

INSTALLATION INSTRUCTIONS
PARKER DIRECT FIRED HOT WATER BOILERS
OIL FIRED OR COMBINATION GAS/OIL FIRED

INST. 203-5-IV-V
MARCH 1974

BEFORE INSTALLING THE BOILER, BE CERTAIN TO CAREFULLY READ THE "GENERAL BASIC INSTALLATION INSTRUCTIONS" ON DIRECT FIRED HOT WATER BOILERS, AS THESE ARE ESSENTIAL PREREQUISITES TO THE INSTRUCTIONS THAT FOLLOW.

THE PARKER DIRECT FIRED HOT WATER BOILER IS RECOMMENDED FOR USE ON ALL FORMS OF CLOSED SYSTEM BUILDING OR PROCESS HEATING APPLICATIONS.

7G GAS SUPPLY (COMBINATION GAS/OIL FIRED ONLY): THE METER AND GAS LINE SIZE SHOULD BE SUFFICIENT TO ACCOMMODATE THE BTU INPUT SHOWN ON THE SPECIFICATION SHEET, ITEM 7C, AND IN COMPLETE COMPLIANCE WITH CODE. SEE "GENERAL BASIC INSTALLATION INSTRUCTIONS, PARAGRAPH VIII," FOR INFORMATION ON GAS SUPPLY.

ONE 7GC GAS COCK IS FURNISHED AND AN ADDITIONAL GAS SHUTOFF COCK (NOT FURNISHED) IS REQUIRED TO BE INSTALLED NEAR THE BOILER. GAS LINES SHOULD BE BLOWN OUT BEFORE CONNECTING TO THE BOILER AND A 7DL DRIP LEG SHOULD BE INSTALLED AT THE LOW POINT ON THE GAS LINE JUST BEFORE CONNECTING TO THE BOILER CONTROLS.

ON NATURAL GAS, AN INLET PRESSURE OF 10" TO 14" IS DESIRABLE. A GAS PRESSURE REGULATOR IS STANDARDLY FURNISHED TO REDUCE INLET PRESSURE TO THE DESIRED BURNER PRESSURE. SEE BOILER NAMEPLATE OR SPECIFICATION SHEET FOR THE REQUIRED PRESSURE AT THE BURNER GAUGE. SET REGULATOR FOR THIS PRESSURE. ON INLET PRESSURES EXCEEDING 14", A PROPER HIGH GAS PRESSURE REGULATOR MUST BE INSTALLED. ON INLET PRESSURES BELOW 10", CONSULT FACTORY.

A SEPARATE GAS INLET IS PROVIDED FOR THE PILOT AND THIS SHOULD BE CONNECTED TO A GAS LINE WHICH WILL NOT BE SHUT OFF IN THE EVENT OF A GAS INTERRUPTION. IT IS NECESSARY TO HAVE A SMALL GAS SUPPLY AVAILABLE EVEN WHEN THE BOILER IS FIRING ON OIL AS THE BURNER IS STANDARDLY FURNISHED WITH A GAS PILOT FOR BOTH GAS AND OIL FIRING.

8O OIL FUEL SUPPLY: A TWO PIPE SYSTEM (SUCTION AND RETURN) IS RECOMMENDED ON ALL INSTALLATIONS AND REQUIRED ON JOBS WITH OIL SUPPLY TANK BELOW BURNER LEVEL. A MINIMUM 3/8" SUCTION LINE IS REQUIRED UP TO 0-528 SIZE, 1/2" SUCTION LINE UP TO MODEL 0-1008 (OR GO-1008), 3/4" SUCTION LINE SIZE UP TO MODEL 0-2640 (OR GO-2640), AND 1" SUCTION LINE SIZE MODEL 0-3120 (OR GO-3120) AND LARGER. INCREASE SIZE OF SUCTION IF OVER 30' LONG. THE RETURN LINE MAY BE ONE SIZE SMALLER. ON ANY SUCTION LINE EXCEEDING 50' OR MORE THAN 10' LIFT, AN AUXILLIARY OIL PUMP IS REQUIRED TO KEEP CONTINUOUS FLOW OF OIL CIRCULATING THROUGH LINE AT ALL TIMES WHILE BOILER IS IN USE. AN OIL FILTER MUST BE INSTALLED NEAR THE BURNER. THE FUEL LINE CONNECTIONS AT THE BURNER SHOULD BE FLEXIBLE PIPE OR COPPER TUBING FOR SERVICE CONVENIENCE. FOR PROPER OIL PIPING DETAILS, SEE SPECIAL DRAWINGS ON FUEL TANKS AND BURNERS.

