY OPEN UNTIL THE PROBE IS CONTACTED BY BOILER WATER OR FOAM. THE PROBE CIRCUIT IS TIMED TO OPEN, SHUTTING DOWN THE BOILER, AT REGULAR INTERVALS PROVIDING A STILL WATER TEST. THE STILL WATER TEST ALLOWS ANY FOAM TIME TO SETTLE PROVIDING AN ACCURATE WATER LEVEL READING. THE STILL WATER TEST IS SUSPENDED BY THE TANKLESS COIL AQUASTAT DURING DOMESTIC HOT WATER PRODUCTION. THE PROBE CIRCUIT TIMER IS RESET EACH TIME THE BURNER MOTOR ACTIVATES. THIS PROVIDES A FULL RUN TIME CYCLE EACH TIME THE BURNER FIRES. THE CGT450-2060 HAS A 20 MINUTE RUN TIME, 60 SECOND STILL WATER TEST. (NOTO = NORMALLY OPENED TIMED OPEN)
6. CARLIN IGNITION MODULE USES CONSTANT POWER FROM RED WIRE.
7. DRAWING NUMBER: 103-48-B-1-C



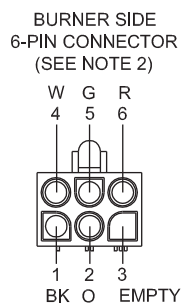
**CARLIN AND BECKETT BURNERS,
LADDER DIAGRAM,
STEAM BOILERS WITH CGT450-2060
L.W.C.O., WITH TANKLESS COIL**



RIELLO BURNER WITH ELECTRIC SHUTTER, CONNECTION DIAGRAM, STEAM BOILERS WITH CGT450-2060 L.W.C.O., WITH TANKLESS COIL



DETAIL "A"



DETAIL "B"

DETAILS VIEWED FROM END OPPOSITE WIRE ENTRY.

NOTES:

