INSTALLATION AND MAINTENANCE INSTRUCTIONS
PARKER INDUSTRIAL HORIZONTAL DRUM STEAM BOILERS 30 TO 50 H.P.
OIL OR COMBINATION GAS/OIL FIRED

BEFORE INSTALLING THE BOILER, BE CERTAIN TO CAREFULLY READ THE "GENERAL BASIC INSTALLATION INSTRUCTIONS" ON STEAM BOILERS AS THESE ARE ESSENTIAL PREREQUISITES TO THE INSTRUCTIONS THAT FOLLOW. FOR BLOWDOWN CONNECTIONS AND RETURN SYSTEMS, SEE SEPARATE DETAILED INSTRUCTION SHEETS.

IN ORDER TO RECEIVE THE BEST OPERATING LIFE AND EFFICIENCY FROM YOUR PARKER INDUSTRIAL BOILER, IT IS ESSENTIAL TO FOLLOW THE MANUFACTURER'S MINIMUM STANDARDS AND ANY ADDITIONAL REQUIREMENTS OF LOCAL AND STATE CODES. THE DIAGRAM FURNISHED ILLUSTRATES THE RECOMMENDED PROCEDURE FOR PROPER INSTALLATION OF THE BOILER AND EQUIPMENT. THE EQUIPMENT SHOULD BE INSTALLED IN LOCATION FOR ACCESSIBILITY AND EFFICIENT OPERATION. THE BOILER MUST BE INSTALLED ON A NON-COMBUSTIBLE SURFACE.

4 & 5 VENT STACK: CAREFULLY REVIEW THE "GENERAL BASIC INSTALLATION INSTRUCTIONS, PARAGRAPH VI" FOR THE GENERAL REQUIREMENTS FOR A PROPER AND SAFE VENT. THE 4B DRAFT CONTROL FURNISHED MUST BE INSTALLED ON THE BOILER VENT OUTLET IN THE SAME ROOM WITH THE BOILER. THE 5A VENT MUST BE RUN OUTSIDE THE BUILDING IN ACCORDANCE WITH ALL CODE REQUIREMENTS. A FULL SIZE NON-RESTRICTIVE 5C VENT CAP IS REQUIRED ON TOP OF THE STACK. DO NOT SUPPORT WEIGHT OF VENT STACK ON BOILER.

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 3/4" SUCTION LINE IS RECOMMENDED. THE RETURN LINE SHOULD BE ONE SIZE SMALLER. ON ANY SUCTION LINE EXCEEDING 50' OR MORE THAN 10' LIFT, AN AUXILIARY 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 CONNECTION AT THE BURNER SHOULD BE FLEXIBLE PIPE OR COPPER TUBING FOR SERVICE CONVENIENCE. FOR PROPER OIL PIPING DETAILS, SEE THE SPECIAL DRAWINGS ON FUEL TANK AND BURNERS.

9 STEAM LINE: CONNECT FROM TOP OF BOILER AS SHOWN WITH 9A STEAM VALVE INSTALLED CONVENIENTLY NEAR BOILER AND 9C CHECK VALVE (NOT FURNISHED) RECOMMENDED NEAR STEAM VALVE. STEAM LINE SHOULD BE PROPERLY SIZED IN ACCORDANCE WITH STANDARD ENGINEERING PRACTICES AND MAY BE INCREASED AFTER LEAVING THE STEAM VALVE. SHOULD BE GRADED DOWNWARD 1/8" PER FOOT WITH A STEAM TRAP INSTALLED AT THE LOW POINT. IT IS CONSIDERED GOOD PRACTICE TO INSULATE ALL STEAM LINES TO PREVENT UNNECESSARY RADIATION LOSS.

10 WATER FEED LINE: THE WATER FEED LINE FROM PUMP SHOULD BE INSTALLED NOT LESS THAN 1" SIZE TO THE OPENING PROVIDED OUT THE SIDE OF THE CABINET. A 10C CHECK VALVE MUST BE INSTALLED CONVENIENTLY NEAR THE BOILER FEED PUMP. AN ADDITIONAL 10C CHECK VALVE (NOT FURNISHED) SHOULD BE INSTALLED NEAR THE BOILER. A 10A SHUTOFF VALVE (NOT FURNISHED) MUST BE INSTALLED NEAR BOILER. BE SURE THIS VALVE IS OPEN AT ALL TIMES THE SYSTEM IS IN OPERATION. A 10D RELIEF VALVE (NOT FURNISHED) SHOULD BE INSTALLED ON THE PUMP DISCHARGE LINE ON THE PUMP SIDE OF THE CHECK VALVE AND PIPED TO A SAFE LOCATION. THIS WILL PREVENT DAMAGE TO THE PUMP BY RELIEVING EXCESSIVE PRESSURE SHOULD RESTRICTION OR STOPPAGE OCCUR IN THE WATER FEED LINE TO THE BOILER.