15 HOT WATER OUTLET: THIS CONNECTION IS THE UPPER HEADER OF THE BOILER AS SHOWN ON THE DRAWING AND MUST BE ON THE SAME SIDE OF THE BOILER AS THE TEMPERATURE CONTROLS AND TEMPERATURE PRESSURE GAUGE. THIS CONNECTION CAN BE REDUCED IN SIZE TO MEET THE REQUIREMENTS OF THE PARTICULAR CIRCULATING LINES BUT SHOULD NOT BE REDUCED TOO SMALL TO IMPAIR CIRCULATION AND SHOULD NEVER BE SMALLER THAN THE CIRCULATING PUMP. BOILERS 0-672 AND SMALLER ARE FURNISHED WITH SCREWED CONNECTIONS; MODELS 0-864 (OR GO-864) AND LARGER ARE FURNISHED WITH FLANGED CONNECTIONS. LINES SHOULD BE RUN AS STRAIGHT AS POSSIBLE.

16 RETURN WATER INLET: THIS CONNECTION IS LOCATED IN THE LOWER HEADER OF THE BOILER ON THE OPPOSITE SIDE FROM THE OUTLET AS SHOWN ON THE DRAWING. ALL LINES SHOULD BE ADEQUATELY SIZED NEVER LESS THAN THE CIRCULATOR AND RUN AS STRAIGHT AS POSSIBLE.

17 LOW WATER CUTOFF: A LOW WATER CUTOFF IS FURNISHED FOR THE PURPOSE OF SHUTTING OFF THE MAIN FUEL VALVES ON LOW WATER EXPERIENCE. AN APPROVED PROBE TYPE LOW WATER CUTOFF IS RECOMMENDED ON ALL BOILERS AS REGULAR FLUSHING IS NOT REQUIRED AND IT CAN CONVENIENTLY BE MOUNTED IN THE BOILER OUTLET HEADER. IF FLOAT TYPE LOW WATER CUTOFF IS FURNISHED, IT SHOULD BE INSTALLED WITH A DRAIN VALVE AND REGULARLY FLUSHED. WHEN AN ADDITIONAL LOW WATER CUTOFF OR A COMBINATION FEEDER IS USED, IT SHOULD BE INSTALLED IN THE FIELD AT THE SAFE SYSTEM WATER LEVEL AND WIRED TO TERMINALS PROVIDED ON THE BOILER.

17D DRAIN: THE 17A DRAIN VALVE (NF), SHOULD BE INSTALLED ON THE LOWER HEADER OF THE BOILER. IT SHOULD BE CONNECTED FULL SIZE TO AN APPROVED DRAIN RECEPTACLE FOR FLUSHING THE BOILER, WHEN NECESSARY.

18 RELIEF VALVE: MUST BE MOUNTED ON THE TOP HEADER OF THE BOILER. THE RELIEF VALVE OUTLET MUST BE PIPED FULL SIZE, PREFERABLY DOWNWARD TO A SAFE POINT OF DISCHARGE IN COMPLIANCE WITH LOCAL CODE. THE PIPING SHOULD BE PROPERLY SUPPORTED SO THERE WILL BE NO STRAIN ON THE RELIEF VALVE TO CAUSE POSSIBLE DAMAGE OR BREAKAGE.

