



# City of Grand Island

Tuesday, July 28, 2020

Council Session

## Item G-9

**#2020-167 - Approving Bid Award - Turbine Valve Overhaul at  
Platte Generating Station - Fall 2020**

Staff Contact: Tim Luchsinger, Stacy Nonhof



# **Council Agenda Memo**

**From:** Timothy G. Luchsinger, Utilities Director  
Stacy Nonhof, Interim City Attorney

**Meeting Date:** July 28, 2020

**Subject:** Turbine Valve Overhaul – Fall 2020

**Presenter(s):** Timothy G. Luchsinger, Utilities Director

## **Background**

An inspection and overhaul of the turbine valves at the Platte Generating Station is performed every 2.5 years. The next overhaul is scheduled for the fall outage in October of this year. During this inspection, the turbine valves are completely disassembled, and all components are cleaned, inspected, repaired or replaced as necessary.

Specifications were developed by the plant maintenance staff to include all labor to open, inspect, clean, and close the turbine valves, with the Utilities Department to supply all required parts and materials. The Specifications include time and material rates for additions or reductions in the repair labor amount as the amount of actual work is not known until the valves are disassembled and inspected.

## **Discussion**

The specification for the Turbine Valve Overhaul – Fall 2020, was advertised and issued for bid in accordance with the City Purchasing Code. Bids were publicly opened on July 7, 2020. The engineer's estimate for this project was \$800,000.00, with the bid results for the valve overhaul as follows:

Bidder	Bid Price	Valve Mapping	Total Adjusted Bid Price
GE Steam Power, Inc. Windsor, Connecticut	\$ 221,000.00	\$ **	\$221,000.00
HPI, LLC Houston, Texas	\$ 161,458.00	\$121,731.00	\$238,189.00
Mechanical Dynamics & Analysis Latham, New York	\$ 278,504.00	\$ 39,265.00	\$317,769.00
S.T. Cotter Turbine Services, Inc. Clearwater, Minnesota	\$291,799.83*	\$ 5,375.00	\$297,174.83
Power Services Group Cape Coral, Florida	\$ 336,685.00	\$ 59,018.00	\$395,703.00



Plant staff reviewed the bids for compliance with the City's detailed specification. The bid from \*S.T. Cotter was not summed correctly in the bid documents and has been corrected. All other bidders had several exceptions to the work bid. Each exception was reviewed and determined acceptable with the recommended bidder.

The bids also included pricing for valve mapping, if mapping were to be required during inspection. When combining the valve mapping with the valve overhaul, the low bidder for the overhaul, HPI would no longer be the low bidder.

\*\*GE Steam Power, Inc., the Original Equipment Manufacturer (OEM) stated they will be able to perform the valve overhaul without valve mapping, having all the original design drawings. Valve mapping is not recommended by GE Steam Power. The bid from GE Steam Power, Inc., of Windsor, Connecticut, has exceptions that are acceptable and less than the engineer's estimate.

### **Alternatives**

It appears that the Council has the following alternatives concerning the issue at hand. The Council may:

1. Move to approve
2. Refer the issue to a Committee
3. Postpone the issue to future date
4. Take no action on the issue

### **Recommendation**

City Administration recommends that Council award the Contract for the Turbine Valve Overhaul – Fall 2020 to GE Steam Power, Inc., of Windsor, Connecticut, as the low responsive bidder, with the bid in the amount of \$221,000.00.

### **Sample Motion**

Move to approve the bid in the amount of \$221,000.00, from GE Steam Power, Inc., of Windsor, Connecticut, for the Turbine Valve Overhaul – Fall 2020 at Platte Generating Station.





Stacy Nonhof, Purchasing Agent

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**BID OPENING**

**BID OPENING DATE:** July 7, 2020 at 2:00 p.m.  
**FOR:** Turbine Valve Overhaul – Fall 2020  
**DEPARTMENT:** Utilities  
**ESTIMATE:** \$800,000.00  
**FUND/ACCOUNT:** 520  
**PUBLICATION DATE:** June 13, 2020  
**NO. POTENTIAL BIDDERS:** 7

**SUMMARY**

<b>Bidder:</b>	<u>GE Steam Powers, Inc.</u> Windsor, CT	<u>HPI, LLC</u> Houston, TX
<b>Bid Security:</b>	Philadelphia Indemnity Ins. Co.	SureTec Ins. Co.
<b>Exceptions:</b>	Noted	Noted

<b>Bid Price:</b>		
<b>Material:</b>	N/A	\$ 2,991.00
<b>Labor:</b>	\$221,000.00	\$158,258.00
<b>Sales Tax:</b>	<u>N/A</u>	<u>\$ 209.00</u>
<b>Total Bid:</b>	\$221,000.00	\$161,458.00

<b>Option Valve Mapping</b>	N/A	\$121,731.00
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<b>Bidder:</b>	<u>Power Services Group</u> Cape Coral, FL	<u>Mechanical Dynamics &amp; Analysis, LTD</u> Latham, NY
<b>Bid Security:</b>	SureTec Ins. Co.	Federal Ins. Co.
<b>Exceptions:</b>	None	Noted

<b>Bid Price:</b>		
<b>Material:</b>	\$ 16,656.00	\$ 8,945.00
<b>Labor:</b>	\$296,834.00	\$268,888.00
<b>Sales Tax:</b>	<u>\$ 23,195.00</u>	<u>\$ 671.00</u>
<b>Total Bid:</b>	\$336,685.00	\$278,504.00
<b>Optional Mapping:</b>	\$ 59,018.00	\$ 39,265.00



**Bidder:** **S.T. Cotter Turbine Services, Inc.**  
**Clearwater, MN**

**Bid Security:** **The Guarantee Co.**

**Exceptions:** **Noted**

**Bid Price:**

**Material:** **N/A**

**Labor:** **\$273,160.00**

**Sales Tax:** **\$ 18,639.83**

**Total Bid:** **\$267,170.83**

**Optional Mapping:** **\$ 5,375.00**

cc: Tim Luchsinger, Utilities Director  
Jerry Janulewicz, City Administrator  
Stacy Nonhof, Purchasing Agent  
Karen Nagel, Utility Secretary

Pat Gericke, Utilities Admin. Assist.  
Patrick Brown, Finance Director  
Lynn Mayhew, Assist. Utilities Director

**P2212**





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**BID SPECIFICATION PACKAGE**

**for**

**TURBINE VALVE OVERHAUL – FALL 2020**

**C 129227**

**Bid Opening Date/Time**

Tuesday, July 7, 2020 @ 2:00 p.m. (local time)  
City of Grand Island, City Hall  
100 East 1<sup>st</sup> Street, P.O. Box 1968  
Grand Island, NE 68802-1968

**Contact Information**

**Lynn Mayhew, Assistant Utilities Director-Production**  
City of Grand Island – Utilities Department  
Platte Generating Station  
308/385-5496

**Date issued: June 12, 2020**



**ADVERTISEMENT TO BIDDERS  
FOR  
TURBINE VALVE OVERHAUL – FALL 2020  
FOR  
CITY OF GRAND ISLAND, NEBRASKA**

Sealed bids for Turbine Valve Overhaul-Fall 2020 will be received at the office of the City Clerk, 100 E. First Street, P.O. Box 1968, Grand Island, Nebraska 68802, until **Tuesday, July 7, 2020 at 2:00 p.m. local time**, FOB the City of Grand Island, freight prepaid. Bids will be publicly opened at this time in the Grand Island City Hall City Clerk's Office located on 1<sup>st</sup> floor of City Hall. **Submit an original and three copies if submitting by mail.** Bid package and any Addendas are also available on-line at [www.grand-island.com](http://www.grand-island.com) under Business-Bids and Request for Proposals-Bid Calendar under the bid opening date. Bidding documents, plans and specifications for use in preparing bids may be downloaded from the QuestCDN website [www.QuestCDN.com](http://www.QuestCDN.com) for a \$30.00 fee. Submitting through QuestCDN requires one original document of the bid to be uploaded. **Bids received after the specified time will not be considered.**

The successful bidder will be required to comply with fair labor standards as required by Nebraska R.R.S.73-102 and comply with Nebraska R.R.S. 48-657 pertaining to contributions to the Unemployment Compensation Fund of the State of Nebraska. Successful bidder shall maintain a drug free workplace policy. Every public contractor and his, her or its subcontractors who are awarded a contract by the City for the physical performance of services within the State of Nebraska shall register with and use a federal immigration verification system to determine the work eligibility status of new employees physically performing services within the State of Nebraska.

Each bidder shall submit with the bid a certified check, a cashiers check, or bid bond payable to the City of Grand Island in an amount no less than five percent (5%) of the bid price which shall guarantee good faith on the part of the bidder and the entering into a contract within fifteen (15) days at the bid price if accepted by the City. **Your certified check, cashiers check or bid bond must be submitted in a separate envelope attached to the outside of the envelope containing the bid.** **Each envelope must be clearly marked indicating its contents. Failure to submit the necessary qualifying information and correct number of copies in clearly marked and separate envelopes will result in your bid not being opened or considered.** Only surety companies authorized to do business in the State of Nebraska may issue bid bonds.

Bids will be evaluated by the Purchaser based on price, schedule, quality, adherence to schedule, plan and specifications, economy and efficiency of operation, experience and reputation of the bidder, ability, capacity, and skill of the bidder to perform contract required and adaptability of the particular items to the specific use intended.

The Purchaser reserves the right to reject any or all bids, to waive irregularities therein, and to accept whichever bid that may be in the best interest of the City, at its sole discretion.

No bidder may withdraw his/her bid for a period of thirty (30) days after date of bid opening.

RaNae Edwards, City Clerk

**Advertised**



(All bids must be submitted on this form)

**TURBINE VALVE OVERHAUL – FALL 2020**  
**BID DATA FORM**

CITY OF GRAND ISLAND  
GRAND ISLAND, NE

The undersigned Bidder, having examined all specifications and other bidding documents, and all addenda thereto, and being acquainted with and fully understanding all conditions relative to the specified materials and equipment, hereby proposes to provide all materials, labor, equipment, tooling, supervision and technical expertise to overhaul ten (10) turbine valves at the Platte Generating Station. The purpose of this overhaul is to completely disassemble, visually inspect and non-destructive examination (NDE) the ten (10) turbine valves, FOB the City of Grand Island, freight prepaid, at the following price:

**ITEM DESCRIPTION**

**EXTENDED COST**

Base Bid:

Material \$ \_\_\_\_\_

Labor \$ \_\_\_\_\_

Applicable Sales tax\* \$ \_\_\_\_\_

**Total Base Bid** \$ \_\_\_\_\_

**\*\*Optional Valve Mapping** \$ \_\_\_\_\_

**\* If bidder fails to include sales tax in their bid price or takes exception to including sales tax in their bid price, the City will add a 7.5% figure to the bid price for evaluation purposes; however, the City will only pay actual sales tax due.**

☐ **Exceptions Noted** - Bidder acknowledges there are *Exceptions* and/or *Clarifications* noted to the above bid, and those exceptions are fully explained on a separate sheet, clearly marked, and included with the Bid.

Bidder Company Name \_\_\_\_\_ Date \_\_\_\_\_

Company Address \_\_\_\_\_ City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Print Name of Person Completing Bid \_\_\_\_\_ Signature \_\_\_\_\_

Email: \_\_\_\_\_ Telephone No. \_\_\_\_\_

According to Nebraska Sales and Use Tax Requirements, Section 1-017, Contractors, check which option you have selected to file with the Nebraska Department of Revenue:

*Nebraska law provides a sales and use tax exemption on contractor labor charges for the construction, repair, or annexation of any structure used for the generation, transmission, or distribution of electricity. Separately stated contractor labor would be exempt, all materials are taxable according to the contractor's option.*

Option 1 (Section 1-017.05) \_\_\_\_\_ Option 2 (Section 1-017.06) \_\_\_\_\_ Option 3 (Section 1-017.07) \_\_\_\_\_

*If the Nebraska sales and use tax election is not filed or noted above, the contractor will be treated as a retailer under Option 1 for sales and use tax purposes.*



**\*\*Optional Valve Mapping pricing.** If Bid includes the Optional valve mapping scope of work, an alternate schedule shall be provided.

☐ By checking this box, Bidder acknowledges the specified completion date of the project is **November 14, 2020.**

☐ By checking this box, Bidder acknowledges that Addenda Number(s) \_\_\_\_\_ were received and considered in Bid preparation.

Note: If Bidder supplies individual unit pricing information as supplemental pricing to the base material and labor cost above, said individual pricing is proprietary information and should not be released under a public records request. The total base bid is not considered proprietary information and will be released pursuant to City Procurement Code.



**CHECKLIST FOR BID SUBMISSION**  
**FOR**  
**TURBINE VALVE OVERHAUL – FALL 2020**

**Bids must be received by the City Clerk before 2:00 p.m. on Tuesday, July 7, 2020.**

The following items must be completed for your bid to be considered.

- ☐ Submittal of bid documents:
  - ☐ **Option 1 – Mailing:** A signed original and three (3) copies of the bidding documents. Failure to submit the correct number of copies may result in your bid not being considered.
    - ☐ Note: Your certified check, cashiers check or bid bond should be clearly marked in a separate envelope attached to the signed original bid.
  - ☐ **Option 2 – QuestCDN (online):** Purchase the bid specification through QuestCDN at their \$30.00 fee. Upload the signed original of the Bid Data Form, along with any supporting material required to meet the bid specification through QuestCDN. Upload your bid bond online through QuestCDN. *Bidders using Certified check or Cashiers' Check must mail said check to the office of the City Clerk no later than the scheduled bid opening date and time and clearly marked with the project name.*
- ☐ Bidders must complete and sign the Bid Data Form provided in these Documents. All blank spaces must be filled in. Bidders shall acknowledge receipt of any Addenda information on the Bid Data Form.
- ☐ Selection of Nebraska Sales Tax Option. If the Nebraska sales and use tax election is not filed or noted above, the Contractor will be treated as a retailer under Option 1 for sales and use tax purposes.
- ☐ A reference list of recent projects similar in scope and complexity.
- ☐ A summary of the experience of the superintendents and supervisors proposed for this project.
- ☐ Firm lump sum pricing; firm unit pricing in case adjustments are necessary, and breakout of sales tax pricing.
- ☐ A proposed detailed test schedule that identifies the work scope items, shifts and manpower loading for each day of the outage. If valve mapping is priced as an optional scope of work, an alternate schedule shall be provided.
- ☐ Exceptions to the specification or Owner's Contract Document must be provided with Bid.
- ☐ A copy of your OSHA compliant Confined Space Procedure and Respiratory Protection Procedure.
- ☐ Acknowledgment of Addenda Number(s) \_\_\_\_\_.

*Please check off each item as completed to ensure compliance. If you have any questions, please feel free to contact our office prior to the bid opening date/time.*



## INSTRUCTIONS TO BIDDERS

### 1. GENERAL INFORMATION.

The following instructions outline the procedure for preparing and submitting Bids. Bidders must fulfill all requirements as specified in these Documents.

### 2. TYPE OF BID.

Bidders shall be required to submit prices for all items listed in the Bid Data Form.

### 3. PREPARATION OF BIDS.

Bidders shall use only the Bid Data Form provided in these Documents. All blank spaces in the Bid Data Form must be filled in, preferably in BLACK ink, in both words and figures where required. No changes to the wording or content of the forms is permitted. Written amounts shall govern in case of discrepancy between the amounts stated in writing and the amounts stated in figures.

Prices stated shall be f.o.b. with freight and full insurance paid by Bidder, to the job site located in Grand Island, Nebraska.

The Bidder shall acknowledge receipt of all Addenda in the Bid Data Form. Bids received without acknowledgement or without the Addendum enclosed will be considered informal.

Individual unit pricing as listed on the Bid Data Form or supplied as supplemental information may be deemed proprietary information and not be released under a public records request. The total amount of the bid is not considered proprietary information and will be released pursuant to City Procurement Code.

### 4. SUBMISSION OF BIDS.

All Bids must be submitted intact with the correct number of copies no later than the time prescribed, at the place, and in the manner set forth in the ADVERTISEMENT FOR BIDS. Bids must be made on the Bid Data Form provided herein. Each Bid mailed must be submitted intact in a sealed envelope, so marked as to indicate its contents without being opened, and delivered in person or addressed and mailed in conformance with the instructions in the ADVERTISEMENT FOR BIDS.

### 5. BID SECURITY.

Bids must be accompanied by cash, a certified check, or cashier's check drawn on a bank which is insured by the Federal Deposit Insurance Corporation, or a bid bond issued by a Surety authorized to issue such bonds in the state where the Work is located, in the amount of 5 percent of the bid amount payable to OWNER. This bid security shall be given as a guarantee that the Bidder will not withdraw their Bid for a period of **thirty (30) days after** bid opening, and that if awarded the Contract, the successful Bidder will execute the attached Contract and furnish a properly executed Performance Bond and Payment Bond, each in the full amount of the Contract price, within the time specified.