12A SAFETY VALVE: INSTALL DIRECTLY ON TOP OF THE BOILER AS SHOWN AND CONNECT FULL SIZE DOWNWARD TO A SAFE LOCATION. IF PIPED UPWARD, A SMALL DRAIN LINE MUST BE PROVIDED AT THE LOW POINT. THE SAFETY VALVE IS FURNISHED FACTORY SEALED FOR THE MAXIMUM WORKING PRESSURE OF THE BOILER AND TRIM. IF THE VALVE IS REPLACED, ALWAYS REPLACE WITH A VALVE WHICH HAS THE SAME PRESSURE SETTING AND REQUIRED RELIEVING CAPACITY.

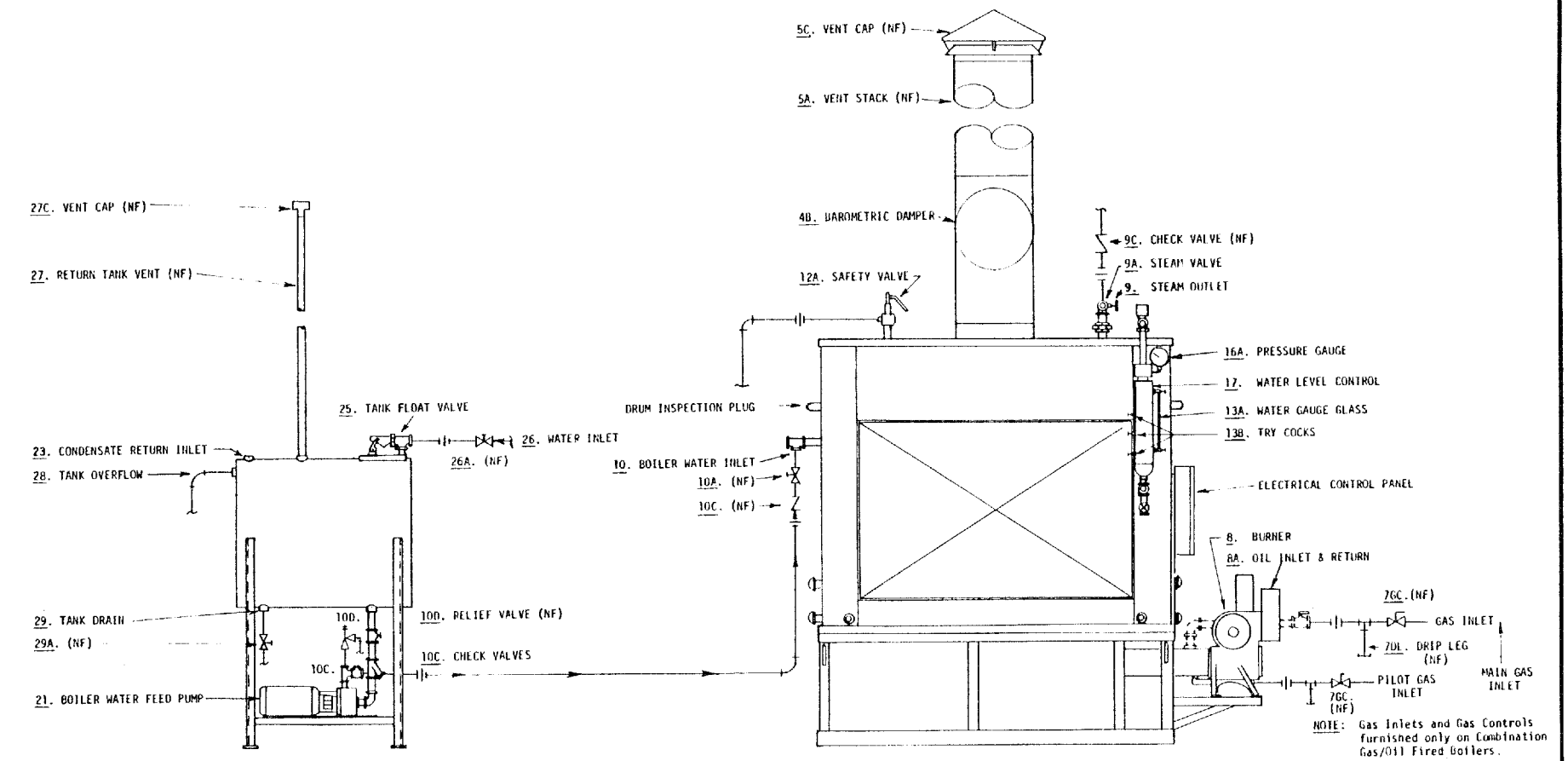
13A WATER GAUGE GLASS: GLASS INDICATES THE AMOUNT OF WATER IN THE BOILER WITH THE NORMAL LEVEL SLIGHTLY ABOVE CENTER. ON INITIAL START OF BOILER, THE WATER WILL EXPAND IN THE GLASS AND FLUCTUATE FROM HALF TO TWO-THIRDS OF THE GLASS UNDER NORMAL OPERATION. THE GAUGE GLASS VALVES SHOULD BE OPEN AT ALL TIMES. CHANGE GAUGE GLASS REGULARLY AND IMMEDIATELY ON INDICATION OF LEAKS OR WHEN IT BECOMES DIRTY. CHANGE ONLY WHEN THE BOILER IS NOT IN SERVICE BY CLOSING GAUGE VALVES, UNSCREWING HEXAGON NUTS AND REMOVING OLD GLASS AND GASKETS. INSTALL GLASS WITH NEW RUBBERS AND GASKETS ON BOTH SIDES OF RUBBERS. INSERT INTO UPPER GAUGE AND THEN CENTER EQUALLY INTO BOTH VALVES BEFORE TIGHTENING PACKING NUT. KEEP SPARE GLASSES, RUBBERS AND GASKETS.