20 TEMPERATURE PRESSURE GAUGE: FOR PURPOSE OF REGISTERING TEMPERATURE AND PRESSURE AT THE BOILER. IT MAY BE DESIRABLE TO INSTALL ANOTHER TEMPERATURE GAUGE IN THE SYSTEM AT THE POINT OF REQUIRED TEMPERATURE CONTROL.

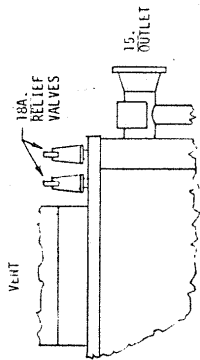
21 HIGH LIMIT & OPERATING CONTROL: MOUNTED ON THE BOILER AND WIRED FOR THE PURPOSE OF SHUTTING OFF THE MAIN FUEL VALVES WHEN THE BOILER WATER REACHES THE DESIRED TEMPERATURE. THE OPERATING CONTROL SHOULD BE SET FOR THE DESIRED CIRCULATING BOILER WATER TEMPERATURE AND THE HIGH LIMIT CONTROL SHOULD BE SET ADEQUATELY ABOVE THAT TEMPERATURE. SEE BURNER CONTROL SYSTEM SHEET.

23 CIRCULATING PUMP: REQUIRED ON ALL INSTALLATIONS WITH NOT LESS THAN 2 FEET OF STRAIGHT PIPE INTO THE SUCTION SIDE OF THE PUMP. PREFERRED OPERATION IS FOR THE PUMP TO RUN CONTINUOUSLY DURING BOILER OPERATION BUT IT MAY BE CYCLED WITH THE LOAD IF THE SYSTEM IS SO DESIGNED. PUMP AND MOTOR SHOULD BE LUBRICATED BEFORE USING. BE SURE TO INSTALL PUMP WITH OIL CUPS UPWARD. SEE "OPERATING INSTRUCTIONS" FOR MORE COMPLETE INFORMATION.

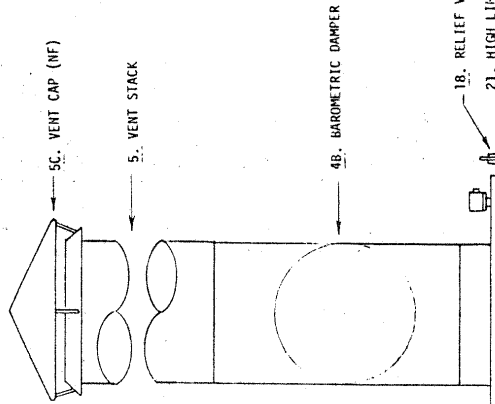
NOTE: EXPANSION TANK (NF) AND AIR CONTROL FITTINGS (NF) REQUIRED IN SYSTEM FOR PROPER OPERATION AND ELIMINATION OF AIR AND NOISE IN CIRCULATING LINES.

REFER TO DETAILED SYSTEM DRAWINGS AND INSTRUCTIONS FOR MORE COMPLETE INSTALLATION INSTRUCTIONS.