The Attorney-in-Fact that executes this bond on behalf of the Surety must attach a notarized copy of his/her power of attorney as evidence of his/her authority to bind the Surety on the date of execution of the bond. Where State Statute requires, certification by a resident agent shall also be provided.

6. RETURN OF BID SECURITY.

Within fifteen (15) days after the award of the Contract, the OWNER will return the bid securities to all Bidders whose Bids are not to be further considered in awarding the Contract. All other retained bid securities will be held until the Contract has been finally executed, after which all bid securities, other than Bidders' bonds and guarantees which have been fortified, will be returned to the respective Bidders whose Bids they accompanied.

7. BASIS OF AWARD.

The award will be made by the OWNER on the basis of the Bid from the lowest responsive, responsible Bidder which, in the OWNER's sole and absolute judgment will best serve the interest of the OWNER. All Bids will be considered on the following basis:

Delivery time	Conformance with the terms of the Bid
Bid price	Documents
Cost of installation	
Suitability to project requirements	Responsibility and qualification of Bidder

The OWNER reserves the right to reject all Bids, or any Bid not in conformance with the intent of the Bid Documents, and to waive any informalities and irregularities in said Bids.

8. EXECUTION OF CONTRACT.

The successful Bidder shall, within fifteen (15) days after receiving notice of award, sign and deliver to the OWNER the Contract hereto attached together with the acceptable bonds as required in these Bid Documents. Within fifteen (15) days after receiving the signed Contract with acceptable bond(s) from the successful Bidder, the OWNER's authorized agent will sign the Contract. Signature by both parties constitutes execution of the Contract.

9. PERFORMANCE AND PAYMENT BONDS.

The successful Bidder shall file with the OWNER Performance and Payment Bonds in the full amount (100 percent) of the Contract price, as security for the faithful performance of the Contract and the payment of all persons supplying labor and materials for the Work under this Contract, and to cover all guarantees against defective workmanship or materials, or both, for a period of one (1) year after the date of final acceptance of the Work by the OWNER. The Surety furnishing these bonds shall have a record of service satisfactory to the OWNER, be authorized to do business in the State where the OWNER's project is located and shall be named on the current list of approved Surety Companies, acceptable on Federal bonds as published by the Audit Staff, Bureau of Accounts, U.S. Treasury Department.

The Attorney-in-Fact (Resident Agent) who executes these bonds on behalf of the Surety must attach a notarized copy of his/her power-of-attorney as evidence of his/her authority to bind the Surety on the date of execution of the bond.



10. TIME OF COMPLETION.

The time of completion of the Work to be performed under this Contract is the essence of the Contract. The time allowed for the completion of the Work is stated in the Bid Data Form.

11. GRATUITIES AND KICKBACKS.

City Code states that it is unethical for any person to offer, give, or agree to give any City employee or former City employee, or for any City employee or former City employee to solicit, demand, accept, or agree to accept from another person, a gratuity or an offer of employment in connection with any decision, approval, disapproval, recommendation, or preparation of any part of a program requirement or a purchase request, influencing the content of any specification or procurement standard, rendering of advice, investigation, auditing, or in any other advisory capacity in any proceeding or application, request for ruling, determination, claim or controversy, or other particular matter, pertaining to any program requirement or a contract or subcontract, or to any solicitation or proposal therefor. It shall be unethical for any payment, gratuity, or offer of employment to be made by or on behalf of a subcontractor under a contract to the prime contractor or higher tier subcontractor or any person associated therewith, as an inducement for the award of a subcontract or order.

12. FISCAL YEAR.

The City of Grand Island, Nebraska operates on a fiscal year beginning October 1st and ending on the following September 30th. It is understood and agreed that any portion of this agreement which will be performed in a future fiscal year is contingent upon the City Council adopting budget statements and appropriations sufficient to fund such performance.



## **CONTRACT AGREEMENT**

THIS AGREEMENT made and entered into by and between **[SUCCESSFUL BIDDER]**, hereinafter called the Contractor, and the **CITY OF GRAND ISLAND, NEBRASKA**, hereinafter called the City.

WITNESSETH:

THAT, WHEREAS, in accordance with law, the City has caused contract documents to be prepared and an advertisement calling for bids to be published for *TURBINE VALVE OVERHAUL-FALL 2020*; and

WHEREAS, the City, in the manner prescribed by law, has publicly opened, examined, and canvassed the bids submitted, and has determined the aforesaid Contractor to be the lowest responsive and responsible bidder, and has duly awarded to said Contractor a contract therefore, for the sum or sums named in the Contractor's bid, a copy thereof being attached to and made a part of this Contract;

NOW, THEREFORE, in consideration of the compensation to be paid to the Contractor and of the mutual agreements herein contained, the parties have agreed and hereby agree, the City for itself and its successors, and the Contractor for itself, himself/herself, or themselves, and its, his/her, or their successors, as follows:

ARTICLE I. That the following documents shall comprise the Contract, and shall together be referred to as the "Agreement" or the "Contract Documents";

1. This Contract Agreement.
2. City of Grand Island's Specification for this project.
3. **[NAME OF SUCCESSFUL BIDDER]** bid signed and dated **[DATE OF BID]**.

In the event of any conflict between the terms of the Contract Documents, the provisions of the document first listed shall prevail.

ARTICLE II. That the Contractor shall (a) furnish all tools, equipment, superintendence, transportation, and other construction materials, services and facilities; (b) furnish, as agent for the City, all materials, supplies and equipment specified and required to be incorporated in and form a permanent part of the completed work; (c) provide and perform all necessary labor; and (d) in a good substantial and workmanlike manner and in accordance with the requirements, stipulations, provisions, and conditions of the Contract documents as listed in the attached General Specifications, said documents forming the Contract and being as fully a part thereof as if repeated verbatim herein, perform, execute, construct and complete all work included in and covered by the City's official award of this Contract to the said Contractor, such award being based on the acceptance by the City of the Contractor's bid;

ARTICLE III. That the City shall pay to the Contractor for the performance of the work embraced in this Contract and the Contractor will accept as full compensation therefore the sum (subject to adjustment as provided by the Contract) of **[DOLLAR AMOUNT] (\$00.00)** for all services, materials, and work covered by and included in the Contract award and designated in the foregoing Article II; payments thereof to be made in cash or its equivalent in the manner provided in the General Specifications.

The total cost of the Contract includes:



Base Bid:	\$ .00
Sales Tax on Materials/Equipment:	\$ .00
Sales Tax on Labor:	<u>\$ .00</u>
Total	\$ .00

The City of Grand Island, Nebraska operates on a fiscal year beginning October 1st and ending on the following September 30th. It is understood and agreed that any portion of this agreement which will be performed in a future fiscal year is contingent upon the City Council adopting budget statements and appropriations sufficient to fund such performance.

ARTICLE IV. The Contractor hereby agrees to act as agent for the City in purchasing materials and supplies for the City for this project. The City shall be obligated to the vendor of the materials and supplies for the purchase price, but the Contractor shall handle all payments hereunder on behalf of the City. The vendor shall make demand or claim for payment of the purchase price from the City by submitting an invoice to the Contractor. Title to all materials and supplies purchased hereunder shall vest in the City directly from the vendor. Regardless of the method of payment, title shall vest immediately in the City. The Contractor shall not acquire title to any materials and supplies incorporated into the project. All invoices shall bear the Contractor's name as agent for the City. This paragraph will apply only to these materials and supplies actually incorporated into and becoming a part of the finished product of the TURBINE VALVE OVERHAUL-FALL 2020.

ARTICLE V. That the Contractor shall start work as soon as possible after the Contract is signed and the required bonds and insurance are approved, and that the Contractor shall deliver the equipment, tools, supplies, and materials F.O.B. Platte Generating Station, and complete the work on or before **November 14, 2020**.

ARTICLE VI. The Contractor agrees to comply with all applicable State fair labor standards in the execution of this Contract as required by Section 73-102, R.R.S. 1943. The Contractor further agrees to comply with the provisions of Section 48-657, R.R.S. 1943, pertaining to contributions to the Unemployment Compensation Fund of the State of Nebraska. During the performance of this Contract, the Contractor and all subcontractors agree not to discriminate in hiring or any other employment practice on the basis, of race, color, religion, sex, national origin, age or disability. The Contractor agrees to comply with all applicable Local, State and Federal rules and regulations. The Contractor agrees to maintain a drug-free workplace policy and will provide a copy of the policy to the City upon request. Every public contractor and his, her or its subcontractors who are awarded a contract by the City for the physical performance of services within the State of Nebraska shall register with and use a federal immigration verification system to determine the work eligibility status of new employees physically performing services within the State of Nebraska.

ARTICLE VII. Gratuities and kickbacks: City Code states that it is unethical for any person to offer, give, or agree to give any City employee or former City employee, or for any City employee or former City employee to solicit, demand, accept, or agree to accept from another person, a gratuity or an offer of employment in connection with any decision, approval, disapproval, recommendation, or preparation of any part of a program requirement or a purchase request, influencing the content of any specification or procurement standard, rendering of advice, investigation, auditing, or in any other advisory capacity in any proceeding or application, request for ruling, determination, claim or controversy, or other particular matter, pertaining to any program requirement or a contract or subcontract, or to any solicitation or proposal therefor. It shall be unethical for any payment, gratuity, or offer of employment to be



made by or on behalf of a subcontractor under a contract to the prime contractor or higher tier subcontractor or any person associated therewith, as an inducement for the award of a subcontract or order.

**[SUCCESSFUL BIDDER]**

By \_\_\_\_\_ Date \_\_\_\_\_

Title \_\_\_\_\_

**CITY OF GRAND ISLAND, NEBRASKA**

By \_\_\_\_\_ Date \_\_\_\_\_  
Mayor

Attest: \_\_\_\_\_  
City Clerk

The Contract is in due form according to law and hereby approved.

\_\_\_\_\_  
Attorney for the City Date \_\_\_\_\_

DRAFT



**REQUEST FOR BIDS - GENERAL SPECIFICATIONS**

The Bid shall be in accordance with the following and with all attached BID DATA and DETAILED SPECIFICATIONS.

All prices are to be furnished and installed FOB, Grand Island, Nebraska. **All prices shall be firm, and shall include all sales and use taxes as lawfully assessed under laws and regulations of the State of Nebraska.** \* If bidder fails to include sales tax in their bid price or takes exception to including sales tax in their bid price, the City will add a 7.5% figure to the bid price for evaluation purposes; however, the City will only pay actual sales tax due.

Mailed bids shall include the following on the **outside** of the mailing envelope: **“Turbine Valve Overhaul-Fall 2020”**. All bids submitted by mail must include **an original and three copies** of the bid. The bid specification and on-line bidding forms are also available at <http://www.grand-island.com/business/bids-and-request-for-proposals/bid-calendar> under the bid opening date and “Click here for bid document link” through QuestCDN for a \$30.00 fee. If submitting through QuestCDN, **one** original document of the bid is required to be uploaded. No verbal bids will be considered. All sealed bids are due no later than Tuesday, **July 7, 2020 at 2:00 p.m. local time.** to:

Mailing Address: City Clerk  
City Hall  
P. O. Box 1968  
Grand Island, NE 68802-1968

Street Address: City Clerk  
City Hall  
100 E. First Street  
Grand Island, NE 68801

Bids will be opened at this time in the City Hall City Clerk’s Office located on 1<sup>st</sup> floor of City Hall. Any bid received after the specified date will not be considered.

Bids will be evaluated by the Purchaser based on price, schedule, quality, adherence to schedule, plan and specifications, economy and efficiency of operation, experience and reputation of the bidder, ability, capacity, and skill of the bidder to perform contract required and adaptability of the particular items to the specific use intended.

The successful bidder will be required to comply with fair labor standards as required by Nebraska R.R.S.73-102 and comply with Nebraska R.R.S. 48-657 pertaining to contributions to the Unemployment Compensation Fund of the State of Nebraska. Contractor shall maintain a drug free workplace policy. Every public contractor and his, her or its subcontractors who are awarded a contract by the City for the physical performance of services within the State of Nebraska shall register with and use a federal immigration verification system to determine the work eligibility status of new employees physically performing services within the State of Nebraska.

*Platte Generating Station / 1035 W. Wildwood Drive / Box 1968 / Grand Island, Nebraska 68802-1968  
Phone (308) 385-5496 / FAX (308) 385-5353*



The equipment and materials must be new, the latest make or model, unless otherwise specified. Prior to approving the invoice for payment, the City reserves the right to thoroughly inspect and test the equipment to confirm compliance with specifications. Any equipment or material which does not meet the City's requirements will be returned at vendor's expense for correction. The invoice will be paid after approval at the next regularly scheduled City Council meeting and occurring after departmental approval of invoice; the City Council typically meets the second and fourth Tuesday of each month. Invoices must be received well in advance of Council date to allow evaluation and processing time.

Each bidder shall submit with the bid a certified check, a cashier's check, or bid bond payable to the City of Grand Island in an amount no less than five percent (5%) of the bid price which shall guarantee good faith on the part of the Bidder and the entering into a contract within fifteen (15) days at the bid price if accepted by the City. **Your certified check, cashier's check or bid bond must be submitted in a separate envelope attached to the outside of the envelope containing the bid.** Each envelope must be clearly marked indicating its contents. Failure to submit the necessary qualifying information and correct number of copies in clearly marked and separate envelopes will result in your bid not being opened or considered. Only surety companies authorized to do business in the State of Nebraska may issue bid bonds.

Successful bidder shall comply with the City's insurance requirements; performance and payment bonds are required for this project as outlined in the Detailed Specifications and Instructions to Bidders. All bids shall be valid for at least thirty (30) working days after the bid deadline for evaluation purposes.

**All bids must be on the bid form and must be signed and dated to be accepted.** If exceptions and/or clarifications are noted to the bid, those exceptions must be fully explained on a separate sheet, clearly marked, and included with the Bid. Any changes that are found made to the original bid specification, other than Owner generated Addendums, would result in your bid not being considered. Please contact Lynn Mayhew at 308-385-5494, for questions concerning this specification.

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**TURBINE VALVE OVERHAUL-FALL 2020**  
**DETAILED SPECIFICATIONS**

**SCOPE:** The Contractor shall supply all material, labor, equipment, tooling, supervision, and technical expertise to overhaul ten (10) turbine valves at the Platte Generating Station as further detailed in these specifications. This will include project management, technical direction, field engineering, field labor and supervision, disassembly, cleaning, inspection, repairs, and reassembly. Replacement valve parts will be provided by the Owner as needed.

**DESCRIPTION:** The Platte Generating Station is located at 1035 W. Wildwood Drive, two (2) miles south of Grand Island, Nebraska.

The Unit 1 turbine generator is a 122,000 kva generator with a tandem-compound double flow, single reheat condensing turbine operating at main steam conditions of 1800 psi and 1000 F, and an exhaust pressure of 2.5 in. Hg as shown in the attached drawings. The unit was manufactured by General Electric Company and is turbine No. 197789. The most recent major inspection was performed in 2017.

**REQUIREMENTS:**

**TURBINE VALVES:** The purpose of this overhaul is to completely disassemble, visually inspect and non-destructive examination (NDE) the ten (10) turbine valves. Normal inspection work will also consist of examination, measuring and recording both as-found and as-left clearances, replacement of valve components and re-establishing design stem-to-bushing clearances by cleaning and/or component replacement. Photographic records shall also be provided to further demonstrate the accomplishment of the work and the condition of the equipment.

**Main Stop Valve:**

- Check condition of discs and seats including contact check between seat and disc.
- Record clearances and check run out of stems (5 locations).
- Clean stems and bushing, as required per try bar test.
- Mag particle and dye penetrant examine all valve parts.
- Visually examine linkages, pressure seal heads, steam strainers and valve body.
- Inspect studs and nuts and record bolt extensions.
- Lap valve seats to restore contact.

**Control Valves and Bypass Valve:**

- Check condition of discs and seats including contact between seats and discs.
- Record clearances and check run out of stems (5 locations).
- Clean stems and bushings, as required by try bar tests.
- Inspect linkages, pins
- Measure and record cam bearing clearances.
- Dye penetrant examine all valve parts.
- Visually examine heads, linkages, and valve bodies.
- Lap valve seats to restore contact.

**Combine Intercept Reheat Stop Valves:**

- Check condition of discs and seats including contact check between seat and disc.
- Record clearances and check run out of stems (6 locations).
- Clean stems and bushing, as required per try bar test.
- Inspect linkages, pins and bearings.
- Mag particle and dye penetrant examine all valve parts.
- Visually examine linkages, steam strainers and valve bodies.
- Inspect studs, nuts and record bolt extensions.
- Lap valve seats to restore contact.



