FILE FOLDER

DESCRIPTION ON TAB:

B.B. Well 43

☒ **Outside/inside of actual folder did not contain hand written information**

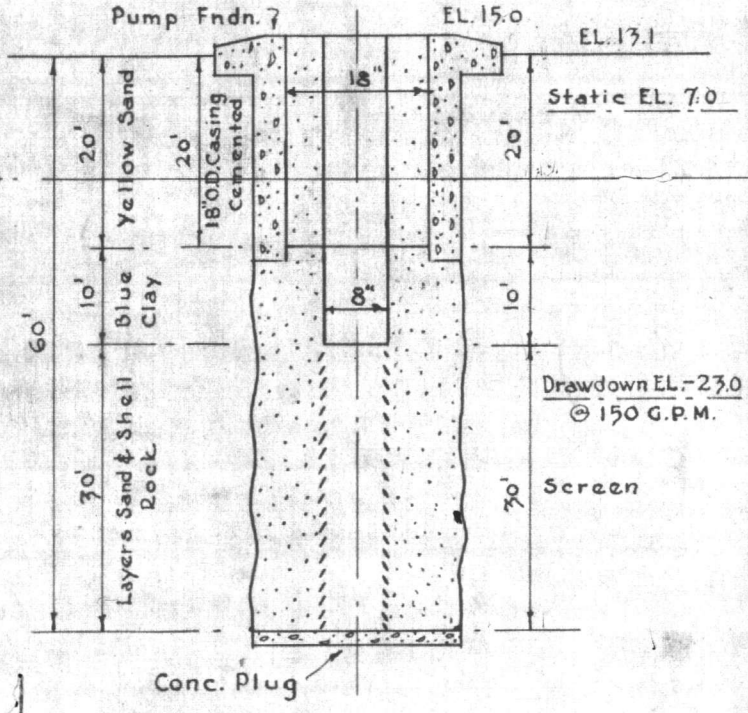
☐ **Outside/inside of actual folder did contain hand written information**
***Scanned as next image**

Confidential Records Management, Inc.
New Bern, NC
1-888-622-4425
9/08

150 G.P.M. - DUAL DRIVE - 10 H.P.

need 8.5 ft on air line to clear screens

47



BALLOON BARRAGE WELL "W" 10/43

QUOTATION

JOHNSTON PUMP COMPANY
GLENDORA, CALIFORNIA 91740

TO: Marine Corp Base
Camp Lejeune, N.C.
Attn: Mr. Harris - Purchasing Department

REFERENCE: Verbal Inquiry
ITEM NO.: Pump "B"

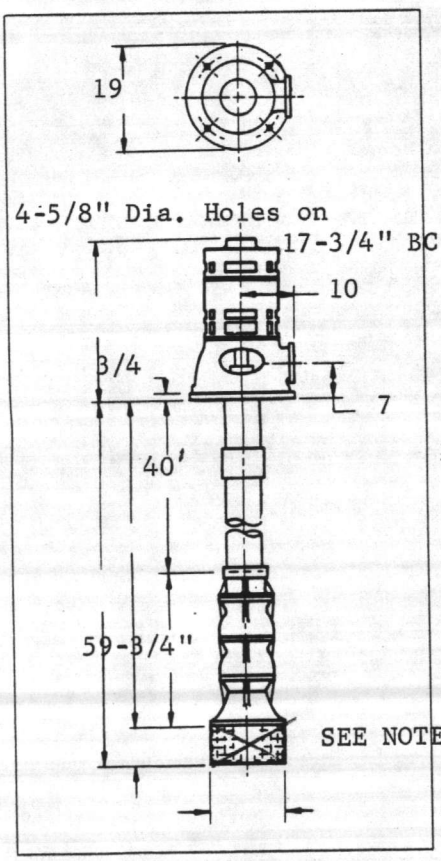
QUOTATION NO.: 81-1088
DATE: 9-15-81 PAGE: Rev. 9-28-81
NUMBER OF UNITS: 1
SERVICE: Well

DESIGN CONDITIONS

LIQUID: Well Water GPM: 150 SUBMERGENCE:
DISCHARGE PRESSURE: DESIGN HEAD IN FEET: 145
SPECIFIC GRAVITY: 1.0 VISCOSITY: TEMPERATURE: Atm
NPSH REQUIRED/AVAILABLE:

PUMP SPECIFICATIONS

BOWL ASSEMBLY MODEL: 7CC NO. OF STAGES: 8 RPM: 1750
EFFICIENCY: 75 BHP AT DESIGN: 7.4 MAXIMUM HORSEPOWER: 7.5
PERFORMANCE CURVE: EC-0464 DISCHARGE 6 "× 125 # ASA FLG.



MATERIAL SPECIFICATIONS

DRIVER: 7-1/2 HP VERTICAL Hollow SHAFT ELECTRIC MOTOR
VOLTS PHASE CYCLE ENCLOSURE
Motor and Amarillo Combination Drive Model C20 By Others

DISCHARGE HEAD: "A" Cast Iron, 12x6 (10x6)
COLUMN PIPE: 4" Steel, Threaded
LINESHAFT: 1" stainless, water lubricated
LINESHAFT BEARINGS: Rubber on not more than 10' centers
LINESHAFT BEARING RETAINER: Bronze
BOWLS: C1 Class 30 or Better
IMPELLERS: Bronze
IMPELLER WEAR RINGS: ~~XXXXXX~~ Aluminum Bronze
BOWL SHAFT: Stainless
BOWL BEARINGS: Combination Rubber & Bronze
~~XMECHANICAL SEAL~~/PACKING BOX: Soft Packing
COUPLING: Standard for combination drive
SUCTION STRAINER: Galvanized Steel, Cone Type

NET COST $ 7534.00 each FOB factories, Mobile, Ala.
SHIPMENT: 4 weeks after complete information and approval to proceed.

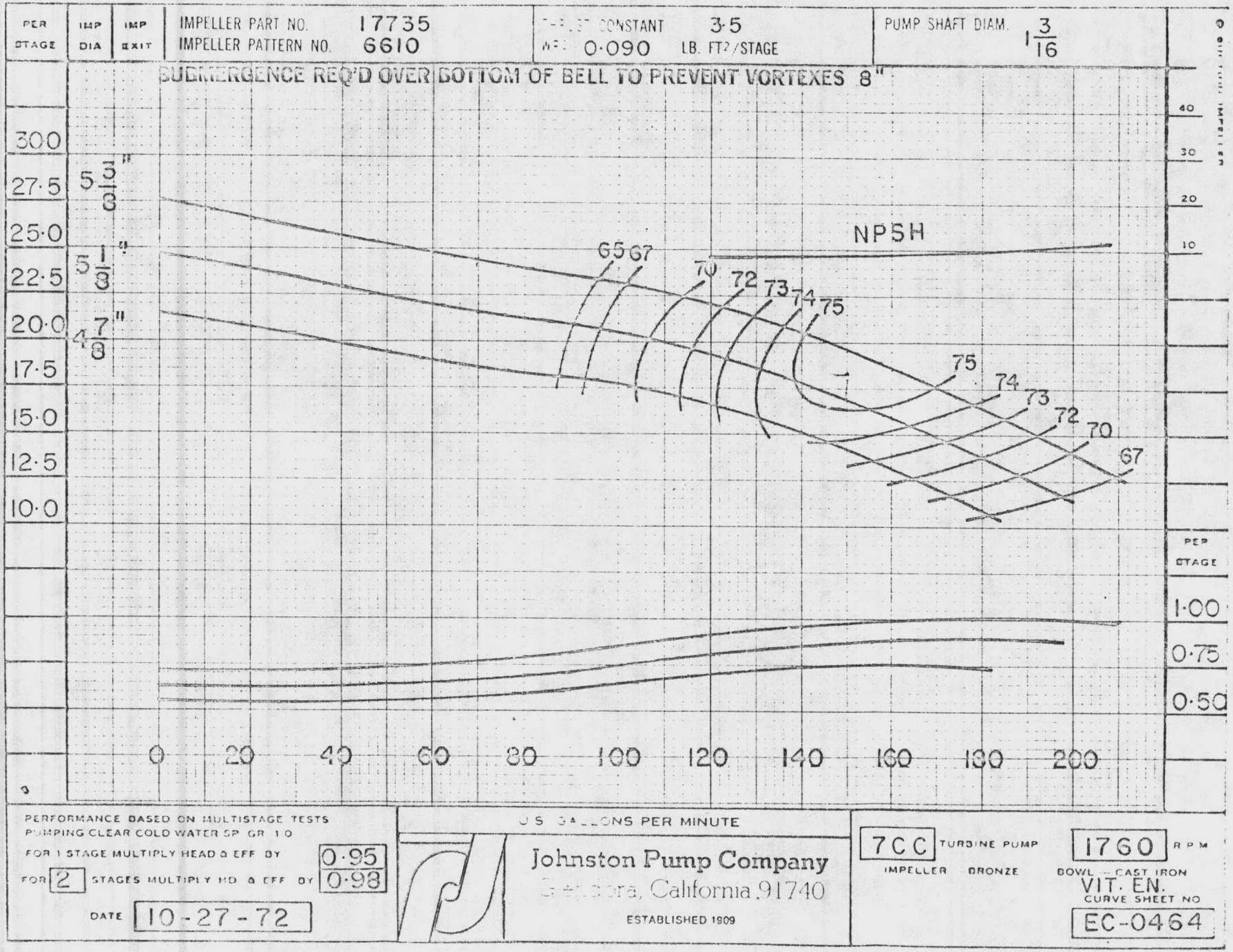
REMARKS: Pump will have 4" x 10' steel suction pipe with cone strainer all for well 7-7/8" I.D.

MEMBER
HYDRAULIC INSTITUTE U.S.A.