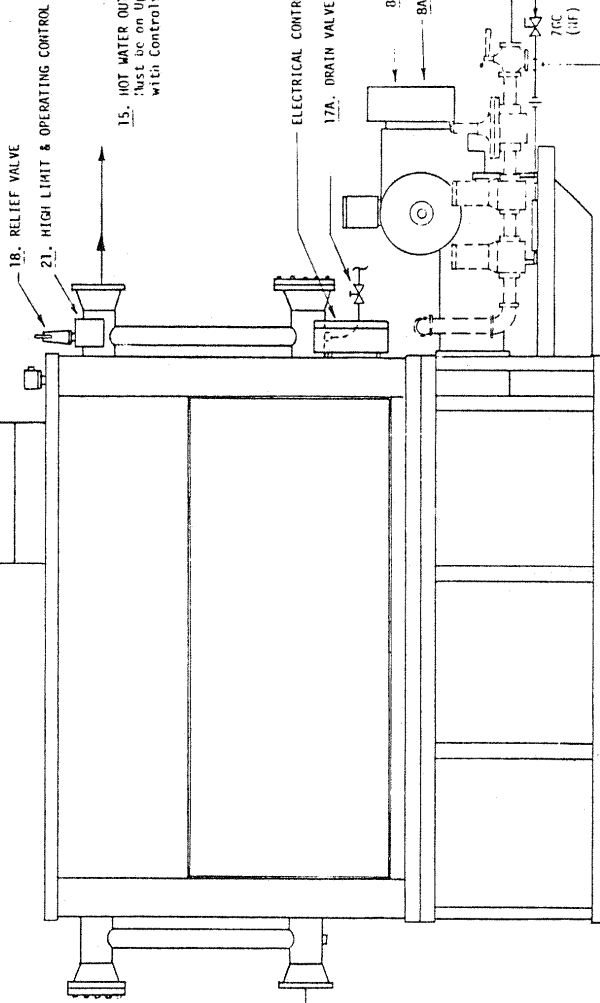
PARKER DIRECT FIRED HOT WATER BOILER OIL OR COMBINATION GAS/OIL FIRED — INSTALLATION DRAWING



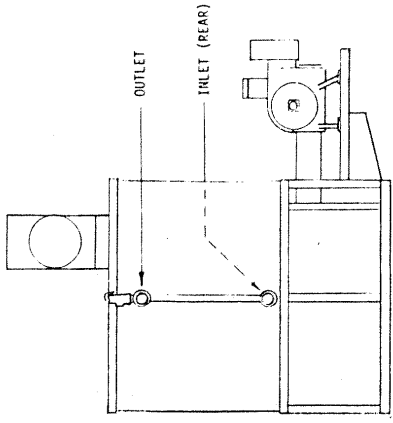
SECTION U-4032 (OR GO-4032) & U-5000 (OR GO-5000)
Two Relief Valves furnished located as shown
on cabinet top.



15. HOT WATER OUTLET
Must be on Upper Header
with Controls.



FRONT VIEW



FRONT VIEW
MODELS U-432 TO U-1008
MODELS GO-864 TO GO-1008
NOTE: OUTLET & INLET ARE AT FRONT AND
REAR OF BOILER ON THESE MODELS.
SEE BELOW FOR LOCATION ON LARGER MODELS.

NOTE: GAS INLETS AND GAS CONTROLS
Furnished only on Combination Gas/Oil
Fired Boilers.

NOTE: MODELS U-864 (OR GO-864) & LARGER FURNISHED WITH FLANGED CONNECTIONS.
ALL SMALLER SIZES FURNISHED WITH SCREWED CONNECTIONS.
NOTE: CIRCULATING PUMP REQUIRED ON ALL INSTALLATIONS.
NOTE: LOW WATER CUTOFF STANDARDLY FURNISHED MOUNTED ON BOILER OUTLET HEADER.
WHICH PROVIDES LOW WATER CUTOFF OR COMBINATION FEEDER USED, SHOULD BE
INSTALLED IN FIELD AT SAFE SYSTEM LEVEL.

USED ON DIRECT FIRED HOT WATER BOILERS	PART NAME	INSTALLATION DRAWING
FOR PARKER INDUSTRIAL HOT WATER BOILER-OIL OR COMBINATION GAS/OIL FIRED	SCALE	SUPERSEDES NO
DATE J/73	APPROVED	DWG. NO. 11/59
PARKER BOILER CO. 5930 BANDINI BLVD. LOS ANGELES, CALIF. 90040-7999		DWS-14-V-1-81-1