The Contractor shall prepare the valve stems, valve seats, studs and specified components for inspection using compressed air grit blasting. The blasting grit used during the process shall be silica free. The Contractor shall provide all protective booths or enclosures and evacuation systems required in order to avoid carryover of dust into other plant areas. All blasting shall be performed by trained personnel in accordance with the turbine manufacturer's recommendations. A compressed air supply will be available at the plant. The Contractor shall submit air supply requirements.

Non-destructive evaluation (NDE) by visual examination, dye penetrant testing and Mag Particle testing shall include the following components at a minimum:

All upper and lower Control Valves and bypass valve-  
Discs, seats, seat welds, stems, steam chest body

Intercepts-  
Valves, seats, seat inlays, seat welds, stems, steam chest body, strainers

Main Steam Stop-  
Anti-swirl dam, main valve disc, disc inlay, main valve seat, seat inlay, stem, strainer, valve body

RH Stops-  
Discs, seats, seat inlays, stems, stem nozzle seats

All NDE work shall be performed by well trained, qualified personnel using methods, procedures, materials and equipment in accordance with the turbine manufacturer's recommendations.

CRANE OPERATOR: The plant will provide a crane operator for the duration of the work.

PLANT TOOLS AND EQUIPMENT: Such turbine generator tools and equipment as may be available on site and are suitable for use may be checked out to the Contractor. The Contractor assumes full responsibility for assessing the suitability for use and assumes full responsibility for the return of such tools and equipment in good condition.

TURBINE COVER: The contractor shall remove the turbine cover and reinstall after completion of the work.

INSULATION: All insulation that must be removed for access to the work shall be removed and reinstalled by the Contractor. The insulation blankets shall be removed and organized such that they may be reinstalled in their current locations.

INSTRUMENTATION: Instrumentation that requires removal for access to the work shall be removed and reinstalled by plant personnel. The contractor shall assist in identification of instrumentation removal requirements and shall take such measures as necessary to assure instrumentation not removed is protected from damage by the Contractor's activities.

CONTROL VALVE CALIBRATION: The contractor shall work with plant technicians to stroke, calibrate and adjust the turbine valves. This requires accurate measurements by the contractor of valve clearances, rack movement, cam angular rotation, valve lift and accurate identification of crack points and dwell points as the plant technicians establish control voltage signal levels and check position feedback signals.

JOB LOGS: The contractor shall be required to maintain accurate job logs detailing all work performed each shift throughout the duration of the work.

OTHER WORK IN PROGRESS: Plant personnel will be working in the front standard to repair vibration probes and may perform work on other turbine instrumentation as required. Plant personnel and other contract personnel will be working on an excitation system upgrade. Plant personnel will be performing minor maintenance on the condenser and hood nozzles. Plant personnel may be performing minor maintenance to



reduce air in-leakage on the turbine. This work should result in minimal interference.

**QUALIFICATIONS:** The Contractor shall be a firm specializing in executing the installation, inspection, and repair of steam turbine generator units used in the power generation industry. The Contractor shall be capable of providing direction during all stages of the turbine disassembly and reassembly. A reference list of recent projects similar in scope and complexity to this specification shall be provided.

All labor used in the performance of the work shall be well qualified, skilled tradesmen with extensive experience in the performance of turbine valve overhauls.

**SUPERVISION:** The Contractor shall provide qualified project Superintendent's for each shift that shall be thoroughly familiar with General Electric equipment and have had extensive previous experience with projects of similar scope. All turbine equipment information required by the contractor's representatives in order to provide technical direction to the working crews shall be immediately available, as required, in order to avoid delays to the start-up schedule. A summary of the experience of the superintendents and supervisors for this project shall be provided. The City reserves the right to approve the selection of a Superintendent and/or Foreman proposed by the Contractor.

**SCHEDULE:** The current schedule is to remove the unit from service on October 19<sup>th</sup>, 2020 at 10am and stay on turning gear for 48 hours. The Contractor may mobilize and perform such work as achievable during that period. The turbine must be closed and back on turning gear on November 16<sup>th</sup>, 2020 by 10am to allow reinstallation of instrumentation by plant personnel, reinstallation of insulation blankets and so the unit can be brought up to pressure and on line on November 18<sup>th</sup>, 2020 by 10am. The Contractor must therefore have completed all work by November 14<sup>th</sup>, 2020 other than minor scopes achievable while on turning gear and building pressure. The Contractor's base Bid shall be based on this schedule. The Contractor shall work such manpower, shifts, days and weekends as required to accomplish this schedule with all associated costs included in the bid.

The Contractor shall submit details of the proposed schedule with the bid. The schedule shall identify the work scope items, shifts and manpower loading for each day of the outage.

No later than thirty (30) days prior to the scheduled start of the outage, the Contractor shall furnish the Owner with a detailed schedule showing the overhaul activities by day and shift, job duration, job start and finish dates, and manpower loading. The Contractor shall participate in an outage coordination meeting at the Platte Generating Station no less than two (2) weeks prior to the outage.

There is no separate contractor entrance at the Platte Generating Station. There is one gate with a card access security system and the Contractor may request to use access cards rather than request entry and exit each trip. There is a \$25.00 charge for all access cards that are not returned when the job is completed.

**REPORTS:** Within thirty (30) days after the outage completion, the Contractor shall provide three (3) copies of a written report to the Owner detailing the repair, clearance readings, repairs, problems, photographs and describe in detail any short-term and long-term maintenance recommendations.

**SAFETY:** The Contractor is required to follow all applicable Federal OSHA and State safety regulations for the work. The Contractor will be required to follow the Plant's equipment tagging policy. A copy of your OSHA compliant Confined Space Procedure and Respiratory Protection Procedure to be provided with bid.

**OPTIONAL WORK SCOPE:** During the last Turbine Overhaul, it was recommended to conduct valve mapping to verify the alignment of the valves. The valve mapping was not conducted in 2017, Valve mapping shall be priced as an optional scope of work. An alternate schedule shall be provided.

**SERVICE RATES:** The Contractor shall include in the Bid a firm lump sum price, including expenses, and all other standard terms and conditions which will be in effect during the project for the outage schedule shown. The Bid shall also include firm unit pricing for adjustments that may be required for work outside of the specified scope of services. All turbine and valve parts will be furnished by the Owner and the Contractor shall furnish



all consumables.

The Platte Generating Station is **NOT** tax exempt and is subject to 7.5% sales tax. See the Nebraska Department of Revenue web site at [www.revenue.state.ne.us](http://www.revenue.state.ne.us) for contractor's tax information.

**OWNER PROVISION:** Portable toilet facilities will be provided by the owner. Plant restroom and shower facilities are not to be used by the Contractor's personnel. Drinking water is available on site.

**PERFORMANCE AND PAYMENT BONDS:** The successful Bidder shall file with the OWNER Performance and Payment Bonds in the full amount (100 percent) of the Contract price, as security for the faithful performance of the Contract and the payment of all persons supplying labor and materials for the Work under this Contract, and to cover all guarantees against defective workmanship or materials, or both, for a period of one (1) year after the date of final acceptance of the Work by the OWNER. The Surety furnishing these bonds shall have a record of service satisfactory to the OWNER, be authorized to do business in the State where the OWNER's project is located and shall be named on the current list of approved Surety Companies, acceptable on Federal bonds as published by the Audit Staff, Bureau of Accounts, U.S. Treasury Department.

The Attorney-in-Fact (Resident Agent) who executes these bonds on behalf of the Surety must attach a notarized copy of his power-of-attorney as evidence of his authority to bind the Surety on the date of execution of the bond.

**INSURANCE:** The Contractor shall comply with the attached City's insurance requirements.

**CONTACT:** Questions regarding this specification may be directed to Lynn Mayhew at the Platte Generating Station, telephone (308) 385-5494 or [lmayhew@giud.com](mailto:lmayhew@giud.com).

**ATTACHMENTS:**

658D970 P37	-	STOP VALVE
3096J22	-	INTERCEPT VALVE
4103J76	-	STOP VALVE
20070531104813443	-	Outline OverView.pdf
4103J55		CAM SHAFT
815D522		BYPASS VLV
4103J48		POWER ACTUATOR
873E105 P64		VLV GEAR ASSY



**MINIMUM INSURANCE REQUIREMENTS**  
**CITY OF GRAND ISLAND, NEBRASKA**

The successful bidder shall obtain insurance from companies authorized to do business in Nebraska of such types and in such amounts as may be necessary to protect the Bidder and the interests of the City against hazards or risks of loss as hereinafter specified. This insurance shall cover all aspects of the Bidder's operations and completed operations. Failure to maintain adequate coverage shall not relieve Bidder of any contractual responsibility or obligation. Minimum insurance coverage shall be the amounts stated herein or the amounts required by applicable law, whichever are greater.

**1. WORKERS COMPENSATION AND EMPLOYER'S LIABILITY**

This insurance shall protect the Bidder against all claims under applicable State workers compensation laws. This insurance shall provide coverage in every state in which work for this project might be conducted. The liability limits shall not be less than the following:

Workers Compensation	Statutory Limits
Employers Liability	\$100,000 each accident
	\$100,000 each employee
	\$500,000 policy limit

**2. BUSINESS AUTOMOBILE LIABILITY**

This insurance shall be written in comprehensive form and shall protect the Bidder, Bidder's employees, or subcontractors from claims due to the ownership, maintenance, or use of a motor vehicle. The liability limits shall not be less than the following:

Bodily Injury & Property Damage	\$ 500,000 Combined Single Limit
---------------------------------	----------------------------------

**3. COMPREHENSIVE GENERAL LIABILITY**

The comprehensive general liability coverage shall contain no exclusion relative to explosion, collapse, or underground property. The liability limits shall not be less than the following:

Bodily Injury & Property Damage	\$ 500,000 each occurrence
	\$1,000,000 aggregate

**4. UMBRELLA LIABILITY INSURANCE**

This insurance shall protect the Bidder against claims in excess of the limits provided under employer's liability, comprehensive automobile liability, and commercial general liability policies. The umbrella policy shall follow the form of the primary insurance, including the application of the primary limits. The liability limits shall not be less than the following:

Bodily Injury & Property Damage	\$1,000,000 each occurrence
	\$1,000,000 general aggregate

**5. ADDITIONAL REQUIREMENTS**

The City may require insurance covering a Bidder or subcontractor more or less than the standard requirements set forth herein depending upon the character and extent of the work to be performed by such Bidder or subcontractor.

Insurance as herein required shall be maintained in force until the City releases the Bidder of all obligations under the Contract.

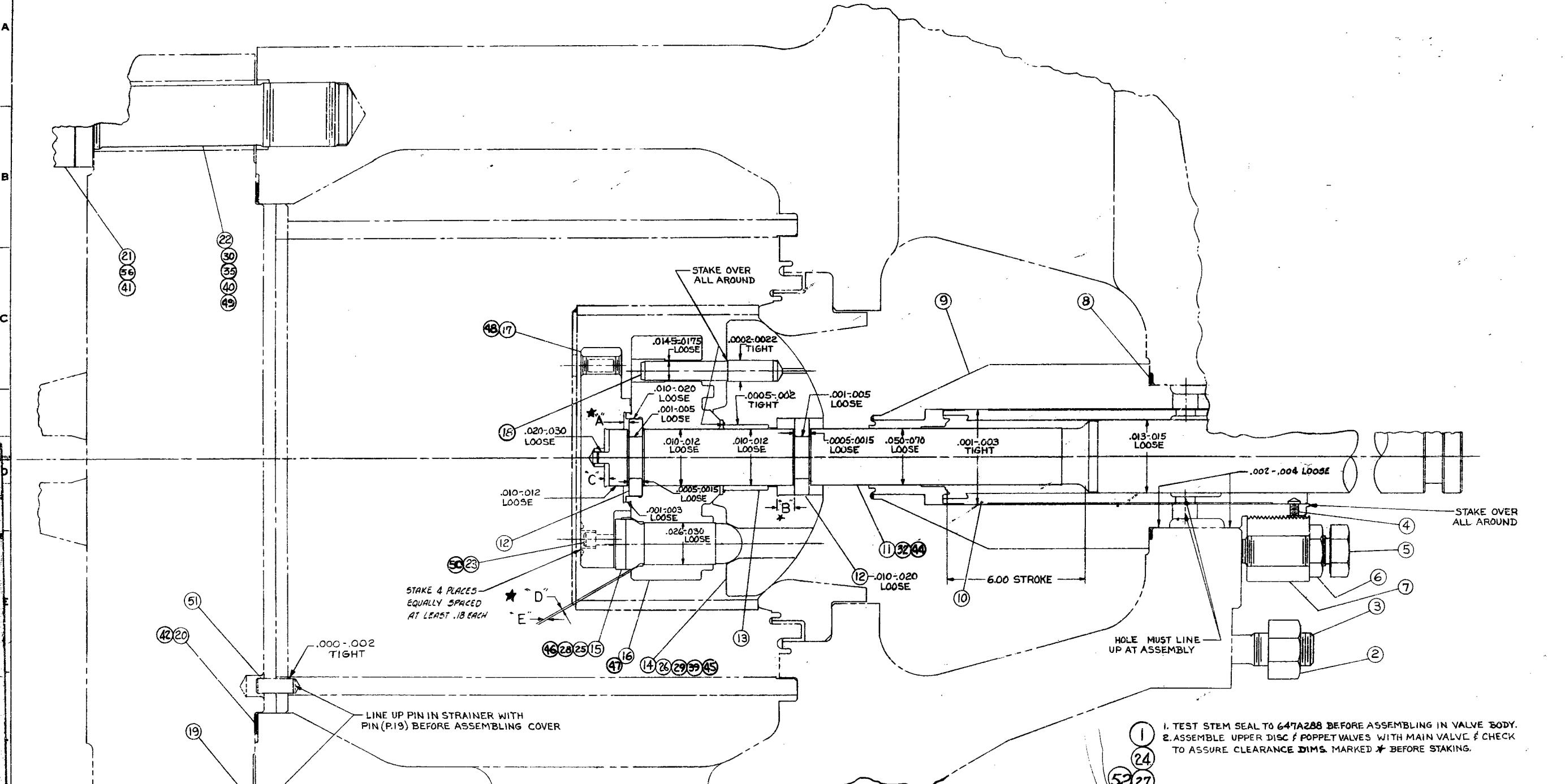
The Bidder shall provide and carry any additional insurance as may be required by special provisions of these specifications.



#### **6. CERTIFICATE OF INSURANCE**

Satisfactory certificates of insurance shall be filed with the City prior to starting any work on this Contract. **The certificates shall show the City as an additional insured on all coverage except Workers Compensation. The certificate shall state that thirty (30) days written notice shall be given to the City before any policy is cancelled (strike the "endeavor to" wording often shown on certificate forms). If the Bidder cannot have the "endeavor to" language stricken, the Bidder may elect to provide a new certificate of insurance every thirty (30) days during the contract. Bidder shall immediately notify the City if there is any reduction of coverage because of revised limits or claims paid which affect the aggregate of any policy.**





1. TEST STEM SEAL TO 647A288 BEFORE ASSEMBLING IN VALVE BODY.
2. ASSEMBLE UPPER DISC & POPPET VALVES WITH MAIN VALVE & CHECK TO ASSURE CLEARANCE DIMS. MARKED \* BEFORE STAKING.