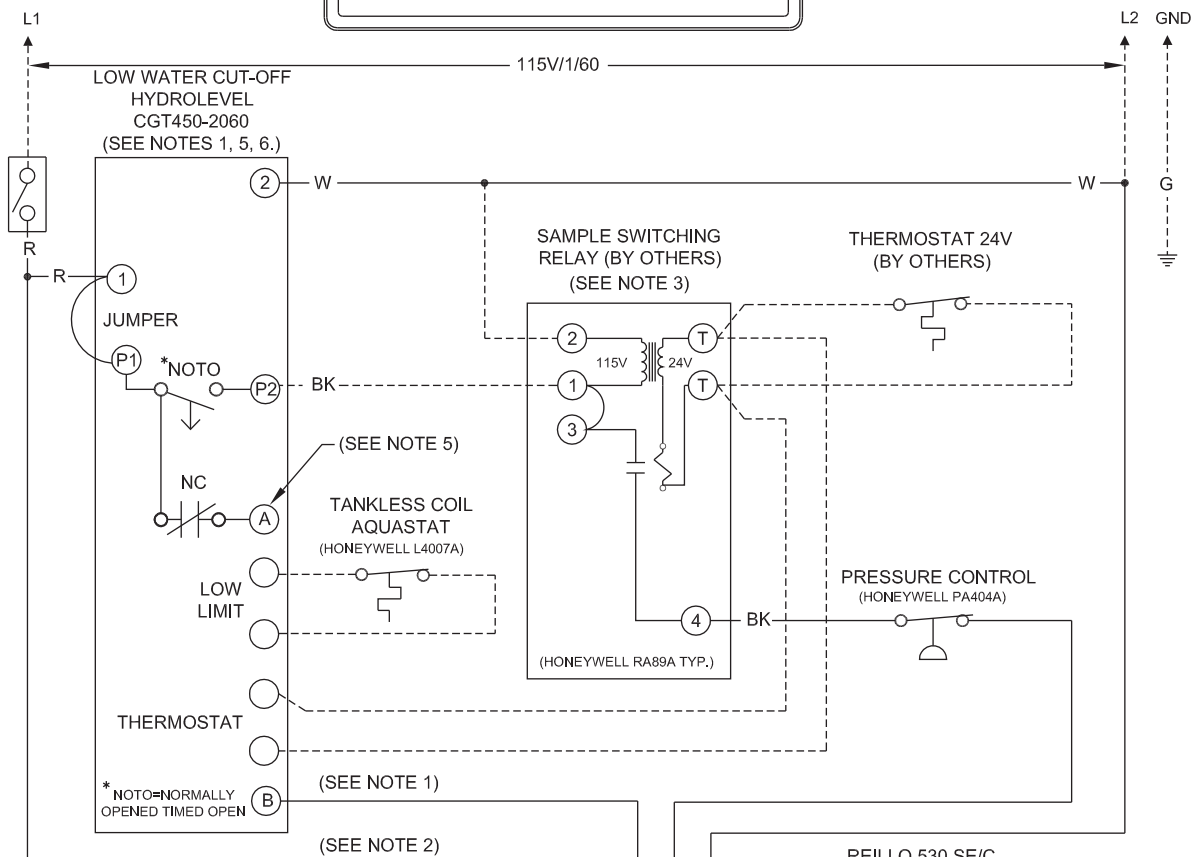
1. ORANGE WIRE USED ON STEAM BOILERS ONLY. FOR TIMER RESET ON HYDROLEVEL CGT450-2060 LOW WATER CUT OFF.
2. RED WIRE TERMINATES IN BURNER JUNCTION BOX FOR RIELLO BURNERS WITH HYDRAULIC SHUTTER CONTROL. RED WIRE PROVIDES CONSTANT POWER FOR ELECTRIC SHUTTER ACTIVATION.
3. (SAMPLE: HONEYWELL RA89A SHOWN) SWITCHING RELAY BY OTHERS. FOLLOW MANUFACTURERS INSTALLATION INSTRUCTIONS.
4. FOR BURNER LOCKOUT ALARM USE TERMINALS 3, 4. THESE TERMINALS ARE CONNECTED TO CONTACTS ACTIVATED DURING LOCKOUT WHICH SUPPLY 120 VAC RATED FOR 1 A.
5. CONTACTS FOR LOW WATER ALARM OR AUTOMATIC WATER FEED. USE ONLY HYDROLEVEL APPROVED WATER FEED SYSTEMS, OR FLOODING COULD OCCUR.
6. THE HYDROLEVEL PROBE CIRCUIT IS NORMALLY OPEN UNTIL THE PROBE IS CONTACTED BY BOILER WATER OR FOAM. THE PROBE CIRCUIT IS TIMED TO OPEN, SHUTTING DOWN THE BOILER, AT REGULAR INTERVALS PROVIDING A STILL WATER TEST. THE STILL WATER TEST ALLOWS ANY FOAM TIME TO SETTLE PROVIDING AN ACCURATE WATER LEVEL READING. THE STILL WATER TEST IS SUSPENDED BY THE TANKLESS COIL AQUASTAT DURING DOMESTIC HOT WATER PRODUCTION. THE PROBE CIRCUIT TIMER IS RESET EACH TIME THE BURNER MOTOR ACTIVATES. THIS PROVIDES A FULL RUN TIME CYCLE EACH TIME THE BURNER FIRES. THE CGT450-2060 HAS A 20 MINUTE RUN TIME, 60 SECOND STILL WATER TEST.

LEGEND:

7. BY OTHERS.
8. DRAWING NUMBER: 103-49-B, SHT 1 OF 2, REV 1.

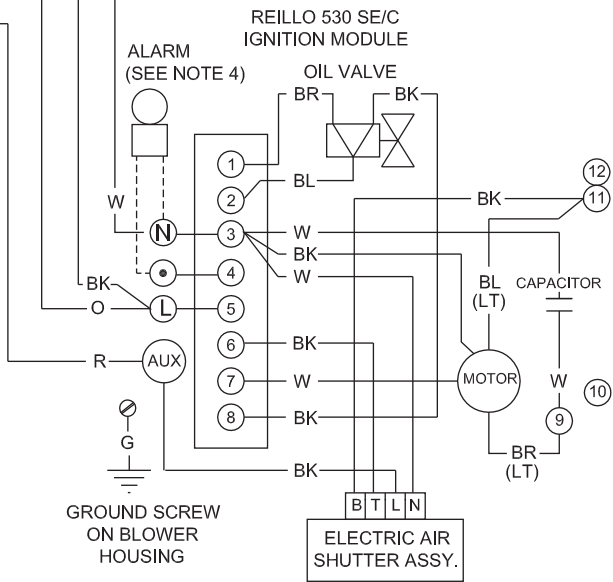


RIELLO BURNER WITH ELECTRIC SHUTTER, LADDER DIAGRAM, STEAM BOILERS WITH CGT450-2060 L.W.C.O., WITH TANKLESS COIL



NOTES:

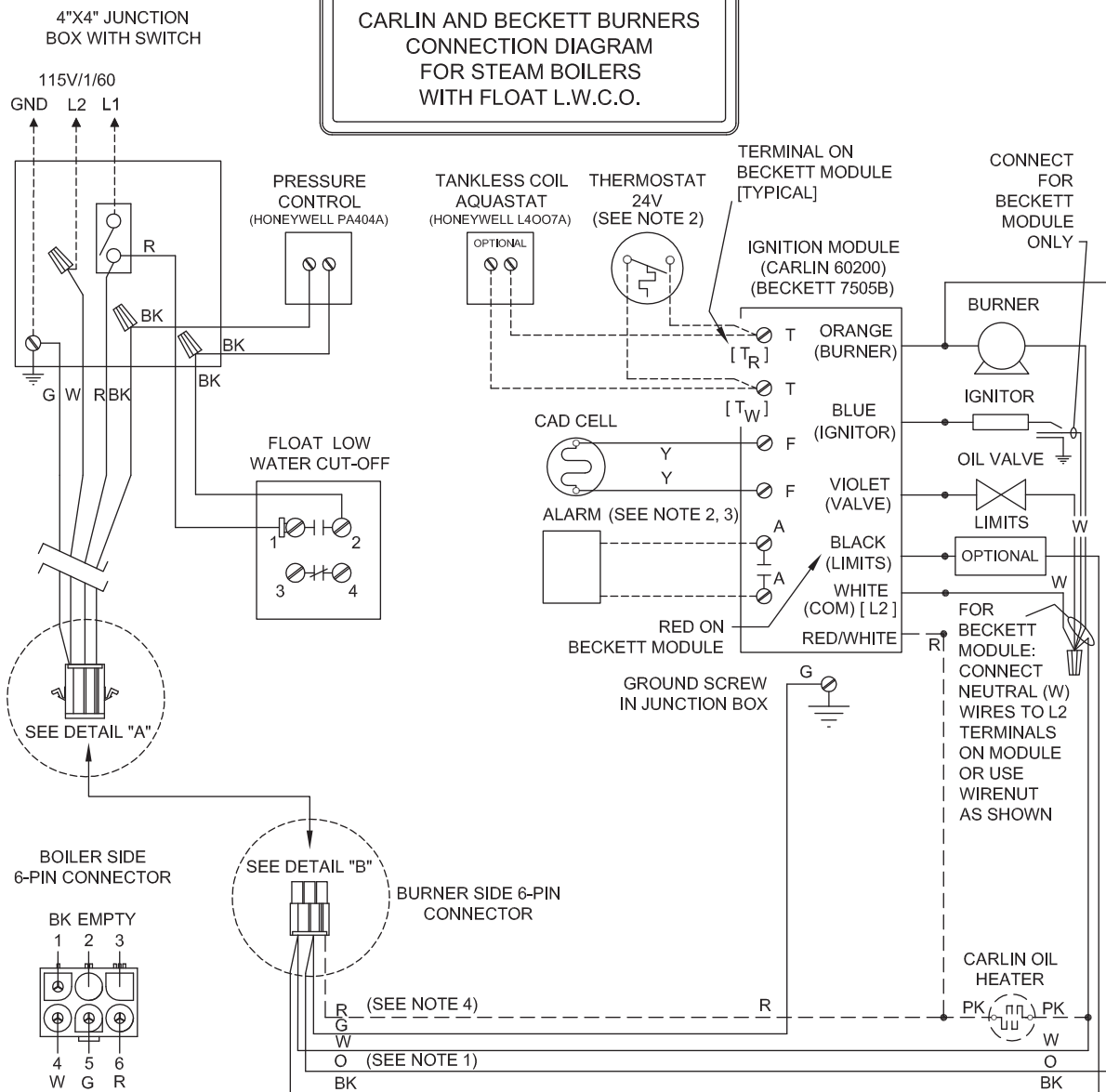
1. ORANGE WIRE USED ON STEAM BOILERS ONLY. FOR TIMER RESET ON HYDROLEVEL CGT450-2060 LOW WATER CUT OFF.
2. RED WIRE TERMINATES IN BURNER JUNCTION BOX FOR RIELLO BURNERS WITH HYDRAULIC SHUTTER CONTROL. RED WIRE PROVIDES CONSTANT POWER FOR ELECTRIC SHUTTER ACTIVATION.
3. (SAMPLE:HONEYWELL RA89A SHOWN) SWITCHING RELAY BY OTHERS. FOLLOW MANUFACTURERS INSTALLATION INSTRUCTIONS.
4. FOR BURNER LOCKOUT ALARM USE TERMINALS 3, 4. THESE TERMINALS ARE CONNECTED TO CONTACTS ACTIVATED DURING LOCKOUT WHICH SUPPLY 120 VAC RATED FOR 1 A.
5. CONTACTS FOR LOW WATER ALARM OR AUTOMATIC WATER FEED. USE ONLY HYDROLEVEL APPROVED WATER FEED SYSTEMS, OR FLOODING COULD OCCUR.
6. THE HYDROLEVEL PROBE CIRCUIT IS NORMALLY OPEN UNTIL THE PROBE IS CONTACTED BY BOILER WATER OR FOAM. THE PROBE CIRCUIT IS TIMED TO OPEN, SHUTTING DOWN THE BOILER, AT REGULAR INTERVALS PROVIDING A STILL WATER TEST. THE STILL WATER TEST ALLOWS ANY FOAM TIME TO SETTLE PROVIDING AN ACCURATE WATER LEVEL READING. THE STILL WATER TEST IS SUSPENDED BY THE TANKLESS COIL AQUASTAT DURING DOMESTIC HOT WATER PRODUCTION. THE PROBE CIRCUIT TIMER IS RESET EACH TIME THE BURNER MOTOR ACTIVATES. THIS PROVIDES A FULL RUN TIME CYCLE EACH TIME THE BURNER FIRES. THE CGT450-2060 HAS A 20 MINUTE RUN TIME, 60 SECOND STILL WATER TEST.