SIGNED: A. G. Seelke, Jr.
THE GEORGE SEELKE COMPANY

FORM JP 297-A

The Terms and Conditions on the back hereof are part of this quotation


PER STAGE
IMP DIA
IMP EXIT
IMPELLER PART NO. 17735
IMPELLER PATTERN NO. 6610
THRUST CONSTANT 3·5
WR² 0·090 LB. FT²/STAGE
PUMP SHAFT DIAM. 1 3/16
SUBMERGENCE REQ'D OVER BOTTOM OF BELL TO PREVENT VORTEXES 8"
5 3/8"
5 1/8"
4 7/8"
NPSH
65 67 70 72 73 74 75
75 74 73 72 70 67
FEET TOTAL BOWL HEAD
300
27·5
25·0
22·5
20·0
17·5
15·0
12·5
10·0
0 20 40 60 80 100 120 140 160 180 200
U S GALLONS PER MINUTE
FEET TO BOTTOM OF IMPELLER
40 30 20 10
BRAKE HORSEPOWER
PER STAGE
1·00
0·75
0·50
PERFORMANCE BASED ON MULTISTAGE TESTS
PUMPING CLEAR COLD WATER SP GR 1·0
FOR 1 STAGE MULTIPLY HEAD & EFF BY 0·95
FOR 2 STAGES MULTIPLY HD & EFF BY 0·98
DATE 10-27-72
Johnston Pump Company
Glendora, California 91740
ESTABLISHED 1909
7CC TURBINE PUMP
1760 R P M
IMPELLER BRONZE
BOWL — CAST IRON
VIT. EN.
CURVE SHEET NO
EC-0464

BB-43 (6-6-67) pumping at 50# 150 GPM @ EL-23.0

STATIC	GUAGE PUMP. LEVEL	D.D.	LINE PRES.	HEAD SHUT OFF	G.P.M.	SEA LEV. ELEV.	AIR LINE
31' (+1.0)	15	16	40	83#	205	-15	+15'
	15	16	43		195	-15	45'
	15	16	46		185	-15	-30'
	16	15	50		172	-14	
	16	15	53		159	-14	
	17	14	56		151	-13	
	18	13	60		133	-12	
	13	18	38		205	-17	
	12	19	36		210	-18	
	11	20	34		214	-19	

45
31
14

CHEMICAL ANALYSIS - WATER
MCBCL 11330/3 (REV 3-69) RAW [redacted]

Collected
DATE 11 Feb 75

TESTS	~~HADNOT POINT~~	~~MONTFORD POINT~~	CAMP GEIGER	TARAWA TERRACE	ONSLOW BEACH	COURTHOUSE BAY	RIFLE RANGE
PHENOLTHALEIN ALKALINITY	0	0					
METHYL ORANGE ALKALINITY	170	152					
CHLORIDES AS CL	40	44					
HARDNESS AS $CaCO_3$	198	18		Court House BAY			
CHLORINE RESIDUAL	—	—					
IRON AS Fe	3.8	0.11					
CARBONATES AS $CaCO_3$	0	0					
BICARBONATES AS $CaCO_3$	170	152					
PH	7.15	8.0			analyzed 11 Feb 75		
~~ORTHO PHOSPHATE~~ temp	21°C	21°C					
META PHOSPHATE							

CHEMICAL ANALYSIS - WATER
MCBCL 11330/3 (REV 3-69)

RAW Water Well # BB43
[redacted] Sample collected 30 Apr [redacted]

DATE 1 MAY 74

TESTS	HADNOT POINT	MONTFORD POINT	CAMP GEIGER	TARAWA TERRACE	ONSLOW BEACH	COURTHOUSE BAY	RIFLE RANGE
PHENOLTHALEIN ALKALINITY	0						
METHYL ORANGE ALKALINITY	158						
CHLORIDES AS CL	22						
HARDNESS AS $CaCO_3$	166						
CHLORINE RESIDUAL	-						
IRON AS Fe	11.5	<=					
CARBONATES AS $CaCO_3$	0						
BICARBONATES AS $CaCO_3$	158						
PH	8.0						
ORTHO PHOSPHATE							
META PHOSPHATE							

If this is the true level of raw water no wonder the treated water level is high

BB43

9/29/75

12' static

9' 6" "

62' depth

103
40
63
- 7
56
40
16

WATER ANALYSIS

By N. H. Kellam

Date 4-5-47

Sample from Ballon Barrage Well No. 2

Total Solids 260 PPM Dissolved Solids 210 PPM

Suspended Solids 40 PPM Volatile Solids ____ PPM

Phenol. Alk. as $CaCo_3$	0 PPM	Silica as Sio_2	40 PPM
Total Alk. " "	160 "	Ferrous Iron as Fe	0 "
Carbonates " "	0 "	Total Iron as Fe	3.5 "
Bicarbonates " "	160 "	Aluminum as Al.	3.8 "
Chlorides as Cl.	25 "	Calcium as Ca.	62.0 "
Sulphates as SO_4	12 "	Magnesium as Mg.	8.9 "
Nitrites as No_2	0 "	Sodium as Na.	2.1 "
Carbon Dioxide as CO_2	7 "		

pH 7.3 Soap Hardness as $CaCO_3$ 200 PPM

Odor Slight Turbidity 30

REMARKS

WELL NUMBER BB 43		BY THOMAS RAYNOR			DATE 12-5-83	
AIR LINE	STATIC LEVEL	PUMPING LEVEL	DRAIN DOWN	DISCHARGE PRESSURE	GPM	START TIME 1300
40	13	21	8	25	100	1310
		23	10	22	115	1319

REMARKS

MANUFACTURER	STAGE	S.N.	TOTAL HEAD	SIZE

DATE	LENGTH OF AIR LINE	STATIC LEVEL	PUMPING LEVEL	DRAW DOWN	DISCHARGE PRESSURE	CAP. PER FOOT OF DRAW DOWN (GPM)	TOTAL CAP.
8-9-82							
BB 43					start	time	
	40'	13'	24'	22'	24 PSI	100	

REMARKS: used direct reading gage
set 24 PSI 5' above first screen

WELL: BB 43 — pump setting 40'

12/22/81

DATE	LENGTH OF AIR LINE	STATIC LEVEL	PUMPING LEVEL	DRAW DOWN	DISCHARGE PRESSURE	CAP. PER FOOT OF DRAW DOWN (GPMs)	TOTAL 2400
	40'	15'	20'	5'	26 LBs	104	1416
			21'	6'	24 LBs	111	1428
			22'	7'	22 LBs	119	1440
			24'	9'	20 LBs	130	1452
	Air Gauge		26'	11'	15 LBs	164	
			29'	14'	10 LBs	192	
			33'	18'	0 LBs	221	

REMARKS:

...TH OF

...AT THE
...TABLE:
...RE
...TH:

WELL # 1x

PLACE - Courthouse Bay DATE - 4 Mar 1957

ORIGINAL WELL CAPACITY G.P.M. 150

ORIGINAL WELL		TESTING	
Depth of Well	60	Depth after Cleaning	61'
Pump Size		Test Pump Setting	50
Pump Setting	45	Measured Static Water Level	13'
Static Water Level	7.0	Depth of Air Line	50

CONDITION OF WELL - Cleaned sand and muck out of well. Much rust. Wiring and electrical equipment being eaten up by chlorine gas.

STATIC LEVEL ON GAUGE

Inches of water in dizometer tube	G.P.M.	30 Min.	45 Min.	60 Min.	1 Hour	
	75	PL	PL	PL	PL	20
	90	PL	PL	PL	PL	21.5
	115	PL	PL	PL	PL	23
	130	PL	PL	PL	PL	25
	145	PL	PL	PL	PL	26
	150	PL	PL	PL	PL	27
	160	PL	PL	PL	PL	28
		PL	PL	PL	PL	
		PL	PL	PL	PL	
		PL	PL	PL	PL	
		PL	PL	PL	PL	

RECOVERY		
10 Sec.		19
20	PL	18
30	PL	17.5
40	PL	17
50	PL	17
60	PL	16.5
2 Min.	PL	16
4	PL	15
8	PL	14.5
16	PL	14
32	PL	13.5

43.

Well # W-CHB

Date	Line Ft.	G.P.M.	D.D. El. GAGE R.	Static El.	Shut off Head	D.D. Ft.
6-2-53	92	215	5 FT	?	208	
"	113	185	10 FT			
"	138	157	14.5 FT.			
			Gage			
8-30-57			15 ft.			
7-20-62	55 LB	167	20' GAGE READING.			
"	50 LB	175	19" " "			
"	45 LB	192	18 " "			

Air Line ~~UNKNOWN~~. 45'-

Sheet 1

43

Marine Barracks
New River, N. C.
April 5, 1942

Wells: Permanent Water Supply at Balloon Barrage

By Layne Atlantic Company

Report on Well No. 2 in this Area

Location: 65' East of center line of Access Road to Balloon Barrage at Station 13.40

Date Drilled: March, 1942

Drilling Equipment: Rotary rig with bits and equipment

Status: Ground elevation 13.1

A 17½" hole drilled and then reamed to 23" in diameter to a depth of 21 feet. 20 feet of I. D. steel casing was set and the anular space around this was filled with cement grout to surface level. A 17" hole was then drilled inside this to a total depth of 61 feet.

Log of Formation:

0 to 1'	Black top soil
1' to 20'	Fine yellow sand
20' to 31'	Blue clay
31' to 61'	Layers of sand and coquina rock

Remarks: Due to the presence of sand between 31' to 61', it was necessary to construct a gravel wall well. On a test pumping, there was much sand in the discharge from the pump, and the well began to fill up.

Gravel Wall Construction: 30' of 8" steel pipe and 30' of 8" silician bronze shutter screen was lowered into the well and the anular space was pumped full of a special ¼" cape may gravel.

Log of Screen Setting:

0 to 30'	Blank pipe
30' to 60'	Bronze screen

The pipe was of thread joints and the screen was welded. The bottom of the screen was sealed with a cement plug.

Static Water Level: 6'2" below surface

Pumping: Well pumps 170 gallons per minute with a 34' drawdown from static level after 26 hours pumping. This is approximately 5.3 gallons per foot of drawdown.

Further pumping test will be made after permanent pumps are installed.

Report will be made later of pump setting.

See separate report for chemical analysis.