PART NO.	FOR REF. ONLY					CLOSED VALVE	
	A	B	C	D	E	OVERTRAVEL	TRAVEL
1, 24, 27, 31, 33, 34, 37, 38, 52	.125±.015	.775±.015	.200 NOM.	.018 .007	.035 .015	.150	.625
43	.150 <sup>+.012</sup> <sub>-.010</sub>	.1005±.015	.230±.043	.018 .007	.035 .015	.175	.830

DESCRIPTION OF GROUPS	DESCRIPTION OF GROUPS	REVISIONS	PRINTS TO
COVER COLLARS / LG. STUDS	2000" - 1000" P.E. EN.	M 1 RETRACED, NO CHG. ARS ADDED.	A
ENT. SAME AS GR. 5 EXCEPT COVER	2000" - 1000" P.E. EN.		
COLLARS / LONG STUDS	1500" - 1000" P.E. EN.		
600 900" - 250" SMALL POP. EN. 12 DISC	24 1800" - 1000" P.E. EN.	N 1 IF 51 ADDED AN 73 RF 1136 210 7 6 11-1-73	
600 1500" - 250" EX LG. POP. EN. 12 DISC	24 1800" - 1000" P.E. EN.	R 11352 ADDED	
610 1500" - 1000" MED. POP. EN. 12 DISC	ENT. SAME AS GR. 1 EXCEPT		

R.L. "B" SIZE ADDED



GROUP NO. AND QUANTITY				GROUP NO. AND QUANTITY				GROUP NO. AND QUANTITY				GROUP NO. AND QUANTITY				GROUP NO. AND QUANTITY				PART NO.	NAME	DRAWING NO., DESCRIPTION, MATERIAL	WT
										10	9	8	7	6	5	4	3	2	1				
										-	-	-	-	-	-	-	-	-	X	1	ASSEMBLY	OF PTS. IN GR. 1	
										8	8	8	8	8	8	8	8	8	8	2	NUT, HEX	K-6643235 P.9 (1.375-8)	
										8	8	8	8	8	8	8	8	8	8	3	STUD	K-6643231 P.542 (1.375-8 X 5.50 LG)	
										1	1	1	1	1	1	1	1	1	1	4	SCREW, SET	649A919 P.168	
										6	6	6	6	6	6	6	6	6	6	5	BOLT	638A513 P.1 (1 1/4-8)	
										6	6	6	6	6	6	6	6	6	6	6	NUT, JAM	K-6643124 P.10 1.250-8	
										1	7	1	1	1	1	1	1	1	1	7	RING, PULLDOWN	169A148 P.1	
										2	2	2	2	2	2	2	2	2	2	8	GASKET	638A386 P.4 (1 FOR SPARE)	
										1	1	1	1	1	1	1	1	1	1	9	VA. STEM GUIDE	ASSM. 429B299 P.11	
										1	1	1	1	1	1	1	1	1	1	10	BUSHING	429B700 P.2	
										1	-	1	1	1	1	-	1	1	1	11	STEM, VALVE	930B336 P.1	
										2	2	2	2	2	2	2	2	2	2	12	BUSHING SPLIT	200A157 P.1	
										1	1	1	1	1	1	1	1	1	1	13	BUSHING	200A158 P.1	
										1	-	-	-	1	-	-	-	-	1	14	11" VALVE	658D967 P.1	
										3	-	-	-	3	-	-	-	-	3	15	VALVE (MED)	930B333 P.1	
										1	-	1	1	1	1	1	1	1	1	16	DISK, UPPER	658D966 P.1	
										1	-	1	1	1	1	1	1	1	1	17	COVER	753C512 P.1	
										1	1	1	1	1	1	1	1	1	1	18	PIN	200A156 P.1	
										1	1	1	1	1	1	1	1	1	1	19	PIN	K-4801938 P.13	
										3	3	-	3	3	3	3	3	3	3	20	GASKET	637A100 P.1512 (2 FOR SPARE)	
										18	18	-	18	18	18	18	18	18	18	21	NUT, COV.	K-6643225 P.12 (2 3/4-8)	
										-	-	-	-	-	18	18	-	18	18	22	STUD	K6643285 P.552 (2 3/4-8 X 13 3/4 LG)	
										6	-	6	6	6	6	6	6	6	6	23	BOLT	431B505 P.19 (3/4-10 X 2 1/2 LG)	
										-	-	-	-	-	-	-	-	X	-	24	ASSEMBLY	OF PTS. IN GR. 2	
										-	-	3	-	-	-	-	-	3	-	25	VALVE (SMALL)	930B382 P.1	
										-	-	-	-	-	-	-	-	1	-	26	11" VALVE	658D995 P.1	
										-	-	-	-	-	-	-	X	-	-	27	ASSEMBLY	OF PTS. IN GR. 3	
										-	-	-	3	-	3	3	3	-	-	28	VALVE (LARGE)	930B352 P.1	
										-	-	-	1	-	1	1	1	-	-	29	11" VALVE	819D703 P.1	
										18	-	-	-	-	-	-	18	-	-	30	STUD	K-6643285 P.549 (2 3/4-8 X 13 LG)	

REVISIONS																							
SYM	DESCRIPTION	DATE	APPROVED	SYM	DESCRIPTION	DATE	APPROVED	SIGNATURES				DAY	MO	YR	GENERAL  ELECTRIC MSTG&G DEPT LOC LYNN, MASS.								
				A	1 GR. 8 ADDED F.K.	1-31-72	WAR	DRAWN	Havans	21	10	70	VALVE BODY PTS. 12" (FULL ARC)  F.M.F. G.E TURBINE			SIZE B		CODE IDENT NO. 30024		PL-658D970		REV C	
			B	1 GR 9 ADDED R Dandern	5/10/72	L. Peterson	CHECKED																
			C	1 GR 10 ADDED JAK 9/14/75	9/16/75	LGP	ISSUED	R. L. White	25	11	70												
							ENGRG																
								MFG															
								MATLS															



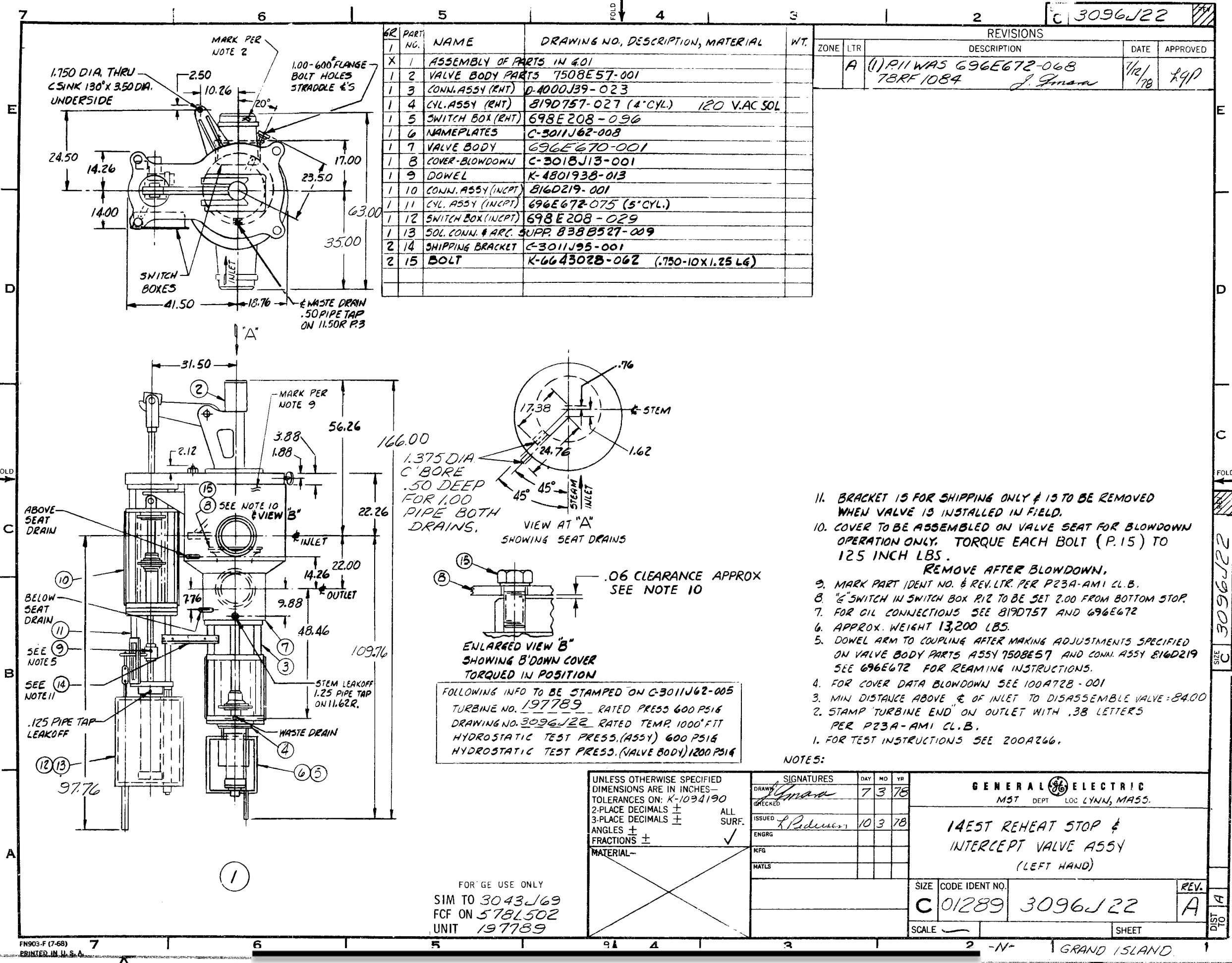
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REVISIONS							
SYM	DESCRIPTION	DATE	APPROVED	SYM	DESCRIPTION	DATE	APPROVED
				A	1 GR. 8 ADDED F.K.	1-31-72	WAR
				B	4 GR. 9 ADDED P. Anderson	5/14/72	P. Anderson
				C	1 PART 51 ADDED TO ALL GROUPS AN 73-RF-1136 G.W.F.	11/1/73	J. D. G.
				D	GR. 10 ADDED JAK 9/16/75	9/16/75	RGP

SIGNATURES				DAY	MO	YR
DRAWN	[Signature]			21	10	70
CHECKED	[Signature]					
ISSUED	[Signature]			26	10	70
ENGRG						
MFG						
MATLS						

<b>GENERAL ELECTRIC</b> MSTG & G DEPT      LOC LYNN, MASS.			
<b>VALVE BODY PTS. 12</b> "FULL ARC			
<b>EM.F. GE. TURBINE</b>			
SIZE	CODE IDENT NO.	REV	
B	30024 PL-658D970	D	
CONT ON SHEET		SH NO. 2	



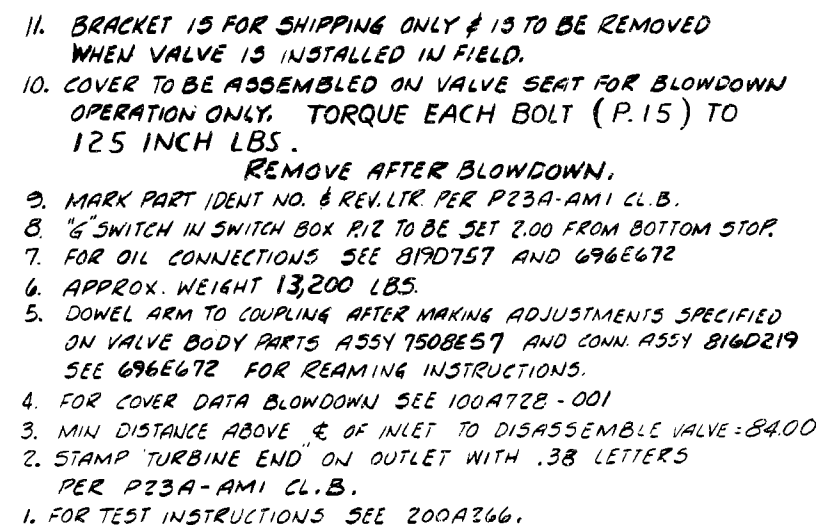
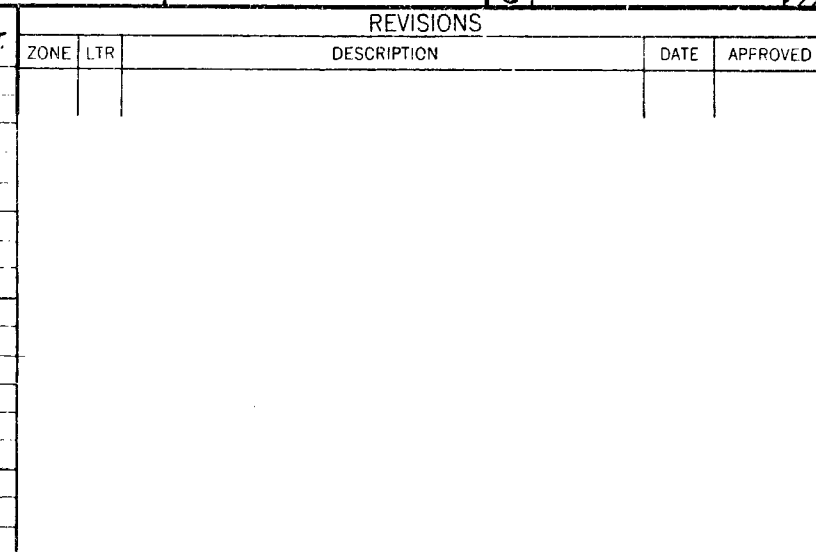


11. BRACKET IS FOR SHIPPING ONLY & IS TO BE REMOVED WHEN VALVE IS INSTALLED IN FIELD.
10. COVER TO BE ASSEMBLED ON VALVE SEAT FOR BLOWDOWN OPERATION ONLY. TORQUE EACH BOLT (P. 15) TO 125 INCH LBS.
- REMOVE AFTER BLOWDOWN.
9. MARK PART IDENT NO. & REV. LTR. PER P23A-AMI CL.B.
8. "E" SWITCH IN SWITCH BOX RIZ TO BE SET 2.00 FROM BOTTOM STOP.
7. FOR OIL CONNECTIONS SEE 819D757 AND 696E672
6. APPROX. WEIGHT 13,200 LBS.
5. DOWEL ARM TO COUPLING AFTER MAKING ADJUSTMENTS SPECIFIED ON VALVE BODY PARTS ASSY 7508E57 AND CONN. ASSY 816D219 SEE 696E672 FOR REAMING INSTRUCTIONS.
4. FOR COVER DATA BLOWDOWN SEE 100A728-001
3. MIN DISTANCE ABOVE & OF INLET TO DISASSEMBLE VALVE: 84.00
2. STAMP "TURBINE END" ON OUTLET WITH .38 LETTERS PER P23A-AMI CL.B.
1. FOR TEST INSTRUCTIONS SEE 200A266.

NOTES:

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES— TOLERANCES ON: K-1034190 2-PLACE DECIMALS ± 3-PLACE DECIMALS ± ANGLES ± FRACTIONS ± MATERIAL—		SIGNATURES DRAWN: <i>J. G. Gama</i> CHECKED: <i>L. Pedersen</i> ISSUED: <i>L. Pedersen</i> ENGRG: NFG: MATS:		DAY 7	MO 3	YR 78	GENERAL ELECTRIC MST DEPT LOC LYNN, MASS.	
FOR GE USE ONLY SIM TO 3043J69 FCF ON 578L502 UNIT 197789		14EST REHEAT STOP & INTERCEPT VALVE ASSY (LEFT HAND)		SIZE C		CODE IDENT NO. 01289 3096J22		REV. A
				SCALE		SHEET		

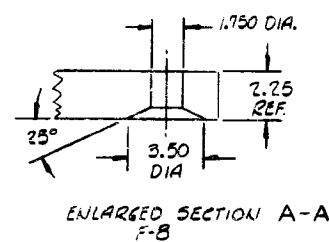
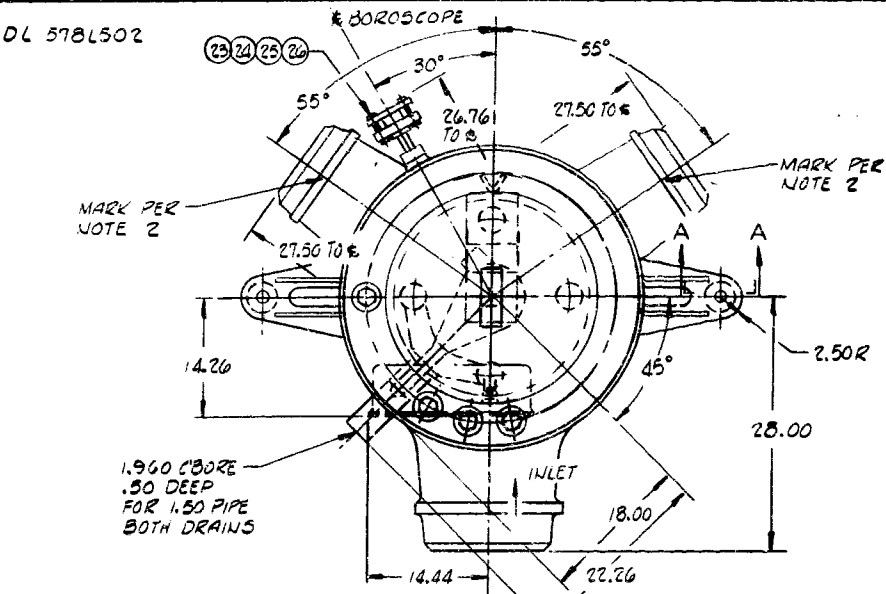