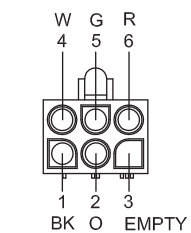
LEGEND:



**CARLIN AND BECKETT BURNERS
CONNECTION DIAGRAM
FOR STEAM BOILERS
WITH FLOAT L.W.C.O.**



DETAIL "A"



DETAIL "B"

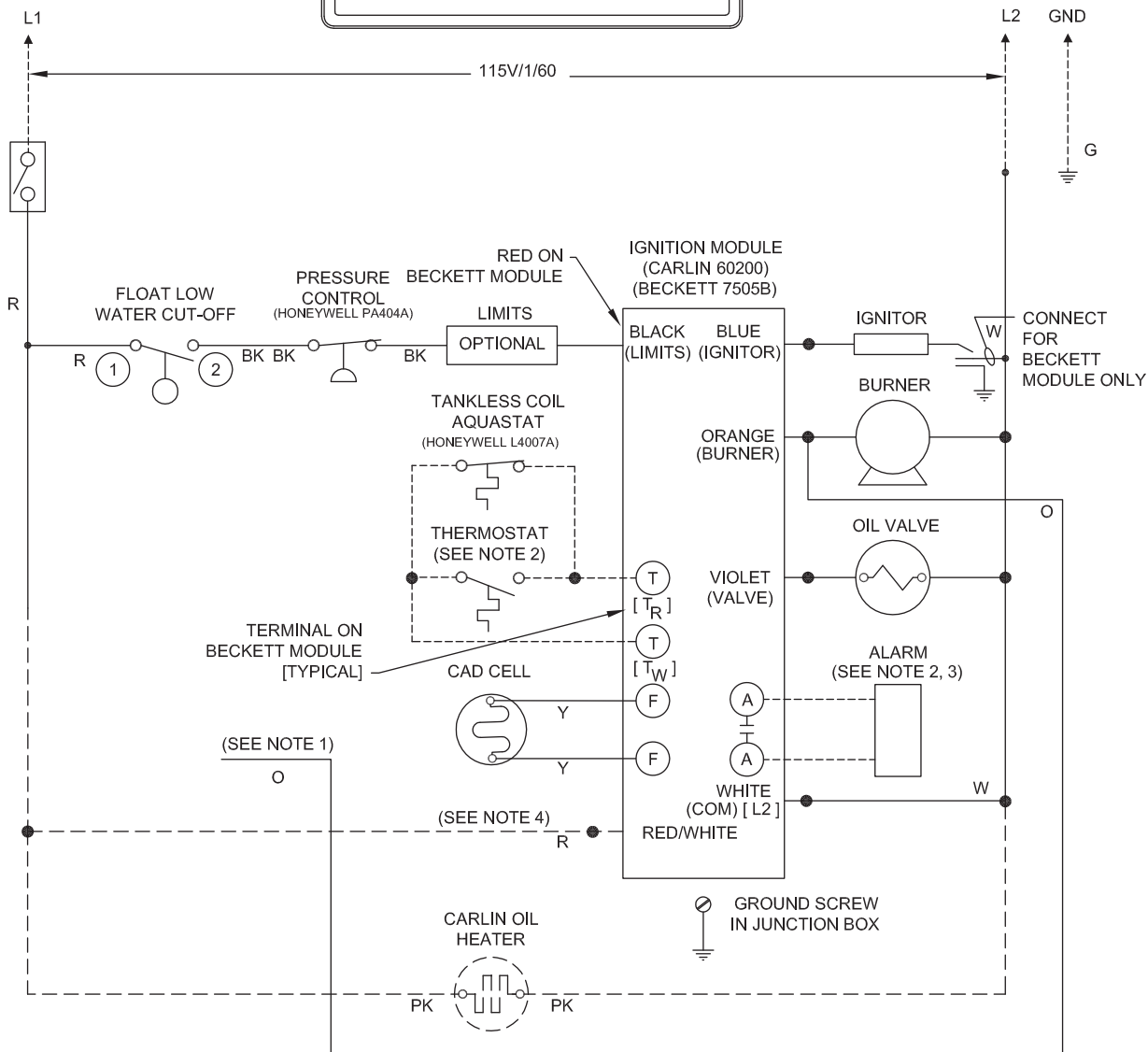
(SEE NOTE 1)
DETAILS VIEWED FROM END
OPPOSITE WIRE ENTRY.

- NOTES:
1. ORANGE WIRE TERMINATES IN BURNER CONNECTOR AND IS ONLY REQUIRED ON STEAM BOILERS WITH HYDROLEVEL CG 450 LOW WATER CUT OFF.
 2. BURNER LOCKOUT ALARM: DRY ALARM CONTACTS RATED 24V AC/DC, 2A.
 3. CARLIN IGNITION MODULE USES CONSTANT POWER FROM RED WIRE.
 4. BY OTHERS.
 5. BOILERS EQUIPPED WITH FLOAT LOW WATER CUT-OFF USE JUNCTION BOX TO BURNER HARNESS FROM WATER BOILER (# 79004).
 6. DRAWING NUMBER: 102-23-B-1-B