N. H. Kellam
Asst. Chem. Engineer

WATER ANALYSIS

By N. H Kellam

Date 3-28-42

Sample from Ballon Barrage Well No. 2

Total Solids _____ PPM Dissolved Solids _____ PPM

Suspended Solids _____ PPM Volatile Solids _____ PPM

Phenol. Alk. as $CaCo_3$ 0 PPM Silica as Sio_2 _____ PPM

Total Alk. " " 160 " Ferrous Iron as Fe _____ "

Carbonates " " 0 " Total Iron as Fe _____ "

Bicarbonates " " 160 " Aluminum as Al. _____ "

Chlorides as Cl. 25 " Calcium as Ca. _____ "

Sulphates as SO_4 _____ " Magnesium as Mg. _____ "

Nitrites as No_2 _____ " Sodium as Na. _____ "

Carbon Dioxide as CO_2 _____ "

pH 7.6 Soap Hardness as $CaCO_3$ _____ PPM

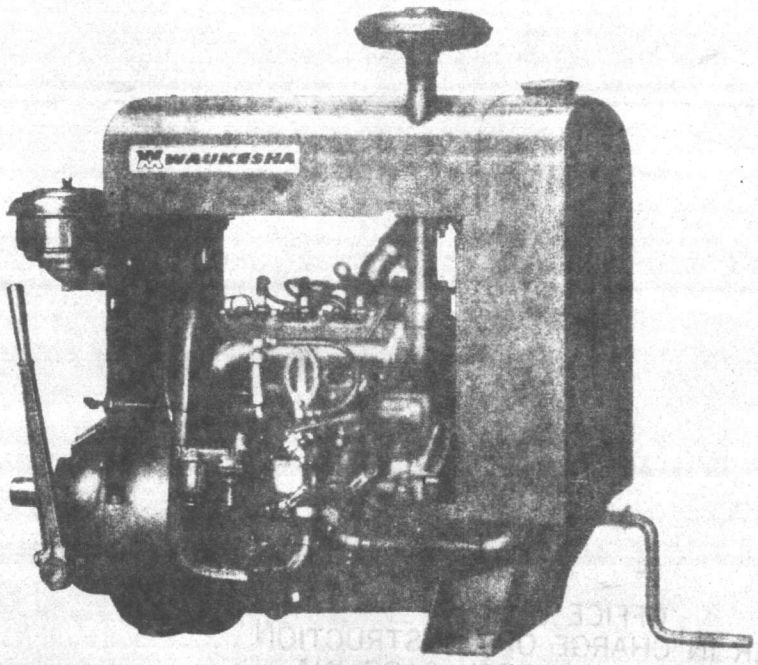
Odor Slight Turbidity Brownish Color

REMARKS _____

BULLETIN 4887

Waukesha power units

series ICKU



Typical
MODEL ICKU

specifications

Engine — Inline 4, L-head, 4-cycle gasoline. L-type cylinder head. Removable alloy iron cylinder block and cylinders precision honed. Alloy iron valve guides. Alloy steel intake and exhaust valves, alloy exhaust valve seat inserts. Barrel type valve lifters, case hardened. Heavy section contour ground aluminum alloy pistons and floating piston pins. Forged steel connecting rods, replaceable precision type bearings and piston pin bushings. Alloy iron crankcase with rigid section to support front and rear single row radial main bearings. Forged steel crankshaft with precision ground crankpin journals. Dynamically balanced. Combination updraft intake and exhaust manifold with front vertical exhaust outlet. Automotive type oil pan.

Air Cleaner — Oil bath type.

Cooling System — Radiator, fan, gear driven centrifugal water pump. 170 F. thermostat, by-pass type.

Crank — Hand starting.

Enclosure — Protective sheet steel hood, rear panel, side doors.

Engine Rotation — Counterclockwise when facing flywheel.

Flywheel and Ring Gear — Flywheel machined for TD single plate 7" clutch.

Flywheel Housing — SAE No. 5 foot type.

Front Support

Fuel System — Carburetor, gasoline ⅝" updraft. Mechanical fuel pump.

Governor — Built-in centrifugal type, lubricated from engine oiling system.

Ignition System — Distributor, drive, coil and cables. One spark plug per cylinder.

Instruments — Mounted in rear panel, including ammeter, ignition switch, oil pressure and water temperature gauges, throttle control.

Lubrication — Full pressure gear type oil pump. External adjustable relief valve for pressure control. Oil filter, by-pass type.

Muffler and Exhaust Pipe

Starting — 12 volt electric starter, 32 amp alternator, starting switch.

OPTIONAL ATTACHMENTS
(Available as original equipment when specified)

Air Cleaner — Oil bath with pre-cleaner.

Controls — Variable speed governor, high water temperature and low oil pressure cut-off switches. Waukesha Engomatic® Control System.

Cooling System — Heat exchanger.

Electrical — 12 volt, 42 amp alternator.

Filters — Sweet or sour natural gas, sewage gas, not mounted.

Fuel System — Carburetor, combination gas-gasoline ⅝" updraft with gas pressure test gauge. Carburetor, natural gas or LPG ⅜" updraft with gas pressure test gauge. LPG vaporizer.

Fuel Tank

Ignition System — High tension magneto, transistorized ignition, coil and cables. One spark plug per cylinder.

Instruments — Electric hour meter, electric or mechanical tachometer.

Power Take-Off — Standard, stub shaft for direct drive.

OFFICE OF THE
OFFICER IN CHARGE OF CONSTRUCTION
CAMP LEJEUNE, NORTH CAROLINA

APPROVED

SUBJECT TO CONTRACT REQUIREMENTS

CONTRACT NBy 88313 SPEC. NO. 88313/67

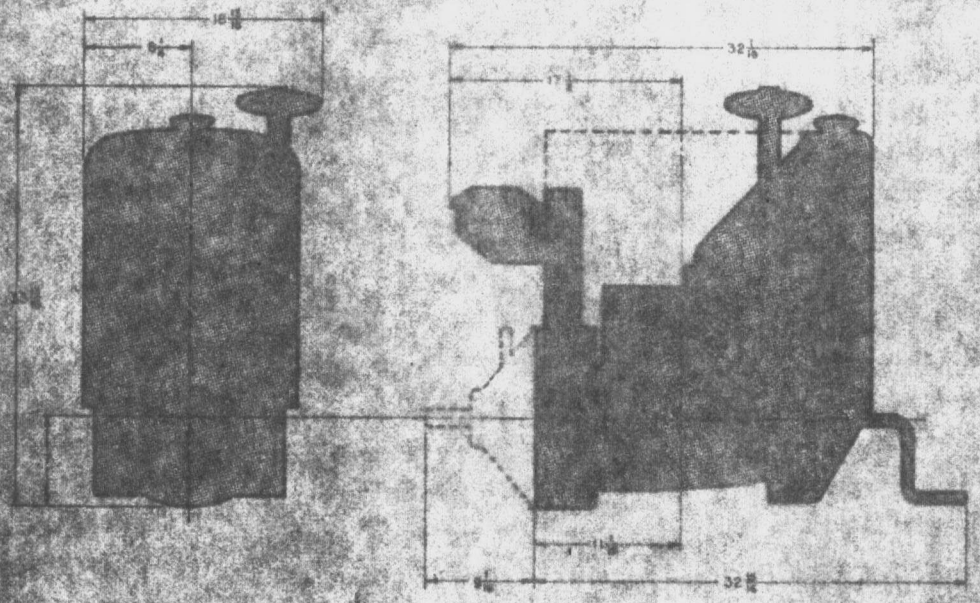
DATE: 3 July 1968

J. W. UPDEGROVE
CAPT. CEC, USN
Officer in Charge
of Construction

PRINCIPAL ENGINE DATA

Model	ICKU
Bore and Stroke	2½ x 3⅛
Number of Cylinders	4
Displacement, cu. in.	61
Number of Main Bearings	2
Oiling System, capacity, quarts	
Engine, not including lines and filters	3
Filter (mounted)	1
Cooling System, capacity, quarts	
Engine without radiator	1½
Engine and radiator	6
Weight, unit without radiator (approx. lbs.)	265
Weight, unit with radiator, sheet steel housing and side doors (approx. lbs.)	330

SCHEMATIC COMPOSITE DIAGRAM



COMPONENTS AND ACCESSORY LOCATIONS AND DIMENSIONS (inches) MAY VARY WITH SERVICE AND INSTALLATION REQUIREMENTS.
DIMENSIONS NOT GUARANTEED. DETAILED PRINT AVAILABLE FOR LAYOUT WORK.

POWER RATINGS Columns M are Maximum Ratings Columns C are Continuous Ratings

MODEL	TORQUE RPM	BRAKE HORSEPOWER AT SPEEDS INDICATED															
		800		1000		1200		1400		1600		1800		2000		2200		2400	
		M	C	M	C	M	C	M	C	M	C	M	C	M	C	M	C	M	C
GASOLINE Without Accessories																			
ICKU	41-1800	6	5	7	5	9	7	10	8	12	9	14	11	15	11	16	12	17	13
GASOLINE With Accessories																			
ICKU	38-1400	5	4	7	5	8	6	10	8	11	8	13	10	14	11	15	11	16	12
NATURAL GAS Without Accessories																			
ICKU	36-1600	5	4	6	5	8	6	9	7	11	8	12	9	14	11	15	11	16	12
NATURAL GAS With Accessories																			
ICKU	33-1600	5	4	6	5	7	5	9	7	10	8	11	8	13	10	14	11	15	11
LP GAS Without Accessories																			
ICKU	41-1800	6	5	7	5	9	7	10	8	12	9	14	11	15	11	16	12	17	13
LP GAS With Accessories																			
ICKU	38-1400	5	4	7	5	8	6	10	8	11	8	13	10	14	11	15	11	16	12

Performance Curve Supplied on Request.

RATING STANDARDS

MAXIMUM RATING: Maximum HP output of engine which can be demonstrated within 5% at the factory under standard conditions. Engine should not be applied at this rating without prior approval of Waukesha Motor Company, Engineering Division.