Page 29 / 44



FLF ON DL 578L502



FOLLOWING INFO TO BE STAMPED ON NAMEPLATE 017

FULL ARC STARTING

TURB NO 197789 RATED PRESS 1800 PSIG

DWG NO 04103J76 RATED TEMP 1000 °FTT

HYDROSTATIC TEST PRESS ASSY 1890PSIG

HYDROSTATIC TEST PRESS VALVE BODY 3780PSIG

VALVE WT 12,000 LBS APPROX

STEAM LIFT 6.00 INCHES

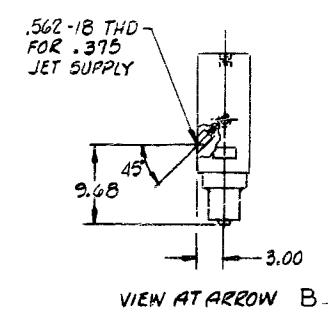
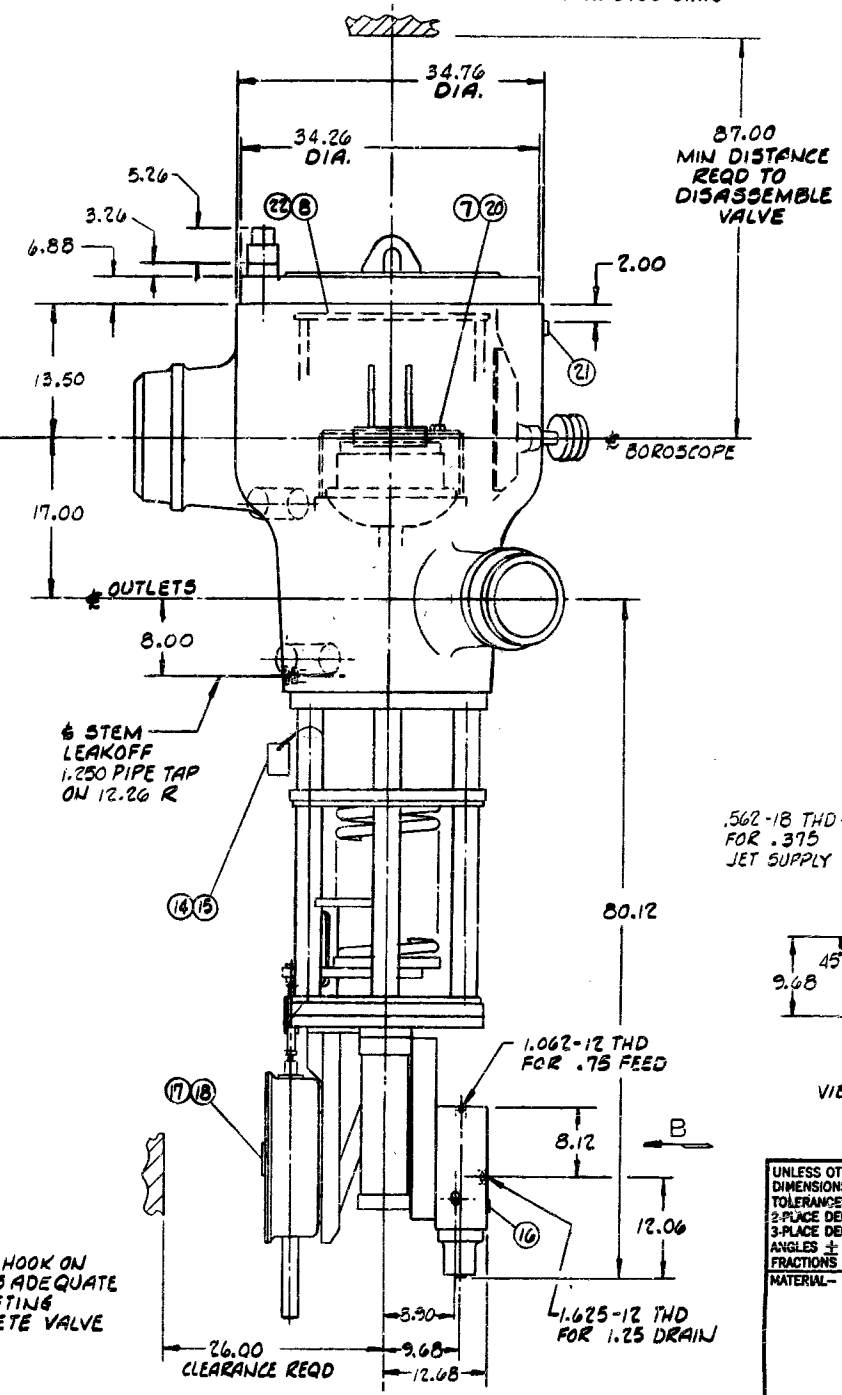
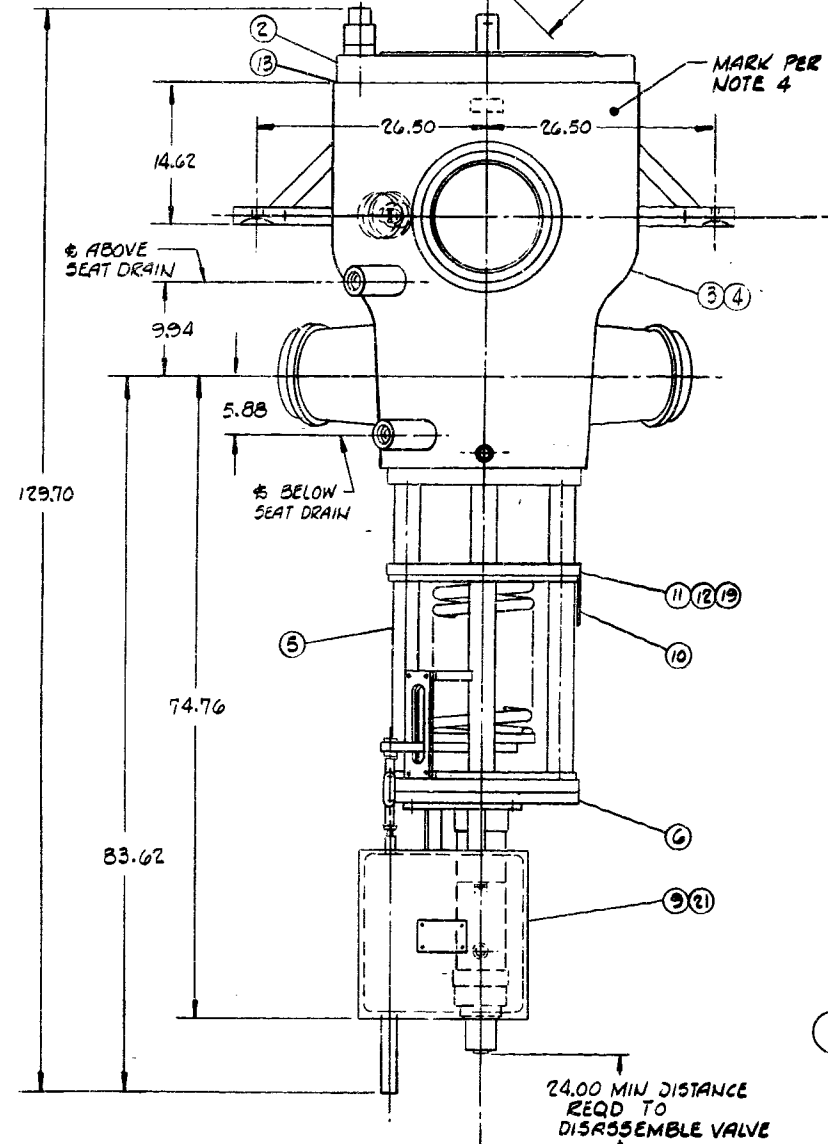
PILOT VALVE NOM LIFT .625 INCHES

PILOT VALVE CRKG .150 INCHES

MAIN PUMP OIL PRESS 1800 PSIG

MAIN DISC CRKG .775 INCHES

REVISIONS			
ZONE	LTR	DESCRIPTION	DATE
A		(NOTE 5 WAS "C" SWITCH - .62 FROM TOP STOP. 79RF1048 J. Zina	MAR 6 1979



1. FOR TEST INSTRUCTIONS SEE 200A205.
2. STAMP TURBINE END ON OUTLET WITH .38 LETTERS PER P23A-AM1 CLASS B.
3. FOR COVER DATA BLOWDOWN SEE 645A922-060
4. MARK PART IDENTIFICATION NO. AND REVISION LETTER PER P23A-AM1 CLASS B.
5. D - SWITCH IN SWITCH BOX TO BE SET .20 - .30 FROM BOTTOM STOP.
6. TEMP COVER - REMOVE AFTER BLOWDOWN TORQUE EACH BOLT PART 20 TO 85 INCH POUNDS (.32 CLEAR APPROX BETWEEN PROTECTION COVER AND VALVE COVER)

NOTES  
PL (B SIZE) ISSUED

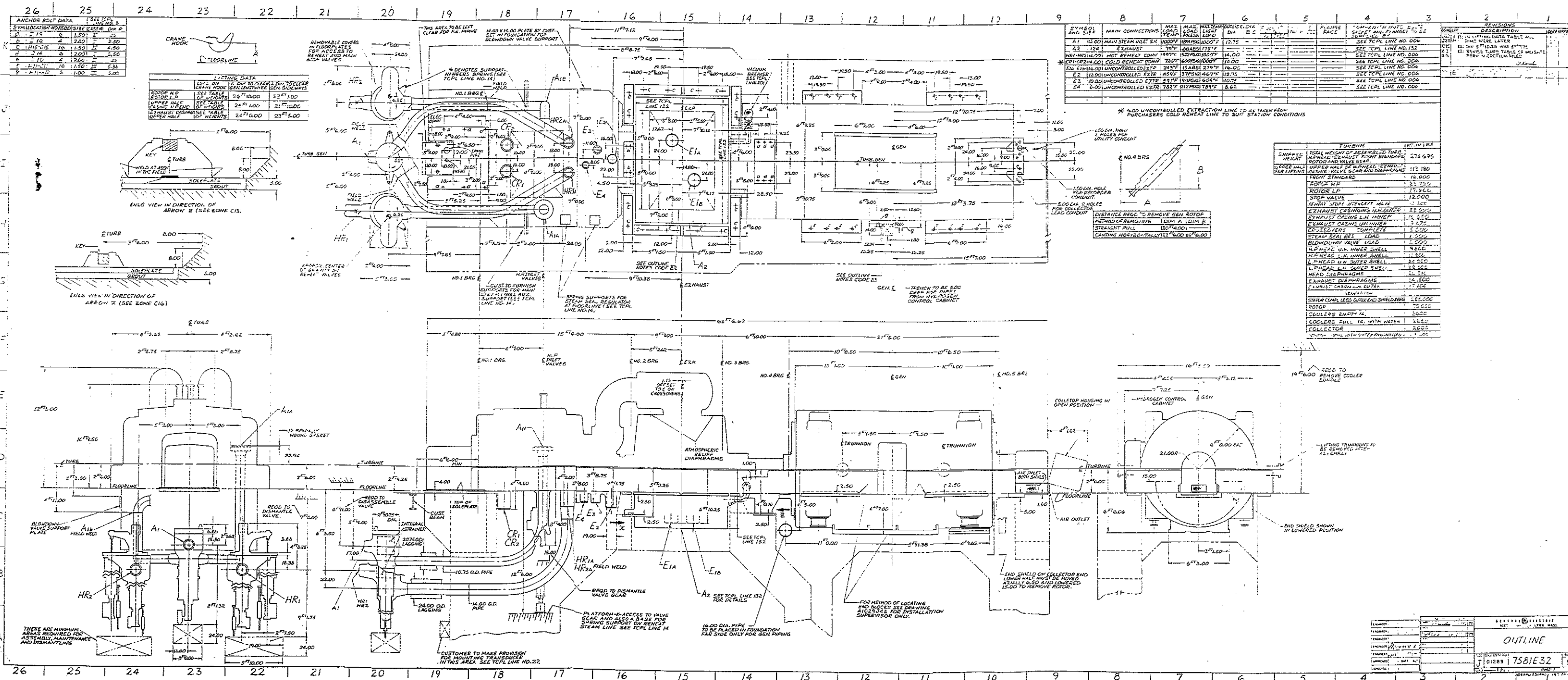
① LIFTING HOOK ON COVER IS ADEQUATE FOR LIFTING COMPLETE VALVE

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES - TOLERANCES ON: K-1094190 2-PLACE DECIMALS ± 3-PLACE DECIMALS ± ANGLES ± FRACTIONS ± MATERIAL -

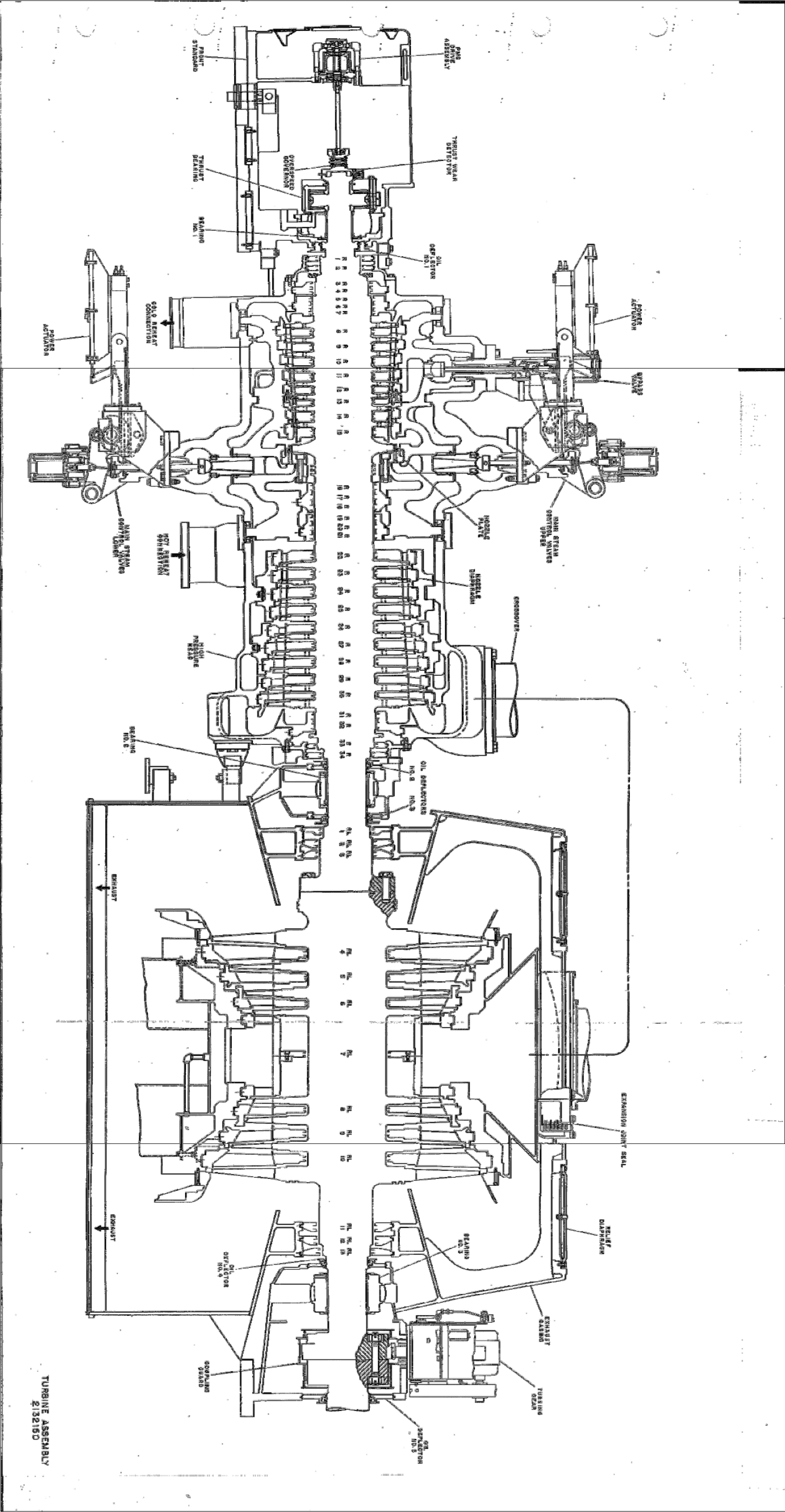
SIGNATURES			
DESIGNED	DATE	NO	YR
CHECKED			
APPROVED			
DATE			

GENERAL ELECTRIC	
MST DEPT LOC LYNN MASS	
12" STOP VALVE ASSY	
1800" FULL ARC	
SIZE	CODE IDENT NO.
D	01289
4103J76	
SCALE	SHEET
2	N
GRAND ISLAND 197789	