13B TRY COCKS: FURNISHED FOR PURPOSE OF CHECKING WATER LEVEL IF GLASS IS BROKEN.

16A STEAM PRESSURE GAUGE: IS INSTALLED ON THE CABINET AS SHOWN AND INDICATES THE STEAM PRESSURE IN THE BOILER.

17 WATER LEVEL PUMP CONTROL & LOW WATER CUTOFF: THIS CONTROL IS WIRED IN CONJUNCTION WITH A MOTOR STARTING RELAY TO THE BOILER FEED PUMP TO INJECT WATER INTO THE BOILER AS REQUIRED. IT IS ALSO WIRED TO SHUT OFF THE MAIN BURNER ON LOW WATER EXPERIENCE AND SOUND AN ALARM. THE LOW WATER CUTOFF SHOULD BE TESTED DAILY TO BE CERTAIN IT IS OPERATING SAFELY. THE 18A DRAIN VALVE SHOULD BE FLUSHED DAILY AND ALL CONNECTING LINES PERIODICALLY INSPECTED AND CLEANED.

PARKER INDUSTRIAL HORIZONTAL DRUM STEAM BOILER 30 TO 50 H.P. – OIL OR COMBINATION GAS/OIL FIRED
INSTALLATION DRAWING – FRONT VIEW – WITH WATER MAKE-UP AND CONDENSATE RETURN TANK



22. WATER MAKEUP AND CONDENSATE RETURN TANK

(See separate Return System Installation Sheet.)

PARKER INDUSTRIAL STEAM BOILER OIL OR COMBINATION GAS/OIL FIRED
FRONT VIEW

(See separate Installation Drawing for blowdown and drain lines)

SHUTOFF VALVE
CHECK VALVE
UNION
(NF) NOT FURNISHED

USED ON: 30 - 50 H.P.		PART NAME: INSTALLATION DRAWING	
FOR: PARKER STEAM BOILER - OIL OR COMBINATION GAS/OIL FIRED			
DR. MB	DATE 10/75	PARKER BOILER CO. 5930 BANDINI BLVD. LOS ANGELES, CALIF. 90040-2999	SCALE
CH.			SUPERCEDED NO. 8/66
APPROVED			DWG. NO. 104-IV-V INST 2