INTERMITTENT RATING: 90% of Maximum Rating. The HP and speed which can be applied under specific conditions of varying load and/or speed. This rating is used for standby, standby-continuous, and peaking applications. Some users prefer to operate for long periods in this higher HP range with full knowledge that this may result in higher maintenance.

CONTINUOUS RATINGS: The HP and speed which can be applied without reduction.

SPECIAL RATINGS: All published ratings of the Waukesha Motor Company are a general guide for a broad range of applications. Other ratings based on specific load applications and economic requirements are available upon receipt at the factory of detailed information.

Ratings are corrected to sea level barometric pressure of 29.92" hg. and standard temperature of 60 F.

DEDUCTIONS FOR ALTITUDE AND [illegible]

RATING		
Maximum	Intermittent	Continuous
3% for each 1000' above sea level	3% for each 1000' above 1000' altitude	3% for each 1000' above 2000' altitude

WAUKESHA

OFFICE OF THE
OFFICER IN CHARGE OF CONSTRUCTION
CAMP LEJEUNE, NORTH CAROLINA

APPROVED

SUBJECT TO CONTRACT REQUIREMENTS
CONTRACT NBy 88313 SPEC. NO. 88313 /67
DATE: 3 July 1968

J. W. UPDEGROVE
CAPT. CEC. USN
Officer in Charge
of Construction

WAUKESHA MOTOR COMPANY
WAUKESHA, WISCONSIN

QUOTATION

HUNTINGTON PARK OFFICE
HUNTINGTON PARK, CALIF. 90255
TELEPHONE (213) 588-6231
P. O. Box 2146

To: Johnston Pump Company
1775 East Allen Avenue
Glendora, California 91740

Date: June 12, 1968
Quotation No.: 105-C
Ref: Your Inquiry:

Attention: Mr. G. W. Shaughnessy

Subject: Model ICKU Gasoline Power Unit

Gentlemen:

We are pleased to confirm our June 7, 1968 telephone conversation, during which time we quoted the following:

Model ICKU Gasoline Power Unit, 2½" bore x 3-1/8" stroke, four-cylinder, 61 cubic inch displacement, as generally described in bulletin No. 4887.

Power Unit Specifications include:

Air Filter - Oil bath type
Base - Foot type
Carburetor - Gasoline
Cooling - Radiator cooling with water pump, fan and thermostat
Cylinder Heads - Gasoline
Front Support
Flywheel & Housing - No. 5 SAE foot type. Ring gear
Fuel Supply Pump - Open units
Gasoline Tank - Enclosed units
Filter - Lubr. oil
Governor
Ignition - Fixed spark magneto with automatic impulse coupling, cables, spark plugs & ignition switch
Manifold - Combination with updraft intake and front vertical exhaust
Muffler
Oil Pan - Automotive type
Oil Pressure Gauge
Starting Crank
Throttle Control - Friction type
Water Temperature Gauge

Also Included are:

Clutch power takeoff assembly
Safety switches
Tachometer
Variable speed governor
12-Volt electric starting system, including 32-amp. alternator and storage batteries.

F.O.B. Point: See page 2

Delivery: See page 2 days from receipt of order and complete specifications.

By: John E. Caltrider
Hobert E. Caltrider

Quotations subject to Terms and Conditions of Sale as described on reverse side.

Form No. 576-3991

OFFICE OF THE
OFFICER IN CHARGE OF CONSTRUCTION
CAMP LEJEUNE, NORTH CAROLINA

APPROVED

SUBJECT TO CONTRACT REQUIREMENTS

CONTRACT NBy 88313 SPEC. NO. 88313/67

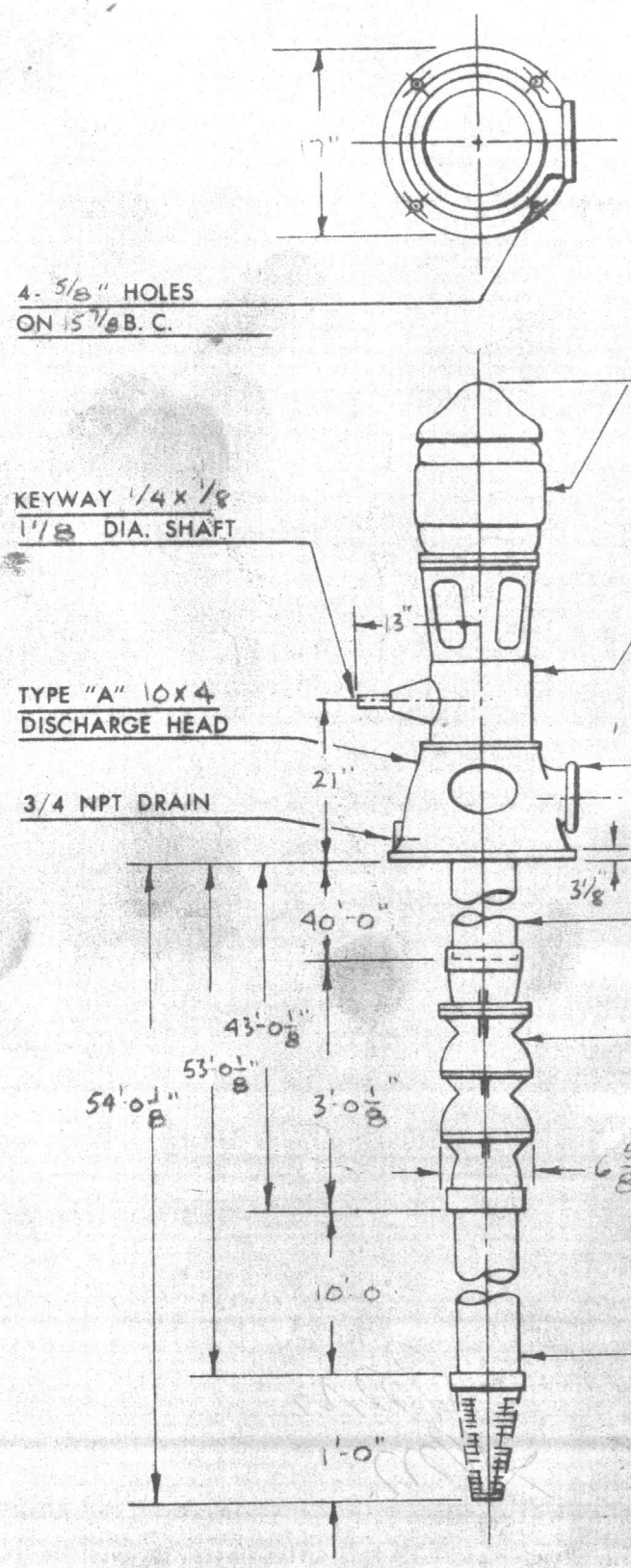
DATE: 3 July 1968

J. W. UPDEGROVE
CAPT. CEC, USN
Officer in Charge
of Construction

JOHNSTON VERTICAL TURBINE PUMP

SURFACE DISCHARGE

GEAR DRIVE



VERTICAL HOLLOW SHAFT MOTOR

TYPE FRAME #

5 HP 3 PHASE 60 CYCLES

208 VOLTS 1760 R.P.M.

DRIPPROOF ENCLOSURE

VERTICAL HOLLOW SHAFT RIGHT ANGLE GEAR COMBINATION DRIVE JOHNSON

MODEL HA15 PUMP R.P.M. 1760

SPEED RATIO 1:1 ROTATION

4" x 125# DISCHARGE FLANGE

4x2x13/16 COLUMN ASSEMBLY

4 STAGE 7CC BOWL ASSEMBLY

CONDITIONS:

175 USGPM

63 FT. TOTAL HEAD

LIQUID WATER

SPEC. GRAV. @ °F PUMPING TEMP.

4" SUCTION PIPE CONE STRAINER

CUSTOMER

PO#

DEALER HARTSFIELD WATER CO.