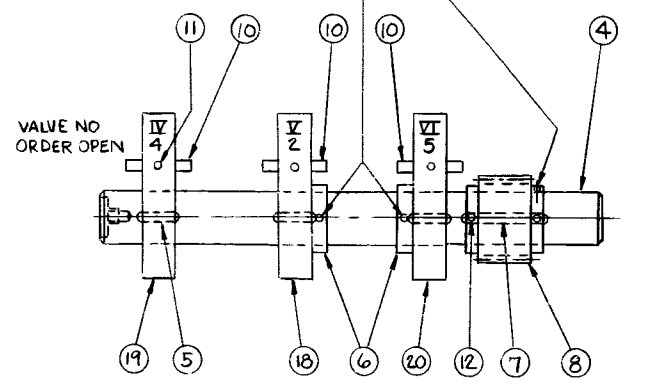
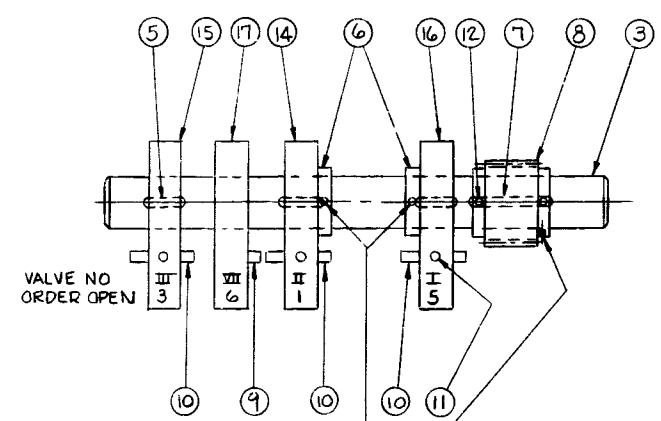




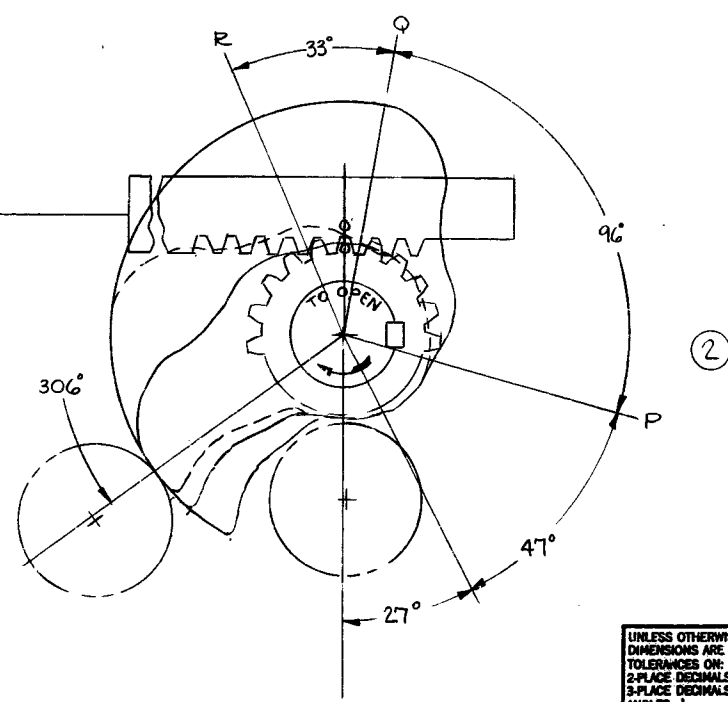
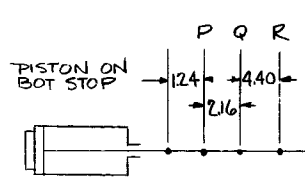
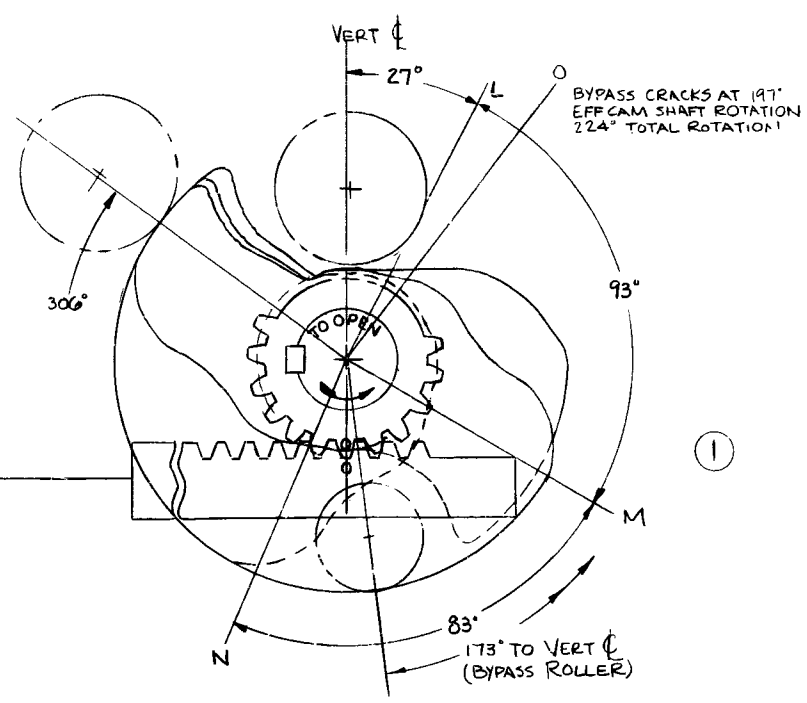
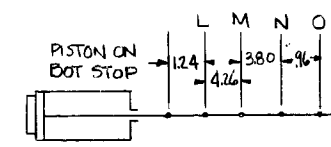




REVISIONS			
ZONE	LTR	DESCRIPTION	DATE
A	(1)	CRACKING PTS TAB REVISED	11/1/75



VIEW LOOKING FROM AHEAD END TOWARD EXHAUST



- 4. MARK PART IDENT NO. AND REVISION LETTER PER P23A-AM1 CLASS N TAG
- 3. USE STEAM FOR SHRINKING ON CAMS SO THAT ORIGINAL HEAT TREATMENT OF PARTS WILL NOT BE AFFECTED.
- 2. O ON LOWER PINION TO MESH WITH O ON LOWER RACK.
- 1. O ON UPPER PINION TO MESH WITH O ON UPPER RACK.

NOTES

CRACKING PTS	
POS	V.N.O
L	II
M	III
N	I
O	VII
P	V
Q	IV
R	VI

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES— TOLERANCES ON: 2-PLACE DECIMALS ± 3-PLACE DECIMALS ± ANGLES ± FRACTIONS ± MATERIAL—				SIGNATURES DRAWN <i>WAR</i> CHECKED <i>J. Pedersen</i> DATE 15/12/77		GENERAL ELECTRIC MST DEPT LOC LYNN MA	
ALL SURF. ✓				CAM SHAFT ASSEM		SIZE CODE IDENT NO. REV D 01289 4103J55 A	
SCALE				SHEET		2 / 4	





PL-4103J55

**SHEET**

SYM	DESCRIPTION	DATE	APPROVED	SYM	DESCRIPTION	DATE	APPROVED

GROUP NO. AND QUANTITY				PART NO.	NAME	DRAWING NO., DESCRIPTION, MATERIAL	WT.
		2	1				
		-	X	1	ACCUM OF	PTS IN G01	
		X	-	2	ACCUM OF	PTS IN G02	
		-	1	3	CAM SFT	3080J83-001	
		1	-	4	CAM SFT	3080J84-001	
		3	4	5	KEY	100A587-001	
		2	2	6	COLLAR	169A166-001	
		1	1	7	KEY	100A587-002	
		1	1	8	PINION	2107J25-001	
		-	1	9	PIN	9896105-005	
		3	3	10	PIN	169A697-001	
		3	3	11	SET SCR	649A908-226	
		2	2	12	SET SCR	649A908-195	
		3	3	13	SET SCR	649A922-230	
		-	1	14	CAM	133C941-015	295°
		-	1	15	CAM	4036J59-006	205°
		-	1	16	CAM	133C926-027	125°
		-	1	17	CAM	3080J85-001	BYPASS
		1	-	18	CAM	133C941-018	245
		1	-	19	CAM	133C913-026	145°
		1	-	20	CAM	128D557-028	125°

SIGNATURES		DAY	MO	YR
DRAWN	WAR	15	12	77
CHECKED				
ISSUED	A. B. Brown	16	12	77
ENGRG				
MFG				
MATLS				

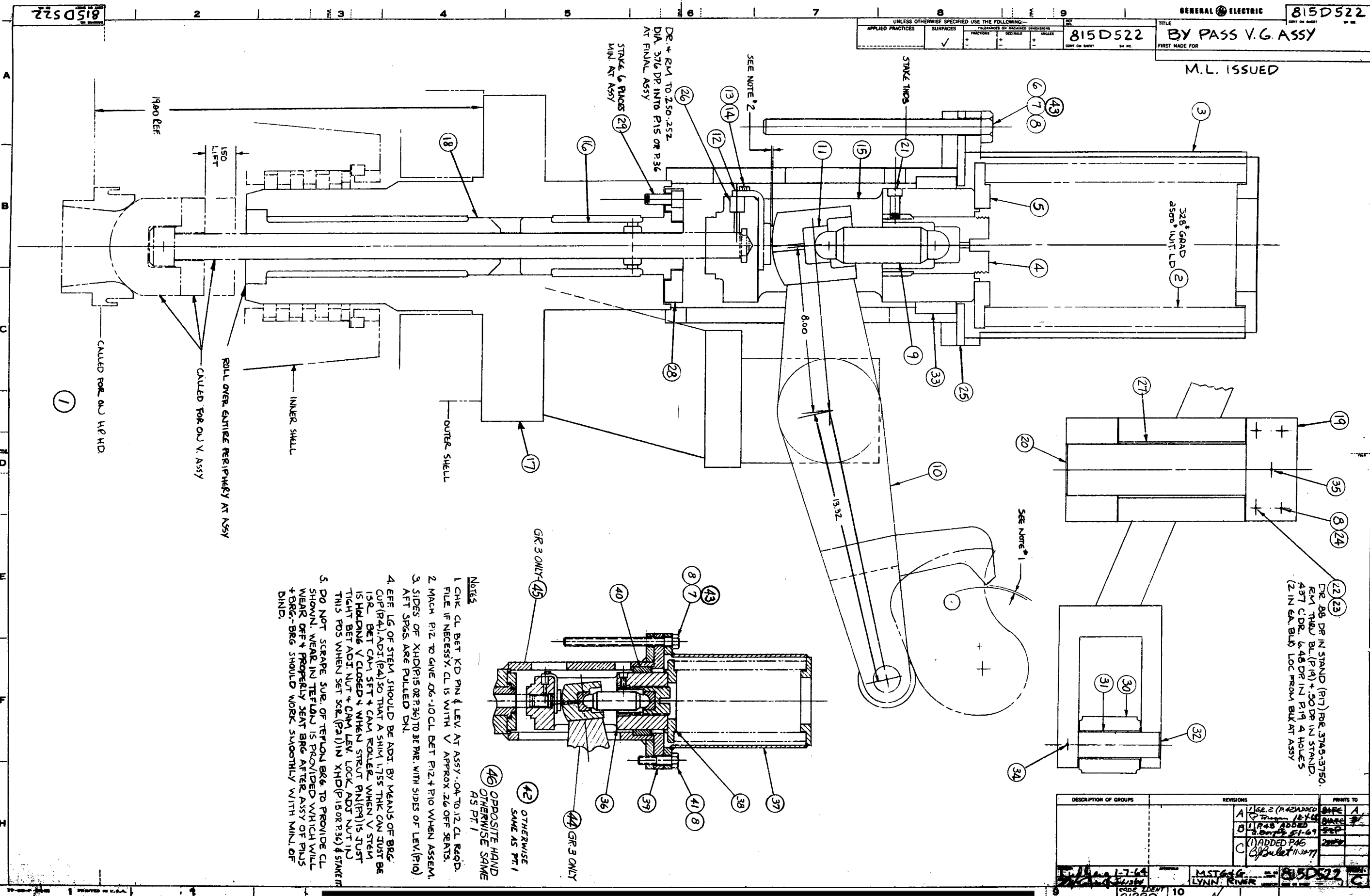
**GENERAL  ELECTRIC**  
MST DEPT. LOC LYNN, MASS.

## CAM SHAFT ASSEM.

SIZE A	CODE IDENT NO. 01289	PL-4103J55	REV —
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CONT ON SHEET 2000-100 SH NO.







815D522

CONT ON SHEET

SH NO. 2

REV NO.	
PARTS LIST FOR	815D522
CONT ON SHEET	SH NO. 2

TITLE

BY PASS V.G ASSY

FIRST MADE FOR

GROUP NO. AND QUANTITY				PART NO.	NAME	DRAWING NO., DESCRIPTION, MATERIAL, WEIGHT
	3	2	1			
	1	1	1	28	RET.	100A495 P.1
	4	4	4	29	SCR	K-6643072 P.15 .500-13
	1	1	1	30	CAM ROLLER	120A610 P.1
	2	2	2	31	BRG.	655A709 P.16 D.U.
	1	1	1	32	PIN	120A611 P.1
	-	-	1	33	BUSH	120A577 P.1
	1	1	1	34	SS	649A922 P.135 .250-20
	2	2	2	35	SS	649A908 P.201 .375-16
	1	1	-	36	CROSSHEAD	C3011J24 P.1
	1	1	-	37	RETAINER	C3011J25 P.1
	1	1	-	38	SPG PLATE	A1143J95 P.1
	1	1	-	39	PLATE	B2004J42 P.1
	1	1	-	40	BUSHING	120A577 P.2
	4	4	-	41	BOLT	K-6643028 P.70 .750-10
	-	X	-	42	ASSY	OF PTS IN GR. 2
	2	2	2	43	COLLAR	A1156J50 P.1
	1	-	-	44	LEVER	D-4103J52 P.1
	1	-	-	45	STAND	873E110 P.1
	X	-	-	46	ASSY. OF	PTS. IN GR. 3

DESCRIPTION OF GROUPS	REVISIONS	PRINTS TO									
	<table border="1"> <tr> <td>A</td> <td>1 GR. 2 ADDED P. Thompson 12-4-68</td> <td>81FC A</td> </tr> <tr> <td>B</td> <td>1 PT. 43 ADDED A.N. 69RF1074 9. B. Smith 3-1-69</td> <td>81FC B 52P 64G</td> </tr> <tr> <td>C</td> <td>(1) ADDED GR. 3 B. Bulat 11-30-77</td> <td>81H 21FC</td> </tr> </table>	A	1 GR. 2 ADDED P. Thompson 12-4-68	81FC A	B	1 PT. 43 ADDED A.N. 69RF1074 9. B. Smith 3-1-69	81FC B 52P 64G	C	(1) ADDED GR. 3 B. Bulat 11-30-77	81H 21FC	REV
A	1 GR. 2 ADDED P. Thompson 12-4-68	81FC A									
B	1 PT. 43 ADDED A.N. 69RF1074 9. B. Smith 3-1-69	81FC B 52P 64G									
C	(1) ADDED GR. 3 B. Bulat 11-30-77	81H 21FC									
MADE BY <i>K. L. Harg</i> 1-7-64 ISSUED <i>M. C. Bunde</i> 7-12-64	APPROVALS MSTG+G LYNN RIVER 1 CODE 101289	PARTS LIST FOR 815D522 CONT ON SHEET - SH NO. 2									