LEGEND:

---	CARLIN WIRING
—	FACTORY WIRING
----	FIELD WIRING

**CARLIN AND BECKETT BURNERS
LADDER DIAGRAM
FOR STEAM BOILERS
WITH FLOAT L.W.C.O.**



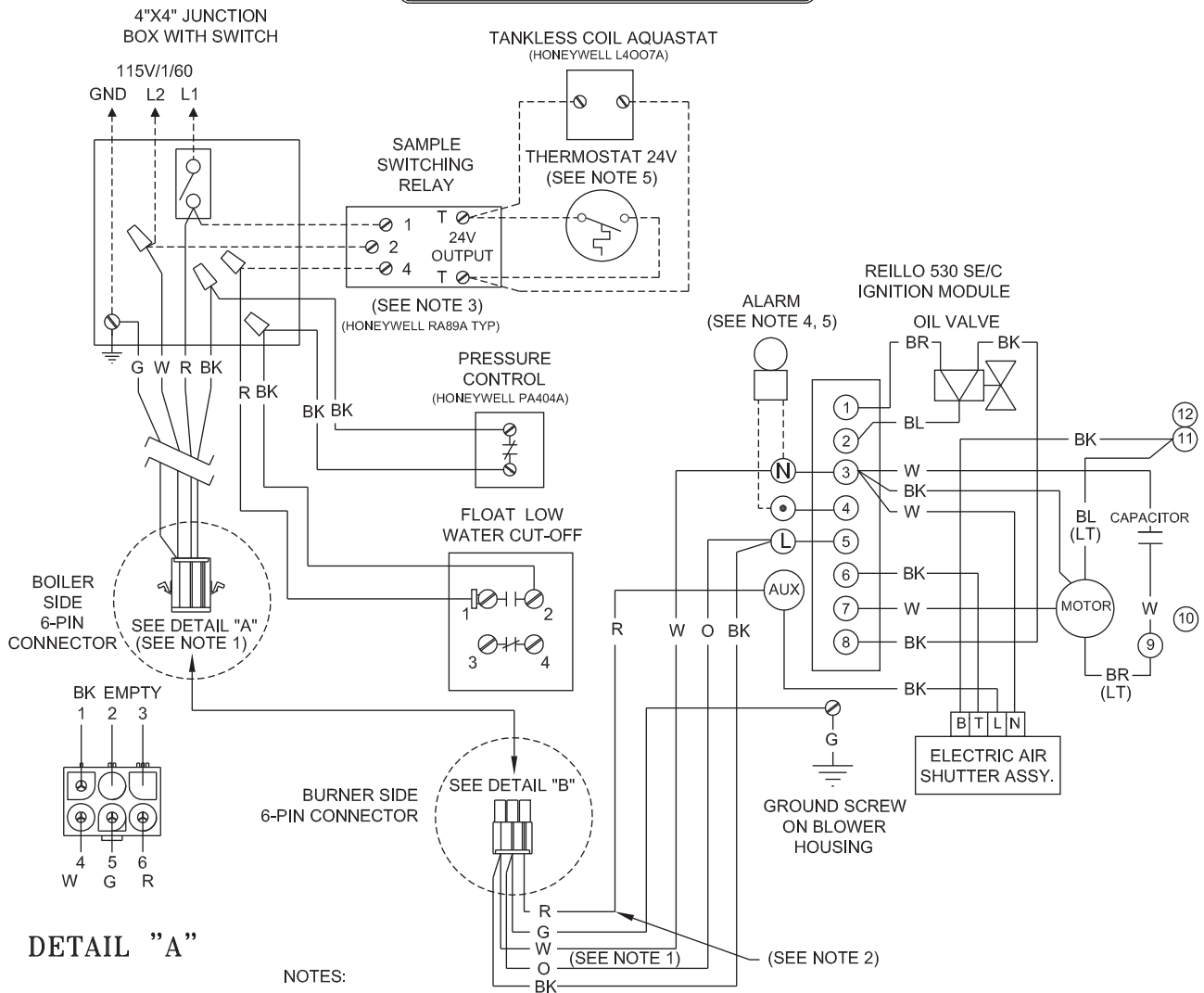
NOTES:

1. ORANGE WIRE TERMINATES IN BURNER CONNECTOR AND IS ONLY REQUIRED ON STEAM BOILERS WITH HYDROLEVEL CG 450 LOW WATER CUT OFF.
2. BURNER LOCKOUT ALARM: DRY ALARM CONTACTS RATED 24V AC/DC, 2A.
3. CARLIN IGNITION MODULE USES CONSTANT POWER FROM RED WIRE.
4. BY OTHERS.
5. BOILERS EQUIPPED WITH FLOAT LOW WATER CUT-OFF USE JUNCTION BOX TO BURNER HARNESS FROM WATER BOILER (# 79004).
6. DRAWING NUMBER: 102-23-B-2-B

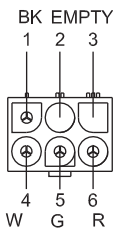
LEGEND:

---	CARLIN WIRING
—	FACTORY WIRING
----	FIELD WIRING

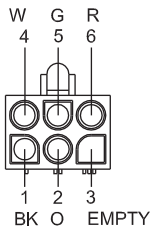
**RIELLO BURNER
WITH ELECTRIC SHUTTER
CONNECTION DIAGRAM
FOR STEAM BOILERS
WITH FLOAT L.W.C.O.**



DETAIL "A"



DETAIL "B"



(SEE NOTE 1)

DETAILS VIEWED FROM
END OPPOSITE WIRE
ENTRY.

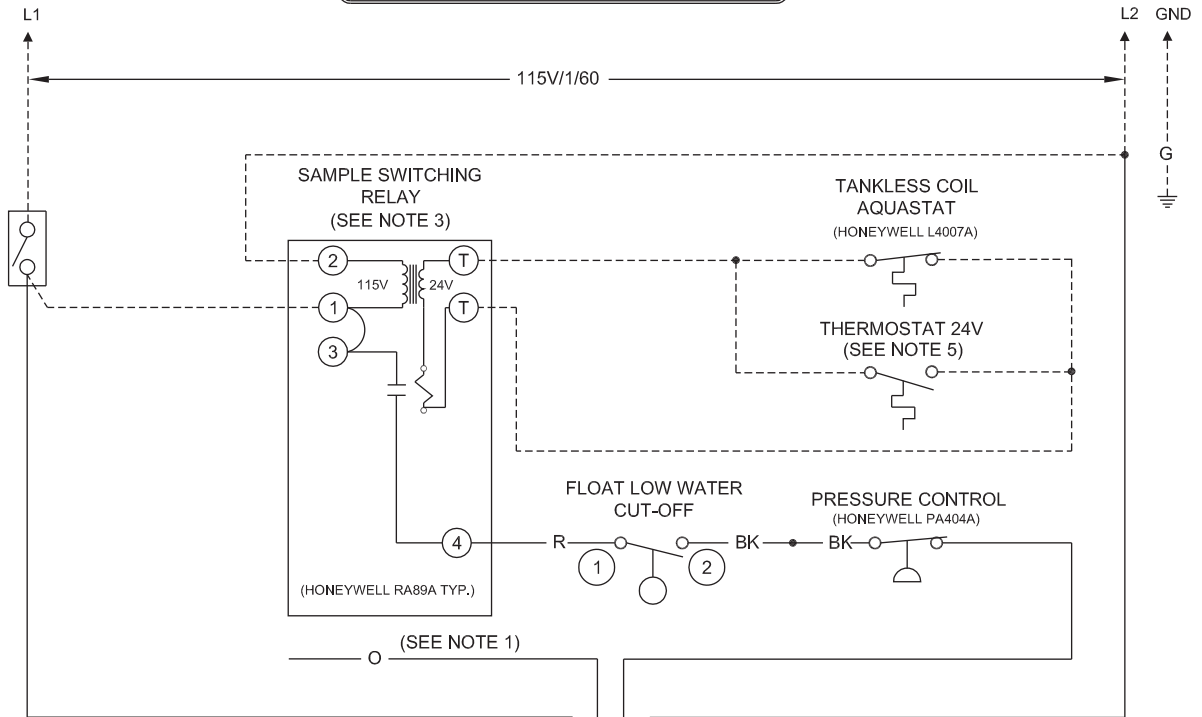
NOTES:

1. ORANGE WIRE TERMINATES IN BURNER CONNECTOR AND IS ONLY REQUIRED ON STEAM BOILERS WITH HYDROLEVEL CG 450 LOW WATER CUT OFF.
2. RED WIRE TERMINATES IN BURNER JUNCTION BOX FOR RIELLO BURNERS WITH HYDRAULIC SHUTTER CONTROL. RED WIRE PROVIDES CONSTANT POWER FOR ELECTRIC SHUTTER ACTIVATION.
3. (SAMPLE: HONEYWELL RA89A SHOWN) SWITCHING RELAY BY OTHERS. FOLLOW MANUFACTURERS INSTALLATION INSTRUCTION.
4. FOR BURNER LOCKOUT ALARM USE TERMINALS 3, 4. THESE TERMINALS ARE CONNECTED TO CONTACTS ACTIVATED DURING LOCKOUT WHICH SUPPLY 120 VAC RATED FOR 1 A.
5. BY OTHERS.
6. BOILERS EQUIPED WITH FLOAT STYLE LOW WATER CUT-OFF USE JUNCTION BOX TO BURNER HARNESS FROM WATER BOILER (#79004).
7. DRAWING NUMBER: 102-24-B, SHT 1 OF 2, REV1

LEGEND:

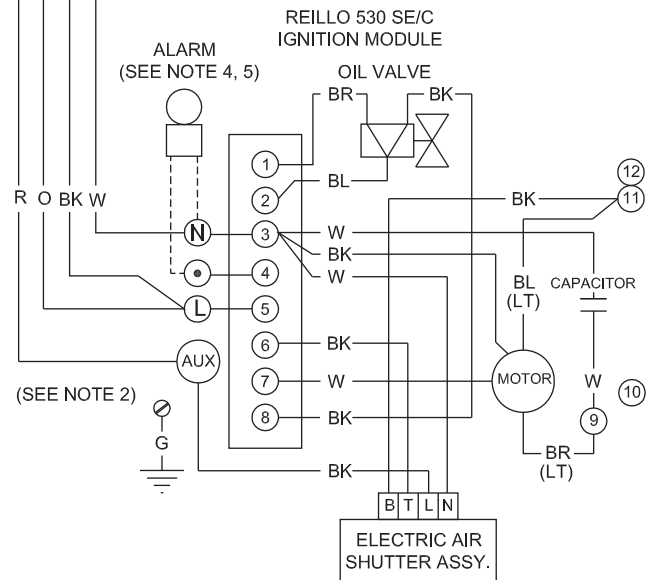


**RIELLO BURNER
WITH ELECTRIC SHUTTER
LADDER DIAGRAM
FOR STEAM BOILERS
WITH FLOAT L. W. C.O.**



NOTES:

1. ORANGE WIRE TERMINATES IN BURNER CONNECTOR AND IS ONLY REQUIRED ON STEAM BOILERS WITH HYDROLEVEL CG450 LOW WATER CUT OFF.
2. RED WIRE TERMINATES IN BURNER JUNCTION BOX FOR RIELLO BURNERS WITH HYDRAULIC SHUTTER CONTROL. RED WIRE PROVIDES CONSTANT POWER FOR ELECTRIC SHUTTER ACTIVATION.
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5. BY OTHERS.
6. BOILERS EQUIPED WITH FLOAT STYLE LOW WATER CUT-OFF USE JUNCTION BOX TO BURNER HARNESS FROM WATER BOILER (#79004).
7. DRAWING NUMBER: 102-24-B, SHT 2 OF 2, REV 1



LEGEND:





WESTCAST, INC.
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