PO#

JOHNSTON SERIAL #

JOHNSTON QUOTATION # A 417

NOTE: DO NOT USE FOR CONSTRUCTION UNLESS CERTIFIED

WELL NO 43

JOHNSTON PUMP COMPANY
PASADENA, CALIFORNIA

H-1023-A

OFFICE OF THE
OFFICER IN CHARGE OF CONSTRUCTION
CAMP LEJEUNE, NORTH CAROLINA

APPROVED

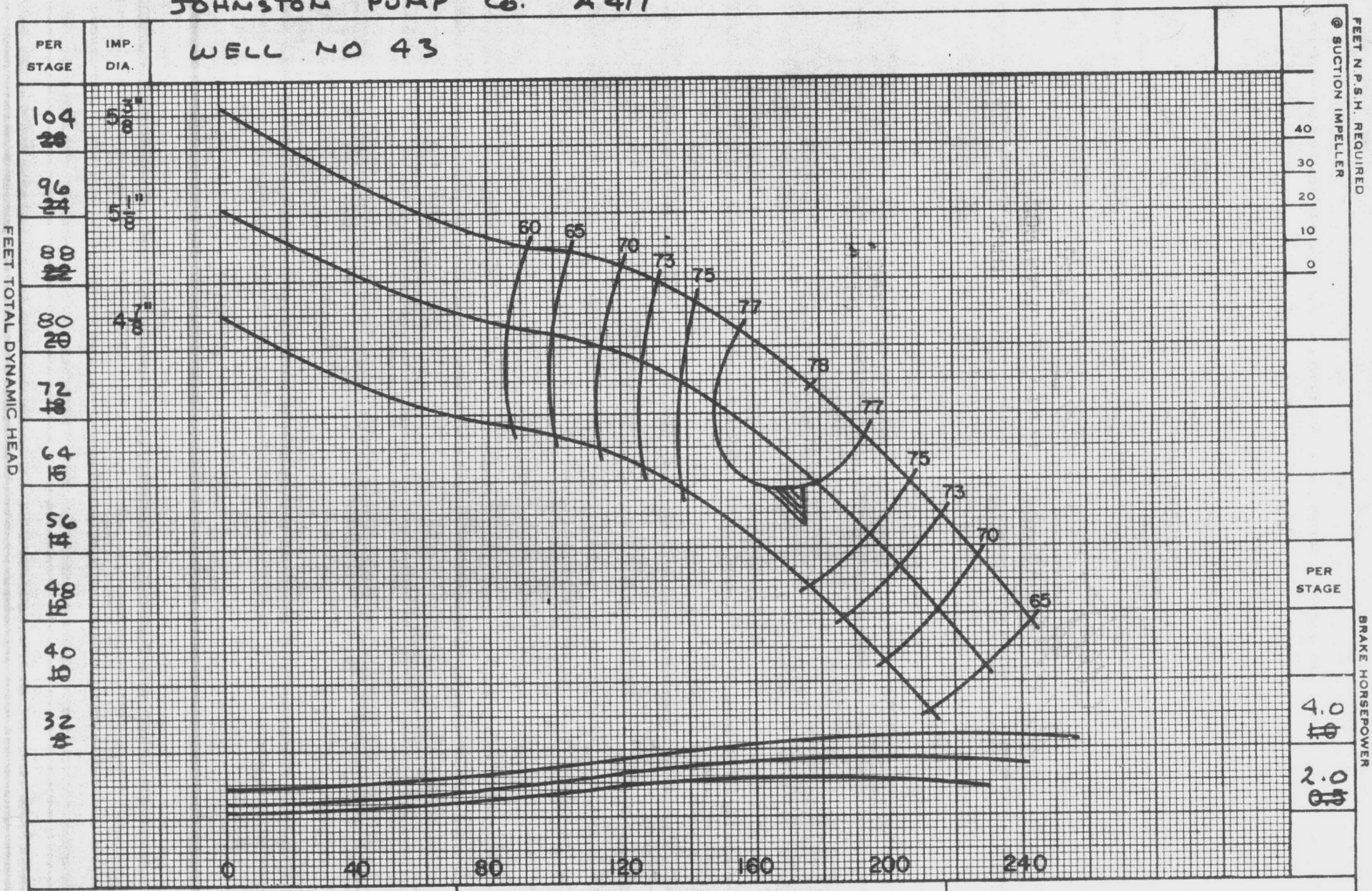
SUBJECT TO CONTRACT REQUIREMENTS

CONTRACT NBy 88513 SPEC. NO. 88513/67

DATE: 3 July 1968

J. W. UPDEGROVE
CAPT. CEC, USN
Officer in Charge
of Construction

JOHNSTON PUMP CO. A417



PERFORMANCE BASED ON MULTISTAGE TESTS
PUMPING CLEAR COLD WATER SP. GR. 1.0

FOR 1 STAGE MULTIPLY HEAD & EFF. BY 0.95

FOR 2 STAGES MULTIPLY HD. & EFF. BY 0.98

DATE 1-2-64

U.S. GALLONS PER MINUTE

JOHNSTON PUMP COMPANY
Pasadena, California
ESTABLISHED 1909

7 CC TURBINE PUMP
IMPELLER — BRONZE

1760 R.P.M.
BOWL — CAST IRON

4 STAGE

CURVE SHEET NO. 9682

PAGE 55 APRIL 6, 1964

7

OFFICE OF THE
OFFICER IN CHARGE OF CONSTRUCTION
CAMP LEJEUNE, NORTH CAROLINA

APPROVED

SUBJECT TO CONTRACT REQUIREMENTS

CONTRACT NBy 88313 SPEC NO. 88313/67

DATE: 3 July 1968

J. W. UPDEGROVE
CAPT. CEC, USN
Officer in Charge
of Construction

WORK REQUEST (MAINTENANCE MANAGEMENT)
NAVFAC 9-11014/20 (REV. 2-68) S/N-0105-002-7510
Supersedes NAVDOCKS 2351

(PW Department see Instructions in NAVFAC MO-321)

Requestor see Instructions on Reverse Side

PART I—REQUEST (Filled out by Requestor)

1. FROM	2. REQUEST NO.
Director, Utilities Division	1-74
3. TO	**4. DATE OF REQUEST**
Director, Operations Division	3 July 1973
5. REQUEST FOR ☒ COST ESTIMATE ☐ PERFORMANCE OF WORK	**5a. REQUEST WORK START**
6. FOR FURTHER INFORMATION CALL	**7. SKETCH/PLAN ATTACHED**
W. R. Price, Ph. 3510	☐ YES ☐ NO

8. DESCRIPTION OF WORK AND JUSTIFICATION *(Including location, type, size, quantity, etc.)*

1. One well pump for HP-633. Utilities will requisition and Maintenance and Repair will install.

Pump in 10/19/73

Completed — 11/9/73

AA4-23-3780-2383-T

Installed this pump in well BB43 on work order # The plumbing shop determined that BB43 had to have new pump, Could not operate while waiting to order one

9. FUNDS CHARGEABLE	10. SIGNATURE (*Requesting Official*)
	J. E. HERNDON

PART II—COST ESTIMATE
(Filled out by Maintenance Control Division if estimate requested)

11. TO:	12. ESTIMATE NO.

13. COST ESTIMATE	
a. Labor	$
b. Material	$ 2300.00
c. Overhead and/or Surcharge	$
d. Equipment Rental/Usage	$
e. Contingency	$
f. TOTAL	$

14. SKETCH/PLAN ATTACHED ☐ YES ☐ NO

15.

☐ APPROVED. PROGRAMMING TO START IN _____

☐ APPROVED. BASED ON PRESENT WORKLOAD, THIS JOB CAN BE PROGRAMMED TO START IN _____, IF AUTHORIZED BY 25TH OF _____ AND FUNDS ARE MADE AVAILABLE.

☐ DISAPPROVED. *(See Reverse Side)*

16. SIGNATURE	17. DATE

PART III—ACTION (Filled out by Requestor)

18. TO:

19. AUTHORIZATION TO PROCEED IS ATTACHED *(Check one if other than PW funds are involved)* ☐ NAVCOMPT 140 ☐ OTHER	20. WORK REQUESTED ☐ HAS BEEN CANCELLED ☐ HAS BEEN DEFERRED ☐ WILL BE PERFORMED BY OTHERS
21. SIGNATURE	**22. DATE**

(See Part IV on Reverse Side)

INSTRUCTIONS

IF ESTIMATE IS DESIRED BEFORE WORK IS STARTED

Requestor fills in all items in Part I, checks "Cost Estimate" in item 5, attaches sketch or plan if necessary, and checks proper block in item 7. Requestor retains last copy and forwards balance to Public Works Department.

If the Work Request is approved, the original and first copy will be returned to the requestor with Part II completed. If the requestor desires the work to proceed in accordance with the estimate provided, he should fill in Part III, checking proper block in item 19 and attaching the document citing the funds to be used. If the requestor decides not to authorize the work, the appropriate box in item 20 should be checked. The original form, in either case, is returned to the Public Works Department.

If the Work Request is disapproved, the reasons for disapproval will be stated in Part IV, signed by the Public Works Officer, and the original and one copy returned to the requestor.

IF ESTIMATE IS NOT DESIRED BEFORE WORK IS STARTED AND FUNDS ARE NOT UNDER COGNIZANCE OF PWO

Requestor fills in all items in Parts I and III except item 20, checks "Performance of Work" in item 5, attaches sketch or plan if necessary, checks proper block in item 7, checks proper block in item 19, and attaches document citing the funds to be used. Requestor retains last copy and forwards balance to Public Works Department.

If the Work Request is approved, the first copy will be returned to the requestor with items 11, 12, 15, 16, and 17 of Part II completed.

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PART IV—REMARKS

WORK REQUEST (MAINTENANCE MANAGEMENT)
NAVFAC 9-11014/20 (REV. 2-68) S/N-0105-002-7510
Supersedes NAVDOCKS 2351

(PW Department see Instructions in NAVFAC MO-321)

Requestor see Instructions on Reverse Side

PART I—REQUEST (Filled out by Requestor)

1. FROM: Director, Utilities Division	2. REQUEST NO.: 15-74
3. TO: Director, Operations Division	4. DATE OF REQUEST: 20 July 1973
5. REQUEST FOR: ☐ COST ESTIMATE ☒ PERFORMANCE OF WORK	5a. REQUEST WORK START
6. FOR FURTHER INFORMATION CALL: W. R. Price, Pf. 3510	7. SKETCH/PLAN ATTACHED: ☐ YES ☐ NO

8. DESCRIPTION OF WORK AND JUSTIFICATION *(Including location, type, size, quantity, etc.)*

1. Pull and make necessary repair to Deep well pump. Bldg. BB-43.

Completed 8-3-73

9. FUNDS CHARGEABLE	10. SIGNATURE *(Requesting Official)*: B. L. LANIER, Acting

PART II—COST ESTIMATE
(Filled out by Maintenance Control Division if estimate requested)

11. TO:	12. ESTIMATE NO.

13. COST ESTIMATE	
a. Labor	$
b. Material	$
c. Overhead and/or Surcharge	$
d. Equipment Rental/Usage	$
e. Contingency	$
f. TOTAL	$

14. SKETCH/PLAN ATTACHED ☐ YES ☐ NO

15.

☐ APPROVED. PROGRAMMING TO START IN _____

☐ APPROVED. BASED ON PRESENT WORKLOAD, THIS JOB CAN BE PROGRAMMED TO START IN _____, IF AUTHORIZED BY 25TH OF _____ AND FUNDS ARE MADE AVAILABLE.