815D522

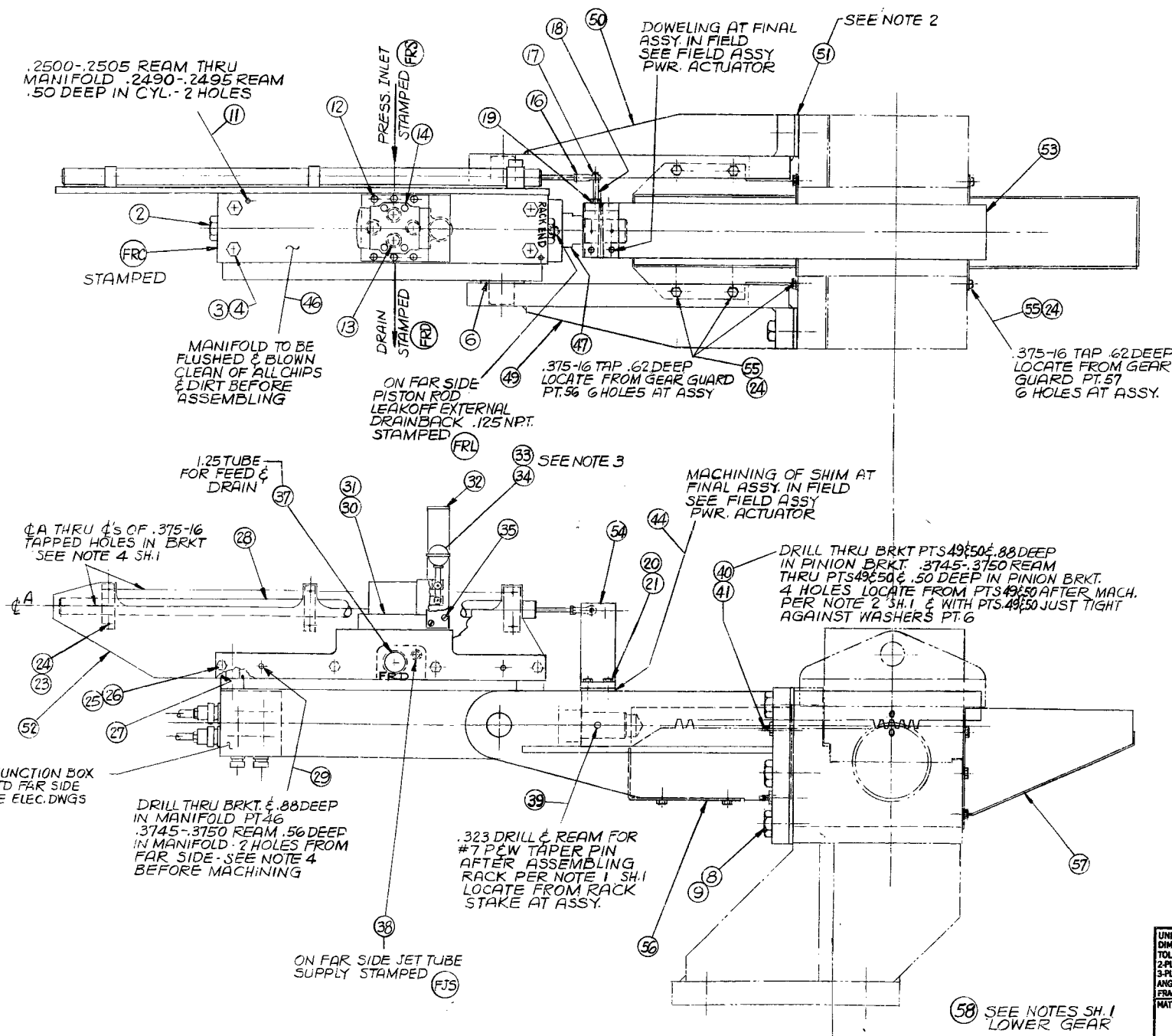
REV NO.				TITLE			
PARTS LIST FOR				BY PASS V.G. ASSY			
815D522				FIRST MADE FOR			
CONT ON SHEET 2 SH NO. 1							
GROUP NO. AND QUANTITY				PART NO.	NAME	DRAWING NO., DESCRIPTION, MATERIAL, WEIGHT	
		3	2	1	1	ASSY OF PTS GR. 1	
		-	-	X	2	SPG. 200A948 P.1	
		1	1	1	3	RET. 752C369 P.1	
		-	-	1	4	BRG CUP ASSY 100A423 P.1	
		1	1	1	5	PL. 645A156 P.6	
		-	-	1	6	BOLT K-6643028 P.65 750-10	
		2	2	2	7	BOLT K-6660255 P.76	
		10	10	8	8	WASH. 649A977 P.11 SHAKEPROOF *1232	
		1	1	1	9	L PIN 100A420 P.1	
		-	1	1	10	LEV. 815D521 P.1	
		1	1	1	11	BRG. CUP 100A291 P.1	
		1	1	1	12	SHIM 169A153 P.5	
		2	2	2	13	BOLT K-6643028 P.1 375-16 X.76	
		2	2	2	14	LK WASH 649A975 P.9 SHAKEPROOF *1120	
		-	-	1	15	X HD 752C357 P.1	
		1	1	1	16	BUSH 870B373 P.3	
		-	1	1	17	STAND 694E225 P.1	
		1	1	1	18	BUSH 200A949 P.1	
		2	2	2	19	BRG BLK 920B221 P.1	
		1	1	1	20	PIN 120A612 P.1	
		1	1	1	21	SS 649A908 P.228 500-13 X 1.00	
		4	4	4	22	SCR DWL K-4804606 P.155	
		4	4	4	23	NUT K-6643035 P.3 375-16	
		4	4	4	24	BOLT K-6643028 P.310 750-10	
		-	-	1	25	PL 120A539 P.1	
		1	1	1	26	PIN V-9461143	
		2	2	2	27	BRG 655A709 P.4 D.U.	
DESCRIPTION OF GROUPS				REVISIONS		PRINTS TO	
				D (1) ADDED GR 3		81FE A	
				B Bulat 11-30-77		81AFC B	
						52P	
						64G	
				A 1 PT WAS K-6643028 P.301 750-10		81H	
				B 6SRF1018 9.20.7.1/65		81H	
				C 1 GR. 2 ADDED		81H	
				P.24 WAS K-6643028 P.88		81H	
				67RF1018 9.20.7.1/65		81H	
				P.24 WAS K-6643028 P.88		81H	
				1 GR. 2 ADDED		81H	
				P.24 WAS K-6643028 P.88		81H	
				67RF1018 9.20.7.1/65		81H	
				1 GR. 2 ADDED		81H	
				P.24 WAS K-6643028 P.88		81H	
				67RF1018 9.20.7.1/65		81H	
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				1 GR. 2 ADDED		81H	
				P.24 WAS K-6643028 P.88		81H	
				67RF1018 9.20.7.1/65		81H	
				1 GR. 2 ADDED		81H	
				P.24 WAS K-			



Page 38 / 44



REVISIONS				
ZONE	LTR	DESCRIPTION	DATE	APPROVED



UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES— TOLERANCES ON: 2-PLACE DECIMALS ± 3-PLACE DECIMALS ± ANGLES ± FRACTIONS ± MATERIAL—		SIGNATURES DRAWN: <i>[Signature]</i> 18 2 78 CHECKED: <i>[Signature]</i> 29 2 78 ENGINEER: <i>[Signature]</i> 29 2 78 DATE: <i>[Signature]</i> 29 2 78 SCALE: <i>[Signature]</i> 29 2 78		GENERAL ELECTRIC MST DEPT LOC. LYNN, MASS. POWER ACTUATOR ASSY. SIZE: D 01289 4103 J48 SHEET 2 OF 2	
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REVISIONS

SIZE B PL-4103J48 SHEET 1

SYM	DESCRIPTION	DATE	APPROVED	SYM	DESCRIPTION	DATE	APPROVED

SYM	DESCRIPTION	DATE	APPROVED	SYM	DESCRIPTION	DATE	APPROVED
A	(1) ADDED GR 3 B/B	2/4/18	19P				
B	(1) ADDED GRS 4 & 5 & SHEET 2, Rudern, (M)	MAY 23 1979	19P				

GROUP NO. AND QUANTITY					PART NO.	NAME	DRAWING NO., DESCRIPTION, MATERIAL	WT
5	4	3	2	1				
4	4	4	4	4	26	LWASHER	649A975-010	
2	2	2	2	2	27	O'RING	655A770-126	
X	X	X	X	X	28	TRANSDUCER	FCF FIELD ASSEM PWR. ACT.	
2	2	2	2	2	29	DOWEL	4801938-010	
1	1	1	1	1	30	ADAPTOR	752C377-001	
1	1	1	1	1	31	O'RING	655A770-010	
1	1	1	1	1	32	GUARD	100A268-002	
1	1	1	1	1	33	VALVE	100A242-001	
X	X	X	X	X	34	SERVO VA.	FCF FIELD ASSEM PWR ACT	
4	4	4	4	4	35	MACH SCR	649A915-213	
1	1	1	1	1	36	HYD. CYL.	3080J70-001	
2	2	2	2	2	37	PLUG	100A160-011	
1	1	1	1	1	38	PLUG	100A160-005	
1	1	1	1	1	39	TAPER PIN	643A391-095	
4	4	4	4	4	40	SCR DOWEL	4804606-110	
4	4	4	4	4	41	NUT	6643035-003	
1	1	1	1	1	42	RACK	3080J74-001	
1	1	1	1	1	43	BRACKET	2107J12-005	
1	1	1	1	1	44	SHIM	1240J90-001	
1	1	1	1	1	45	ASSEM OF	PTS IN G02	
1	1	1	1	1	46	MANIFOLD	753C539-005	
1	1	1	1	1	47	HYD CYL.	3080J70-002	
1	1	1	1	1	48	BRACKET	2107J12-001	
1	1	1	1	1	49	BRACKET	4103J80-001	
1	1	1	1	1	50	BRACKET	4103J80-006	
2	2	2	2	2	51	SHIM	2107J67-001	
1	1	1	1	1	52	BRACKET	3096J13-001	
1	1	1	1	1	53	RACK	3080J74-001	
1	1	1	1	1	54	BRACKET	2107J66-001	
12	12	12	12	12	55	BOLT	6643028-012	
1	1	1	1	1	56	GEAR GUARD	3096J17-001	
1	1	1	1	1	57	GEAR GUARD	3096J18-001	
X	X	X	X	X	58	ASSY. OF PTS	IN G03	

GROUP NO. AND QUANTITY					PART NO.	NAME	DRAWING NO., DESCRIPTION, MATERIAL	WT
5	4	3	2	1				
1	1	1	1	1	1	ASSEM OF	PTS IN G01	
2	2	2	2	2	2	PLUG	100A160-010	
4	4	4	4	4	3	BOLT	6643028-042	
4	4	4	4	4	4	LWASHER	649A975-011	
1	1	1	1	1	5	MANIFOLD	753C539-004	
2	2	2	2	2	6	SPACER	4805675-541	
1	1	1	1	1	7	BRACKET	4103J49-006	
6	6	6	6	6	8	BOLT	6643028-123	
6	6	6	6	6	9	LWASHER	649A975-014	
1	1	1	1	1	10	SHIM	2077J22-001	
2	2	2	2	2	11	DOWEL	4801938-007	
6	6	6	6	6	12	SCREW	771A176-147	
4	4	4	4	4	13	O'RING	655A770-214	
4	4	4	4	4	14	SCREW	771A176-152	
1	1	1	1	1	15	BRACKET	4103J49-001	
1	1	1	1	1	16	HEIM JOINT	644A983-005	
1	1	1	1	1	17	NUT	6643306-002	
1	1	1	1	1	18	STUD SHD.	656A725-001	
1	1	1	1	1	19	JAM NUT	6643124-003	
2	2	2	2	2	20	BOLT	6643060-062	
2	2	2	2	2	21	LWASHER	1397777	
1	1	1	1	1	22	BRACKET	3080J78-001	
6	6	6	6	6	23	BOLT	6643060-057	
6	6	6	6	6	24	LWASHER	649A975-009	
4	4	4	4	4	25	BOLT	6643060-088	

SIGNATURES		DAY	MO	YR
DRAWN	DATE	27	11	77
CHECKED				
ISSUED	DATE	22	11	77
ENGRG				
MFG				
MATLS				

GENERAL ELECTRIC  
MST DEPT LOC LYNN, MASS.

POWER ACTUATOR  
ASSY.

SIZE	CODE IDENT NO	REV
B	01289 PL-4103J48	B

CONT ON SHEET 2 SH NO 1

EST 108 (10-74)



SIZE	PL- 4103J48	SHEET	2
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SYM	DESCRIPTION	DATE	APPROVED	SYM	DESCRIPTION	DATE	APPROVED