☐ DISAPPROVED. *(See Reverse Side)*

16. SIGNATURE	17. DATE

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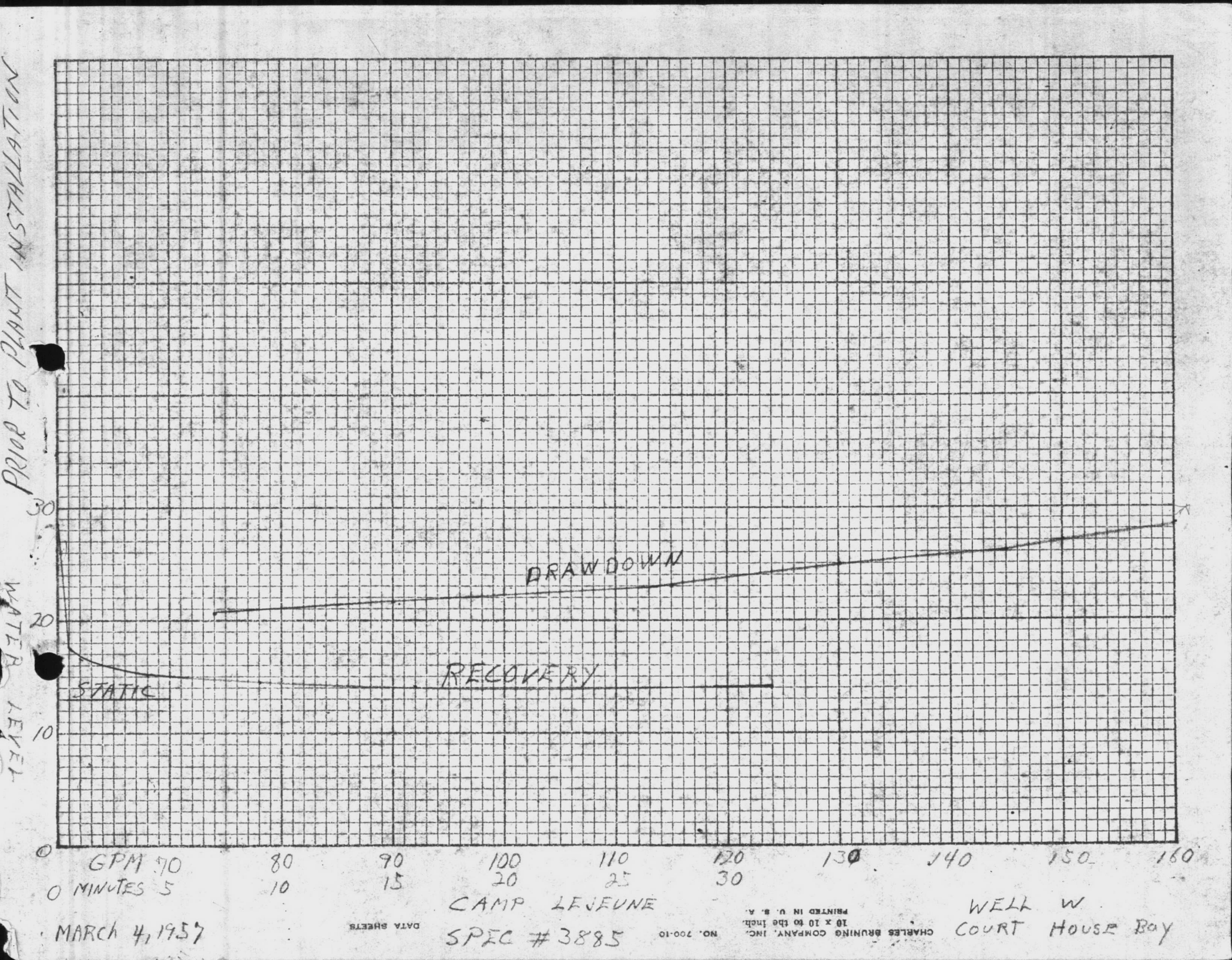
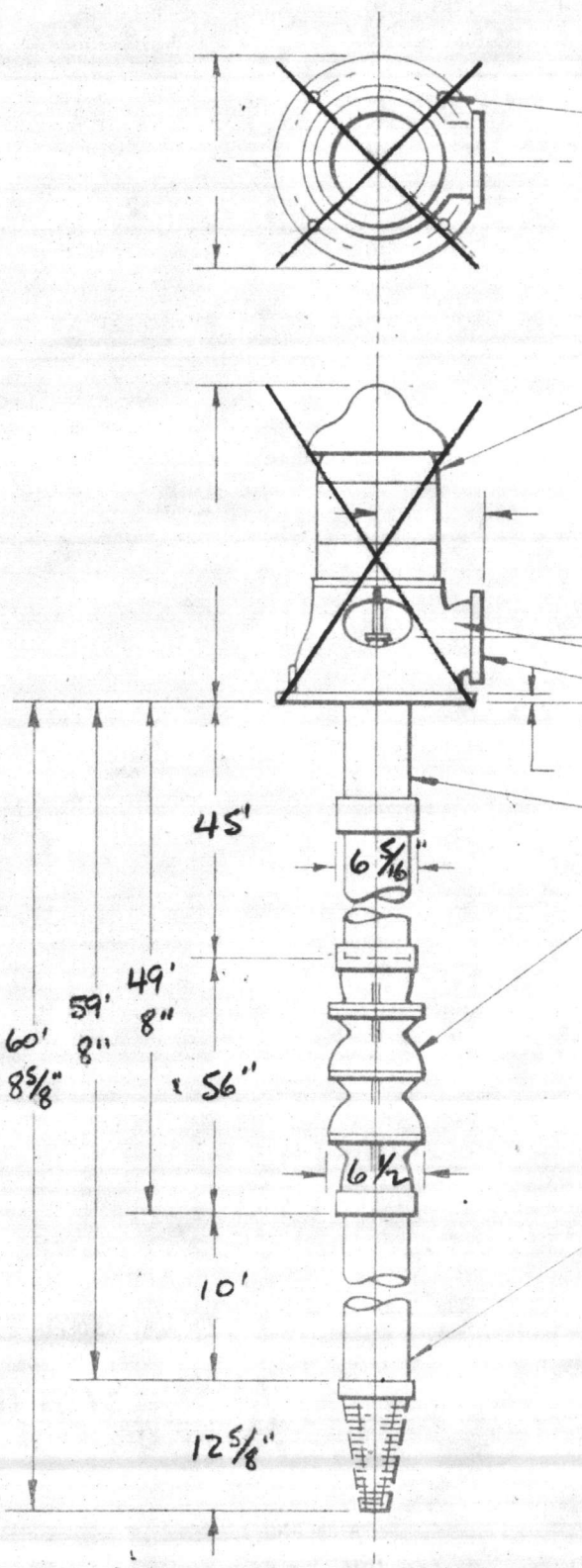
PART IV—REMARKS


MULTIPLANT UNIT OF PRIOR TO
WATER LEVEL
30
20
10
0
DRAWDOWN
RECOVERY
STATIC
GPM 70 80 90 100 110 120 130 140 150 160
0 MINUTES 5 10 15 20 25 30
CAMP LEJEUNE
SPEC #3885
WELL W
COURT HOUSE BAY
MARCH 4, 1957
DATA SHEETS
CHARLES BRUNING COMPANY, INC.
NO. 700-10
10 x 10 to the inch.
PRINTED IN U. S. A.

JOHNSTON VERTICAL TURBINE PUMP



Furnished By Others
VERTICAL HOLLOW SHAFT MOTOR

HP PHASE CYCLE
VOLT RPM
ENCLOSURE

Furnished By Others
→ TYPE "A" DISCHARGE HEAD
" X 125# FLANGE

5" x 2" x 1 3/16" 6WI COLUMN ASSEMBLY

8 STAGE 7CC BOWL ASSEMBLY

CONDITIONS:
150 USGPM
170 FT. TOTAL HEAD
LIQUID Water
SPEC. GRAV 1.0 @ °F PUMPING TEMP.

5" SUCTION PIPE 5" CONE STRAINER

CUSTOMER
PO#
DEALER Heater Well Co.
PO#
JOHNSTON SERIAL #
JOHNSTON QUOTATION #

NOTE: DO NOT USE FOR CONSTRUCTION UNLESS CERTIFIED

Pump # W

JOHNSTON PUMP COMPANY
PASADENA, CALIFORNIA

H-1253-A

PUBLIC WORKS DEPARTMENT
CAMP LEJEUNE, NORTH CAROLINA

APPROVED

SUBJECT TO CONTRACT REQUIREMENTS

CONTRACT NOy 3885 SPEC. NO 3885-52

TITLE Repairs to Well Pumps

DATE: 3-27-57 H. T. Evans Jr.

BY DIRECTION OF OFFICER
IN CHARGE OF CONSTRUCTION

HYDRAULIC PERFORMANCE IS CONTINGENT ON WELL BEING FURNISHING PUMP WITH CLEAR, FRESH NON-AERATED OR NON-GASEOUS WATER FREE FROM DETRITUS WITH NO SUCTION LIFT AND TEMPERATURE NOT TO EXCEED 85 DEGREES FAHRENHEIT

NOTE: ALL COLUMN LOSSES ARE INCLUDED

CUSTOMER: _____

P.O.#

DEALER: Heater Well Co.

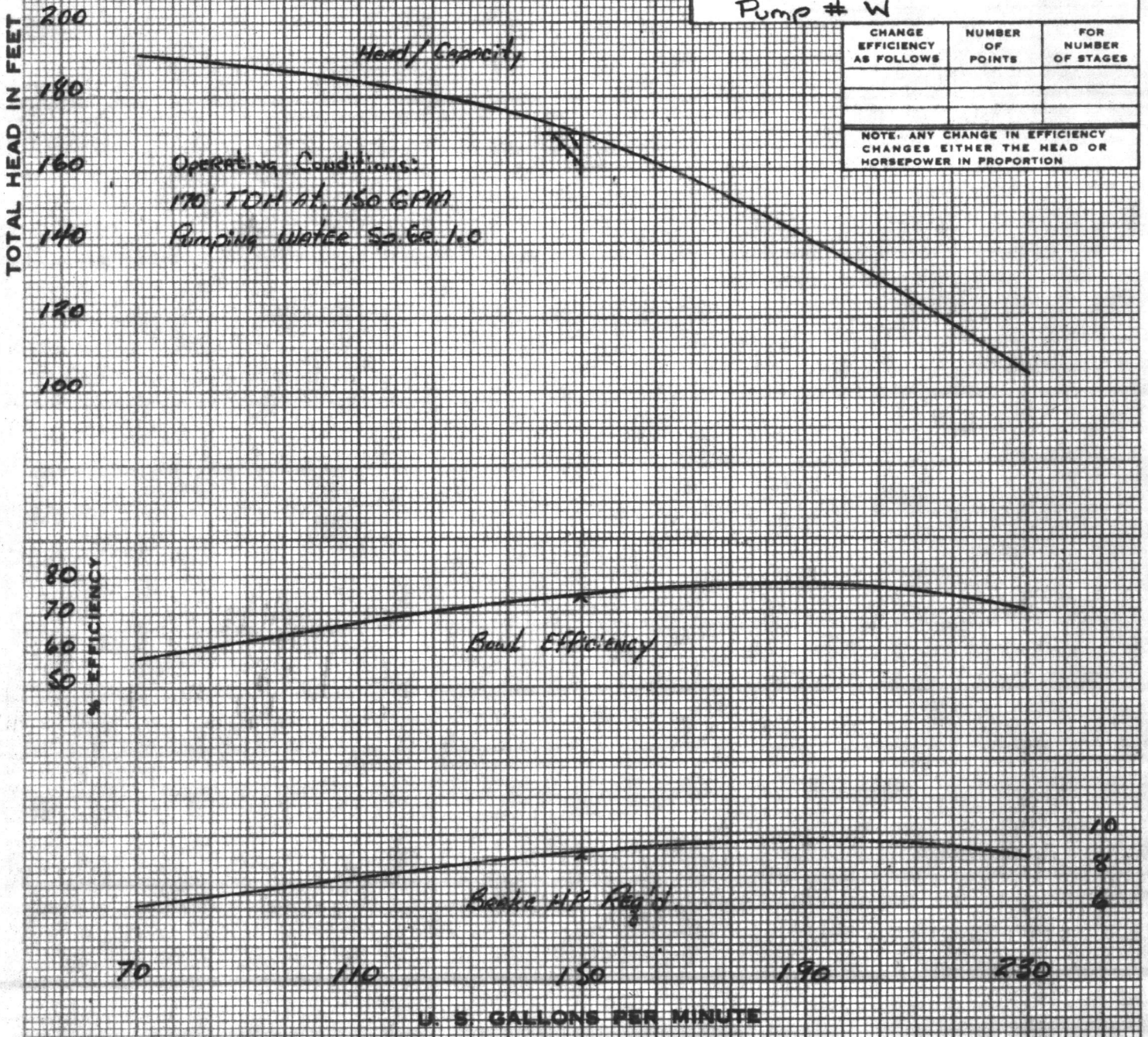
P.O.#

JOHNSTON SERIAL: _____

Pump # W

CHANGE EFFICIENCY AS FOLLOWS	NUMBER OF POINTS	FOR NUMBER OF STAGES

NOTE: ANY CHANGE IN EFFICIENCY CHANGES EITHER THE HEAD OR HORSEPOWER IN PROPORTION



IMPELLER Bez

5 3/8" Full DIA.

DATE: 3-21-57 BY: Jom

JOHNSTON PUMP CO.

JOHNSTON

VERTICAL PUMPS

PASADENA · CALIFORNIA · USA

PERFORMANCE 8 STAGE

7CC DEEP WELL TURBINE PUMP

1800 R. P. M.

CURVE SHEET No.

PUBLIC WORKS DEPARTMENT
CAMP LEJEUNE, NORTH CAROLINA

APPROVED

SUBJECT TO CONTRACT REQUIREMENTS

CONTRACT NO. 3885 SPEC. NO. 3885-56

TITLE Repairs to Well Pumps

DATE: 3-27-57 W. J. Evans Jr.

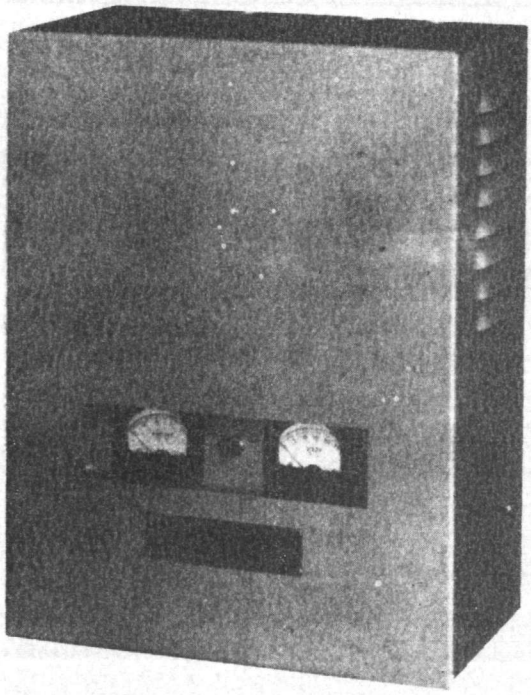
BY DIRECTION OF OFFICER IN CHARGE OF CONSTRUCTION

LESTER AUTOMATIC TWO RATE BATTERY CHARGERS

For Engine-Generator, Well Pump, and Similar Installations

BATTERY LIFE AND START RELIABILITY:

Fully charged storage batteries experience self-discharge without any load on them. This can be offset by a continuous low rate trickle charge but a continuous such low rate without periodic high charge rate, softens the battery plates, thereby shortening battery life with reduced start reliability.



AUTOMATIC TWO RATE CHARGING:

Both types of charging are provided automatically in the Lester Automatic Two Rate Chargers which go on high rate automatically after each engine start or start attempt. An inversely temperature compensated relay cuts the charger back to low rate when the batteries are approximately 90% charged. The low rate is adjustable 0-1 amp to provide a completion of charge and maintenance at a low current which will not boil the battery electrolyte. The 0-1 amp adjustment range permits a setting to offset steady drain by DC monitoring circuits.

HIGH RATE RESET AUTOMATIC ENGINE CONTROLLERS:

Charger models with designations ending with an R suffix switch to high rate automatically only after each engine start or start attempt. Hence they are fully automatic only when used with automatic engine controllers which exercise the engine at least once a week. These models are equally effective in installations which are exercised by manual control regularly once a week. A momentary push button on the charger control panel permits resetting to high rate whenever desired.

AUTOMATIC TIMER RECYCLE TO HIGH RATE:

Installations which are not assured of engine exercise at least once a week by automatic controller or by manual supervision require chargers with a 12 hour timer. These models, designated by an RC suffix, recycle automatically to high rate every 12 hours and are cut back to low rate by the inversely temperature compensated relay.

All Lester Automatic Two Rate Chargers shut off automatically while engine starter is energized and recycle to high rate after each engine start attempt.

STANDARD EQUIPMENT: The chargers are supplied with line voltage compensating taps covering line voltages 105-125 volts AC, a DC ammeter, "ON-OFF" switch, high rate reset button, DC fuse, and High rate indicator light. A DC voltmeter can be supplied at extra cost.

Specify which battery polarity goes thru engine starter solenoid.

Specify full charge specific gravity of batteries: either 1220 long life industrial types or 1270 automotive types.

OFFICE OF THE
OFFICER IN CHARGE OF CONSTRUCTION
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DATE: 3 July 1968

J. W. UPDEGROVE
CAPT. CEC, USN
Officer in Charge
of Construction

INSTALLATION:

1. Install charger and batteries in same room so that they are in air of the same temperature.
2. Mount charger by four ¼" lag screws thru back of housing.
3. Bring in 115 volts AC 60 cycles single phase supply lines thru conduit, according to local code, thru knockouts at top or bottom of cabinet.
4. Use 12 gauge type TW leads from BAT terminals in charger direct to battery terminals, making sure that polarity is not reversed. Length of these leads should not exceed 12 feet. Connect "START" terminal to cold side of starter solenoid.

6 VOLT MODELS

	WITHOUT TIMER	WITH TIMER	WEIGHT
6 Amps	6T6R	6T6RC	37 lbs.
10 Amps	6T10R	6T10RC	39 lbs.

12 VOLT MODELS

6 Amps	12T6R	12T6RC	41 lbs.
10 Amps	12T10R	12T10RC	43 lbs.

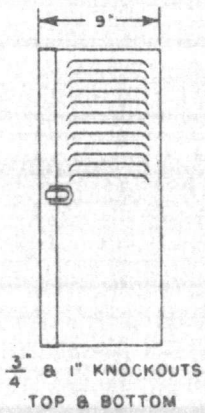
24 VOLT MODELS

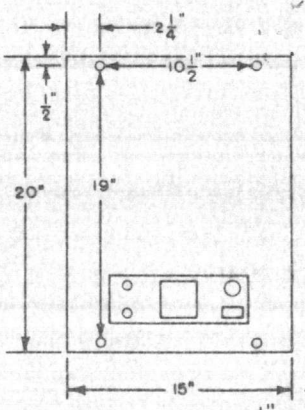
6 Amps	24T6R	24T6RC	46 lbs.
10 Amps	24T10R	24T10RC	48 lbs.

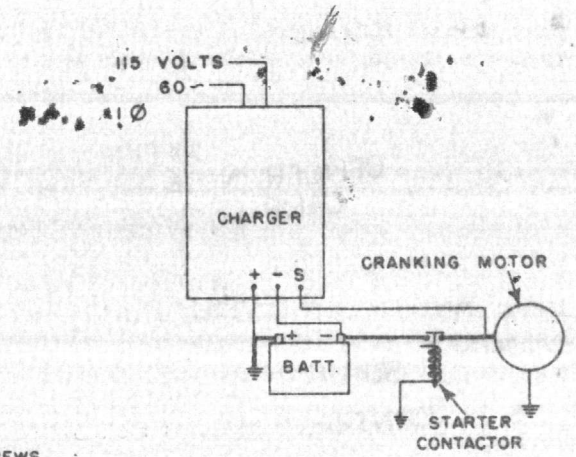
32 VOLT MODELS

6 Amps	32T6R	32T6RC	47 lbs.
10 Amps	32T10R	32T10RC	50 lbs.

12 & 24 VOLT MODELS U.L. LISTED







LESTER EQUIPMENT MFG. CO., INC.
Telephone: Richmond 9-2073
151 West 17th Street
Los Angeles 15, Calif.