B				E-4103048				2			
SYM	DESCRIPTION	DATE	APPROVED	SYM	DESCRIPTION	DATE	APPROVED				

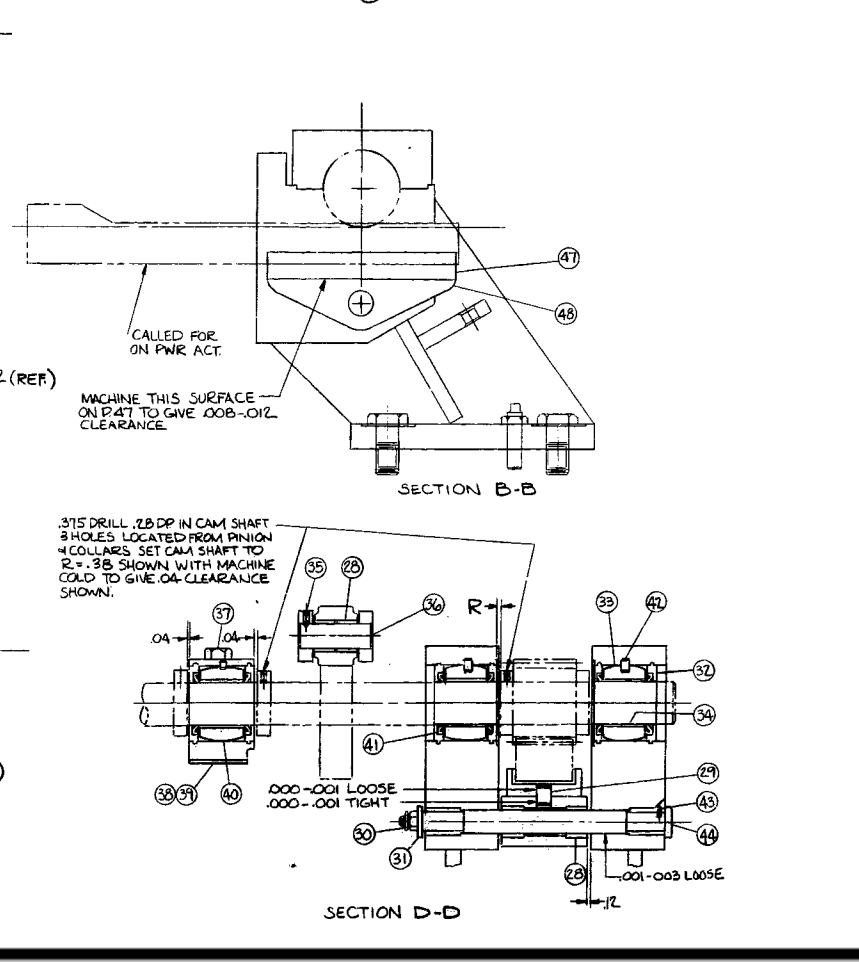
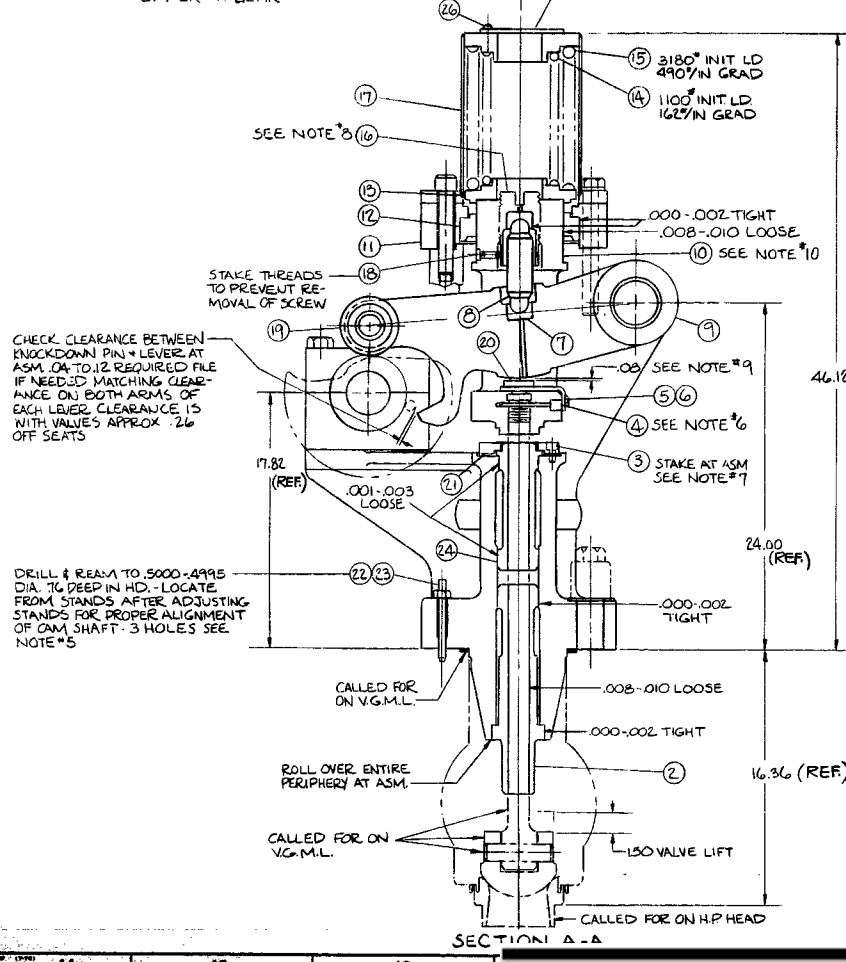
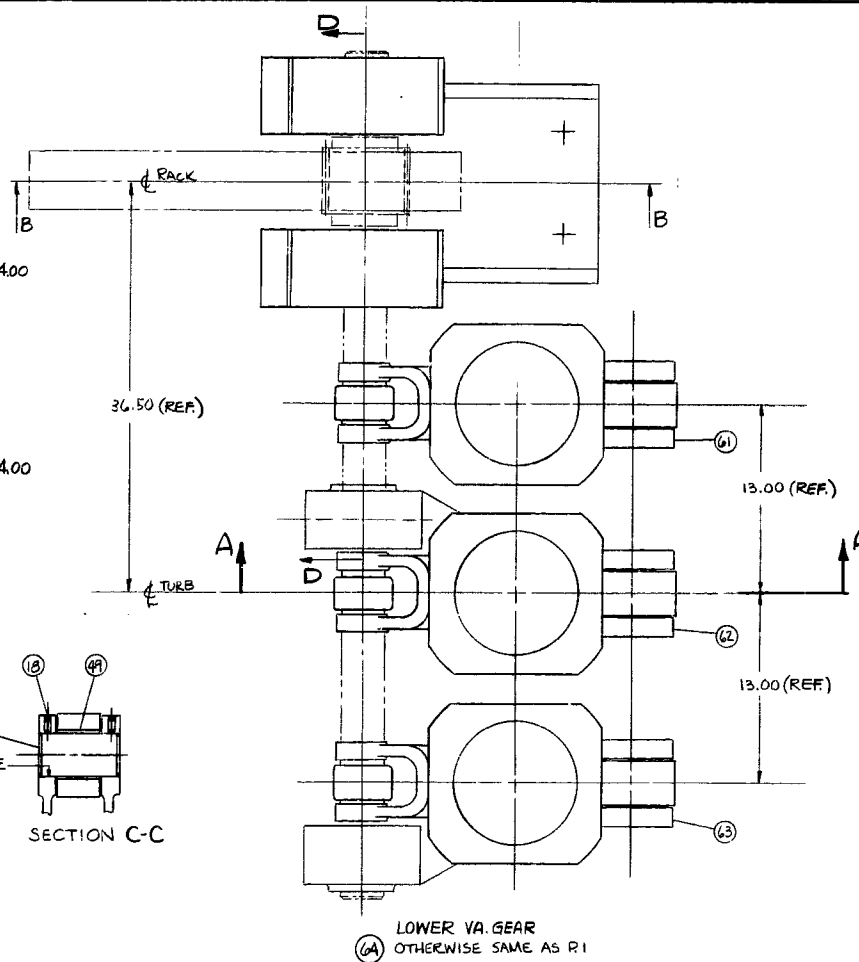
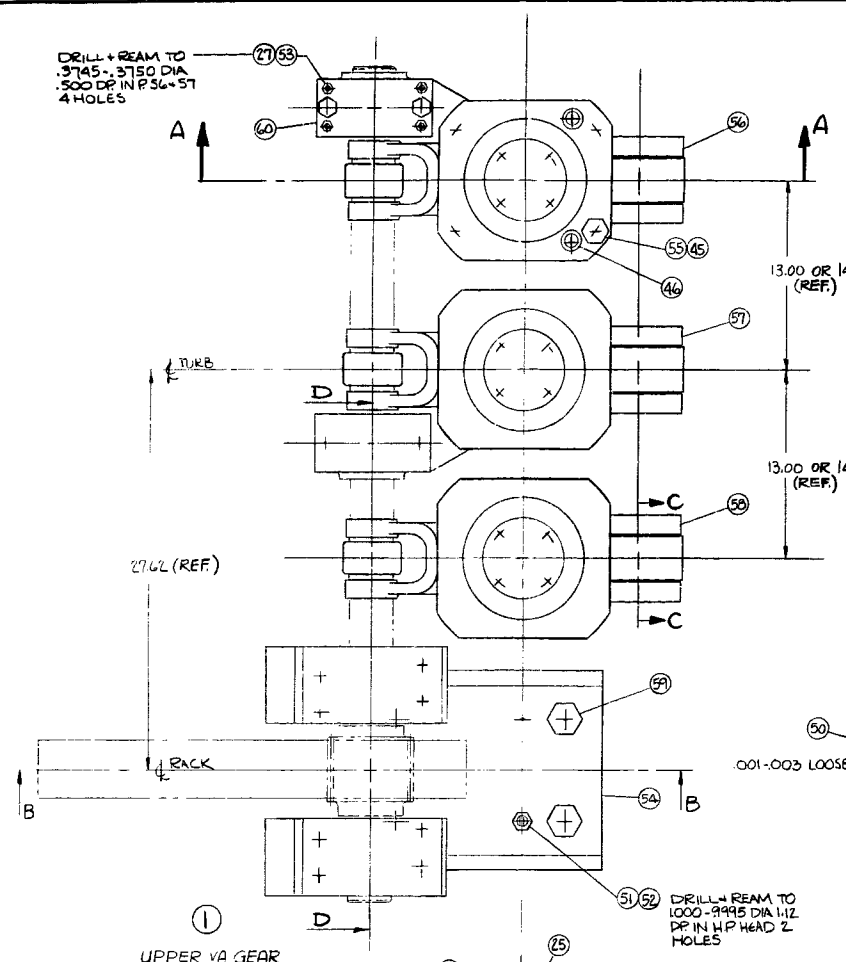
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SIGNATURES		DAY	MO	YR
DRAWN	<i>Ruderman</i>	22	5	79
CHECKED	<i>J. Ruderman</i>	22	5	79
ISSUED	<i>J. Ruderman</i>	23	5	79
ENGRG				
MFG				
MATLS				

<b>GENERAL ELECTRIC</b> MST DEPT LOC LYNN, MASS			
<b>POWER ACTUATOR ASSY</b>			
SIZE <b>B</b>	CODE IDENT NO <b>01289</b>	<b>PL-4103J48</b>	REV <b>-</b>
		CONT IN CONT - 2	<b>2</b>



REVISIONS			
ZONE	LN	DESCRIPTION	DATE
A	(1)	ADDED SECT A-A TO PLAN VIEWS	7/1/78
A	(2)	ADDED REF. TO DIMS. (3) ADDED SH. 2	7/1/78
B	(1)	NOTE 6 REVISED	7/1/78



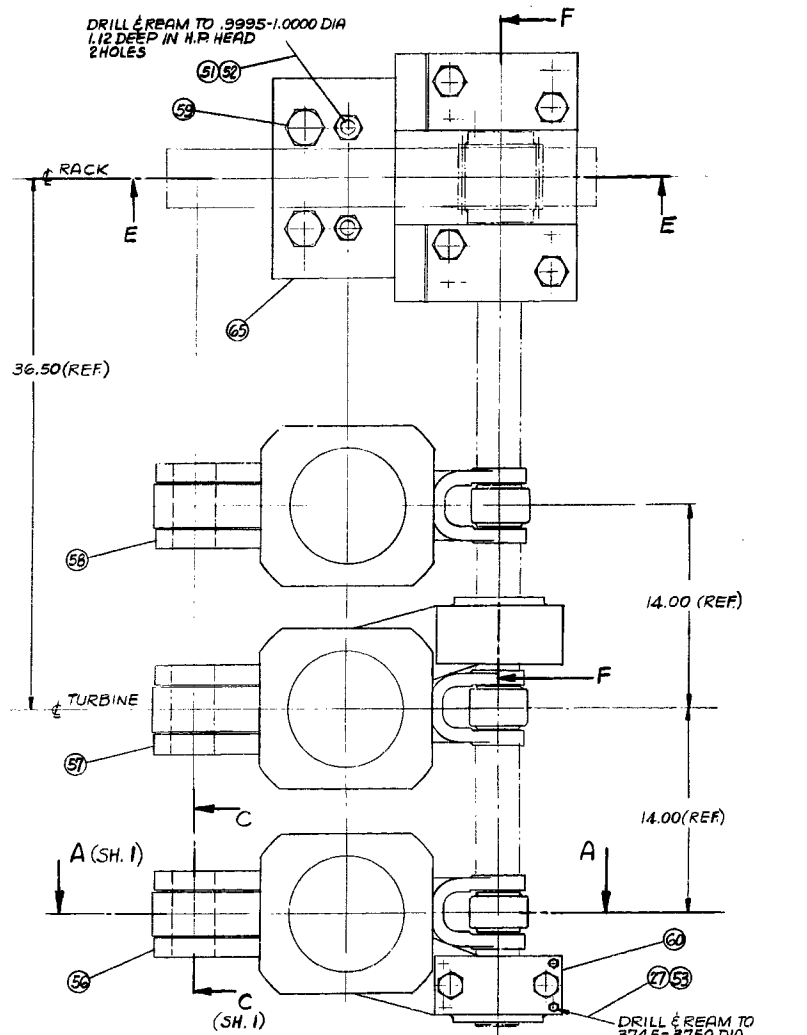
1. RULON SPRAY IN ACCORDANCE WITH P22A-AM1 ON CAM SHAFT CAM ROLLER RACK HINGE ROD AND FULCRUM JOURNALS.
2. SIDES OF CROSSHEAD TO BE PARALLEL WITH SIDES OF LEVER AFTER SPRINGS ARE PULLED DOWN.
3. MACHINE PART 20 TO GIVE .10-.06 CLEARANCE BETWEEN PART 20 AND PART 9 WHEN ASSEMBLED.
4. EFFECTIVE LENGTH OF STEMS SHOULD BE ADJUSTED BY MEANS OF BRG CUP PART 16. ADJUST PART 16 SO THAT A SHIM .006 THICK CAN JUST BE INSERTED BETWEEN CAM SHAFT AND CAM ROLLER WHEN VALVE STEM IS HOLDING VALVE CLOSED AND WHEN STRUT PIN PART 8 IS JUST TIGHT BETWEEN ADJUSTING NUT AND CAM LEVER. LOCK ADJUSTING NUT IN THIS POSITION WITH SET SCREW PART 18 IN CROSSHEAD PART 10 AND STAKE IT.
5. STAKE PART 21 OVER SCREW AT LEAST 6 PLACES TO SECURELY LOCK SCREW IN PLACE.
6. SCREW STEM INTO PART 10 TO BOTTOM AND DRILL AND REAM .252 - .250 DIA. DRILL THRU PART 10 FOR PART 4. ASSEMBLE PART 4 IN PLACE BUT NOT PART 20.
7. ASSEMBLE SPRINGS IN PLACE.
8. LOCATE THE CAM AND CAM ROLLER ON CENTER LINE TURB. CENTRAL WITH EACH OTHER THEN LOCATE PINION ON CAM SHAFT AND PINION BRKT ON H P HEAD TO GIVE R CLEARANCE SHOWN. CHECK FOR MINIMUM CLEARANCES OF RACK GUIDE RELATED TO PINION BRKT. READ JUST PINION AND PINION BRKT TO GIVE THESE CLEARANCES IF NECESSARY. THIS SHOULD MAKE PINION CENTER LINE COME APPROX. .06 FURTHER FROM CENTER LINE TURBINE THAN CENTER LINE OF RACK. CHECK CAM SHAFT BRG ALIGNMENT PINION AND RACK BACKLASH CLEARANCE AS INDICATED AND FULL TOOTH CONTACT BETWEEN PINION AND RACK BY MOVING RACK THRU FULL STROKE. IF NECESSARY MACHINE SHIM PART 38 AND RETAINER PART 47 SQUARE UP STANDS CAM SHAFT BRG AND PINION BRKT TILL FINAL ALIGNMENT IS OBTAINED. DOWEL THESE COMPONENTS AS SHOWN.
9. TOOTH O ON PINION TO MESH WITH SPACE O ON RACK WITH PINION KEYWAY HORIZONTAL AND OPER CYL ON BOTTOM STOP.
10. DO NOT SCRAPE SURFACE OF TEFLON BRG TO PROVIDE CLEARANCES SHOWN. WEAR IN TEFLON IS PROVIDED WHICH WILL WEAR OFF AND PROPERLY SEAT BRG AFTER ASSY OF PINS AND BRG BRG SHOULD WORK SMOOTHLY WITH MINIMUM OF BINDING.
11. AFTER ASSY OF VALVE STEM BUSHINGS A TRYBAR OF 1.497 DIA SHOULD PASS FREELY THRU THE BUSHINGS.

NOTES

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES—TOLERANCES ON: PLACES DECIMALS ± PLACES DECIMALS ± ANGLES ± FRACTIONS ± MATERIAL—		SIGNATURES DATE 1/11/77		GENERAL ELECTRIC MST DEPT LOC LYNN MASS.	
ALL SURF. ✓		VALVE GEAR ASSEM		SHEET 1 OF 2	
SPE CODE IDENT NO. E 01289		873E105		B	



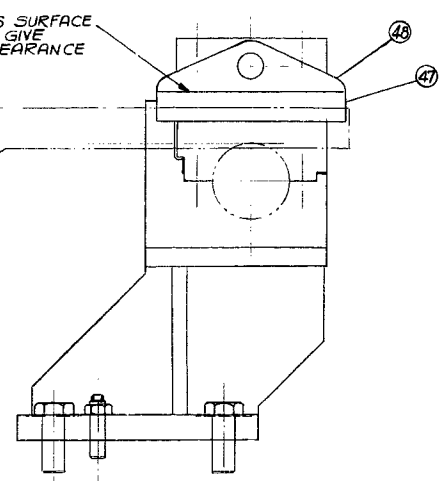
DRILL & REAM TO .9995-1.0000 DIA  
1.12 DEEP IN H.P. HEAD  
2 HOLES



66 LOWER V. GEAR  
SEE NOTES SH. I

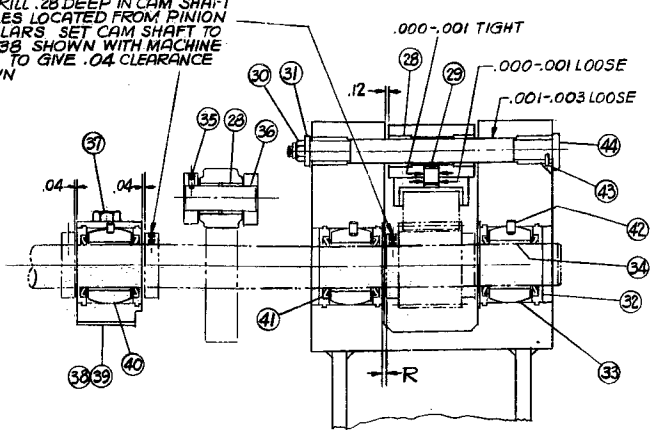
MACHINE THIS SURFACE  
ON PT. 47 TO GIVE  
.008-.012 CLEARANCE

CALLED FOR ON  
PWR. ACT.



SECTION E-E (J-10)

.375 DRILL .28 DEEP IN CAM SHAFT  
3 HOLES LOCATED FROM PINION  
& COLLARS SET CAM SHAFT TO  
R = .38 SHOWN WITH MACHINE  
COLD TO GIVE .04 CLEARANCE  
SHOWN



SECTION F-F (H-10)

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES— TOLERANCES ON: FRACTIONS ± DECIMALS ± HOLE & PIN FITS ± WELDS ± PATTERNS ±		SIGNATURES DATE TIME		GENERAL ELECTRIC MST LYNN, MASS.	
ALL SURF. ✓		7/2/78		VALVE GEAR ASSY	
SIZE CODE IDENT NO.		E 01289		873E105	
SCALE		2 N		SHEET 2 OF 2	



RESOLUTION 2020-167

WHEREAS, the City of Grand Island invited sealed bids for Turbine Valve Overhaul – Fall 2020 at Platte Generating Station, according to plans and specifications on file with the Utilities Department; and

WHEREAS, on July 7, 2020, bids were received, opened and reviewed; and

WHEREAS, GE Steam Power, Inc., of Windsor, Connecticut, submitted a bid in accordance with the terms of the advertisement of bids and plans and specifications and all other statutory requirements contained therein, such bid being in the amount of \$221,000.00; and

WHEREAS, the bid of GE Steam Power, Inc., is than the estimate for Turbine Valve Overhaul – Fall 2020.

NOW, THEREFORE, BE IT RESOLVED BY THE MAYOR AND COUNCIL OF THE CITY OF GRAND ISLAND, NEBRASKA, that the bid of GE Steam Power, Inc., in the amount of \$221,000.00 for Turbine Valve Overhaul – Fall 2020, is hereby approved as the lowest responsible bid.

- - -

Adopted by the City Council of the City of Grand Island, Nebraska, July 28, 2020.

\_\_\_\_\_  
Roger G. Steele, Mayor

Attest:

\_\_\_\_\_  
RaNae Edwards, City Clerk

Approved as to Form	☐ _____
July 24, 2020	☐ City Attorney