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OFFICER IN CHARGE OF CONSTRUCTION
CAMP LEJEUNE, NORTH CAROLINA

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DATE: 3 July 1968

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CAPT. CEC, USN
Officer in Charge
of Construction

1. Install charger and batteries in same room so that they are in air of the same temperature.
2. After charger is mounted, bring in the supply lines via conduit according to local code thru knockout nearest the AC terminal strip at top to the 2 leftmost terminals.
3. Run 12 gauge type TW leads from DC output (BAT) terminal strip to battery terminals, making sure that polarity is not reversed. Length of these leads should not exceed 12 feet. Be sure to connect "START" terminal of battery terminal board to the side of the engine starter Solenoid which has voltage on it only when starter is energized.
4. Set charger switch to "ON" and note charge rate shown on ammeter. Rate will vary with state of battery charge, AC supply voltage, and tap setting on AC input terminal strip.
5. Tap is set for 115 volts AC when charger is shipped from factory. Move coiled lead on AC input terminal strip toward "HIGH" to increase charge rate, thus compensating for low supply voltage and vice versa. When battery specific gravity is 1120, proper tap setting will produce maximum charge rate shown on charger nameplate. Never exceed this current.
6. This is automatic two rate charger. The plastic enclosed relay is an inverse-temperature compensated voltage relay (TVR) which switches the charger to low rate when batteries are approximately 85%charged. Since it will not operate in the low to high direction at normal battery voltages, a push button is supplied for manual reset to high rate.
7. All models recycle to high rate automatically whenever the engine starter is energized by either manual control or automatic engine controller.
8. If the charger model number ends with a "C", it has an electric timer which resets the charger to high rate automatically every 12 hours and after every start or start attempt.
9. The resistor on the chassis should be adjusted to the final steady state voltage under trickle charge recommended by the battery manufacturer.
10. If the batteries require water more than once a month, either resistor is set for too high low rate or TVR is cutting off high rate too late, or it is a combination of both conditions.
11. If batteries never come up to desired specific gravity, resistor is set for too low trickle rate or TVR cuts back too early.
12. To check the operating voltage of the TVR, connect a 1% accuracy DC voltmeter to the battery terminals at the batteries and note voltage when TVR shifts charger to low rate.
13. For desired shut-off voltage, multiply number of lead-acid cells by the volts per cell shown opposite actual air temperature.

35 deg F -2.51	80 deg F -2.35
40 deg F -2.50	90 deg F -2.31
50 deg F -2.46	100 deg F -2.27
60 deg F -2.43	
70 deg F -2.40	

Above figures are for heavy duty automotive type batteries with 1260 full charge specific gravity. For long life industrial batteries with 1220 specific gravity, deduct .05 from above voltages per cell. For other types consult battery manufacturer.

14. To adjust the TVR, remove plastic cover. Use pencil point to move adjusting screw and nut on end of coil spring away from moulded support, stretching spring as little as possible. Without turning adjusting screw carefully turn nut 1/6th turn at a time and release so that flats of nut reseat in moulded support. Turning nut clockwise to increase tension raises the operating voltage and vice versa. Cover must be in place when checking operating voltage.

CERTIFIED TRUE COPY _____

Lester Equipment Mfg. Co. Inc.

LOS ANGELES 15, CALIF.

SCALE	APPROVED BY	DRAWN BY
DATE 6-11-63		REVISED
INSTRUCTIONS FOR TVR TWO RATE STANDBY BATTERY CHARGERS		DRAWING NUMBER 1259 F

OFFICE OF THE
OFFICER IN CHARGE OF CONSTRUCTION
CAMP LEJEUNE, NORTH CAROLINA

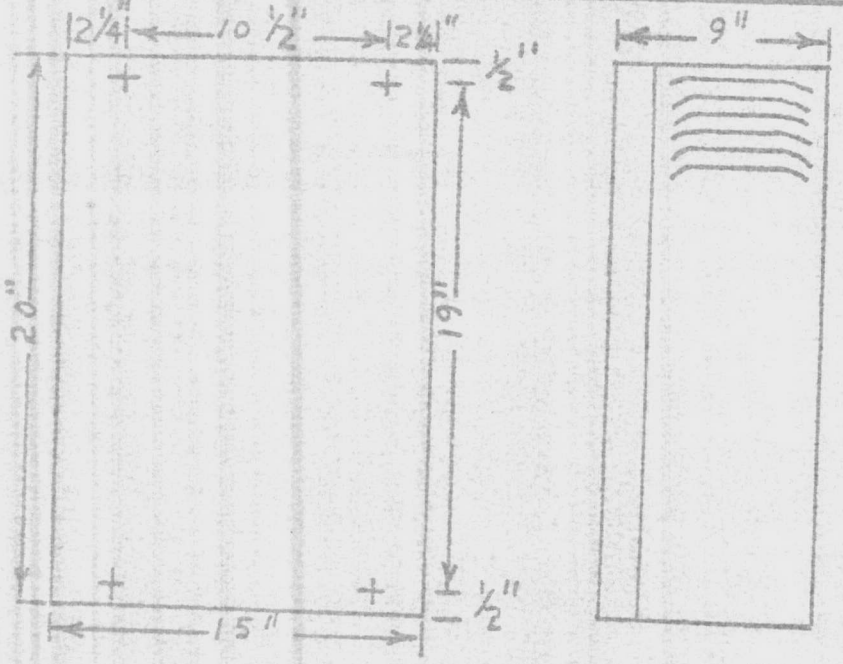
APPROVED

SUBJECT TO CONTRACT REQUIREMENTS

CONTRACT NBy 88313 SPEC. NO. 88313/67

DATE: 3 July 1968

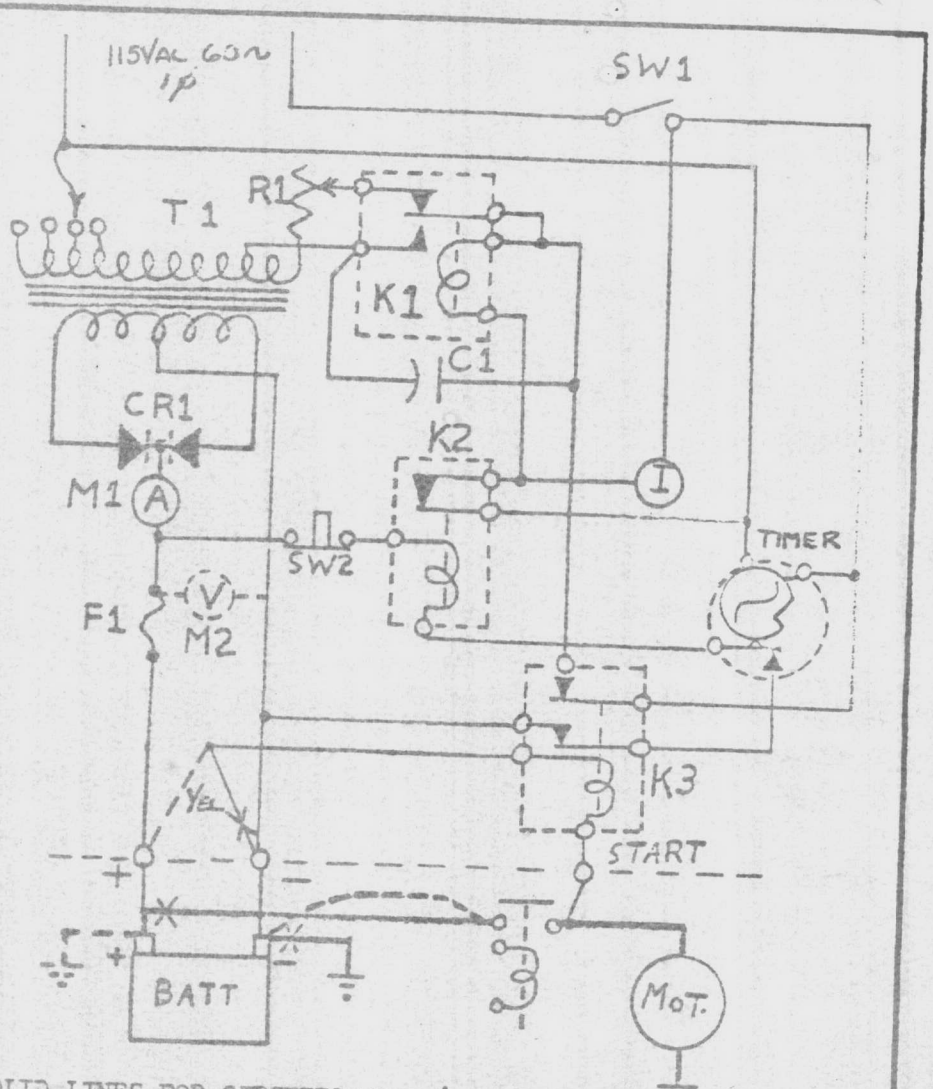
J. W. UPDEGROVE
CAPT. CEC, USN
Officer in Charge
of Construction



4 mtg. holes for ¼" lag screws

3/4" & 1" knockouts top and bottom

6" clearance on both sides and 12" clearance at bottom recommended for good cooling.



SOLID LINES FOR CIRCUITS WITH + THRU STARTER - CONTACTOR
BROKEN LINES FOR CIRCUITS WITH - THRU STARTER CONTACTOR

DURING INSTALLATION CHECK POSITION OF YELLOW WIRE ON CHARGER BATT TERMINAL STRIP. CHANGE IF NECESSARY

For starter circuits with negative (-) thru starter contactor, solid lines are broken at X

"Start" terminal of charger must be connected to contactor terminal which has voltage only while starter is energized.

THIS DRAWING APPLIES TO MODELS 6T6RC, 6T10RC, 12T6RC & 12T10RC

CERTIFIED CORRECT: _____

Lester Equipment Mfg. Co. Inc.

LOS ANGELES 15, CALIF.

SCALE None	APPROVED BY	DRAWN BY
DATE 9/2/57		REVISED 11/14/60
AUTOMATIC TWO RATE BATTERY CHARGER 6 & 12T( )RC SERIES		DRAWING NUMBER 1275C

OFFICE OF THE
OFFICER IN CHARGE OF CONSTRUCTION
CAMP LEJEUNE, NORTH CAROLINA

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