CONTRACT DATA REQUIREMENTS LIST (1 Data Item)	Form Approved QMB No. 0704-0188

Public reporting burden for this collection of information is estimated to average 110 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information, Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Department of Defense, Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188), Washington, DC 20503. Please DO NOT RETURN your form to either of these addresses. Send completed form to the Government issuing Contracting Officer for the Contract/PR No. listed in Block E.

A. CONTRACT LINE ITEM NO.	B. EXHIBIT C	C. CATEGORY: TDP XXXX TM OTHER
D. SYSTEM / ITEM A/S32P-23 Fire Truck Hub Assy	E. CONTRACT / PR NO.	F. CONTRACTOR

1. DATA ITEM NO.	2. TITLE OF DATA ITEM	3. SUBTITLE
C001	PRODUCT DRAWINGS AND ASSOCIATED LISTS	

4. AUTHORITY (Data Acquisition Document No.)	5. CONTRACT REFERENCE	6. REQUIRING OFFICE
DI-DRPR-81000A/T	SOW (para.3.5.1)	WR-ALC/TILCC

7. DD 250 REQ	9. DIST STATEMENT REQUIRED	10. FREQUENCY	12. DATE OF FIRST SUBMISSION
SD	BLOCK 16	ONE/R	SEE BLK 16
8. APP CODE		**11. AS OF DATE**	**13. DATE OF SUBSEQUENT SUBMISSION**
A		BLOCK 16	SEE BLK 16

16. REMARKS

NOTE: Air Force (Cage Code 98752), drawings 9579776 and 9579777, latest revision are part of this CDRL. A copy of the drawings may be requested through the Procurement Contracting Officer

[SEE CONTINUATION SHEET]

14. DISTRIBUTION

a. ADDRESSEE	b. COPIES Draft	FINAL Reg	FINAL Repro
WR-ALC/TILCC			
420 Richard Ray Blvd.			
SUITE 100			
ROBINS AFB GA			
31098-1640			
PAPER COPY	1		
DIGITAL DATA			1
(CLASSIFIED)			
DIGITAL			1
15. TOTAL	1	0	2

G. PREPARED BY	H. DATE	I. APPROVED BY	J. DATE
David Brown	13 April 2001	Michael Schlatt	26 Apr 01

DD Form 1423-1, JUN 90 PREVIOUS EDITIONS ARE OBSOLETE PAGE____ OF ____ PAGES EDATS 2001-46

CONTINUATION OF DD FORM 1423 (DI-DRPR-81000A/T) Dtd 13 April 2001

BLOCK 4:

DI-DRPR-81000A is tailored as follows:

a. Paragraph 7.1, delete in its entirety.

b. Paragraph 10.1, delete in its entirety and replace with "10.1 Reference Documents. The applicable documents apply as cited in the DD Form 1423 and continuation sheets."

c. Paragraph 10.2, delete "Product drawings and associated lists shall meet the requirements of MIL-DTL-31000A".

d. Delete Paragraph 10.3 in its entirety and replace with "10.3 Drawing Forms. The contractor shall utilize their own forms for Product Drawings and Associated Lists, which meet the requirements of ANSI Y14.1. (The government does not furnish forms for drawing formats)"

e. Paragraph 10.4, delete "Product Drawings and Associated Lists shall conform to the requirements of ASME Y14.100M, ASME Y14.34M and, where DoD peculiar requirements must be met, MIL-STD-100" and replace with "Product Drawings and Associated Lists shall conform to the requirements of MIL-STD-100F, ASME Y14.24, ASME Y14.35M, ASME Y14.34M and DD Form 1423."

f. Paragraph 10.6, delete "Selection Work Sheet incorporated in the contract or purchase order." and replace with "DD Form 1423."

g. Paragraph 10.7, delete "The Selection Work Sheet incorporated in the contract or purchase order will specify whether the contractor or the Government is responsible for selecting the types of drawings and lists." and replace with "The contractor is responsible for selecting the types of drawings and lists."

BLOCK 9:

DISTRIBUTION STATEMENT. Distribution statements shall be in accordance with DoD Directive 5230.24 and included on the first sheet of each drawing near the title block, and shall be as follows:

"DISTRIBUTION STATEMENT C. Distribution authorized to US Government agencies and their contractors; Critical Technology; 13 April 2001. Other requests shall be referred to WR-ALC/LEEV."

Note: Certain types of technical data preclude placing the entire notice on the document. To accommodate this problem an abbreviated version is authorized as follows:

"Statement C, Gov't and contractors, WR-ALC/LEEV"

EXPORT CONTROL NOTICE. The Export Control Notice shall be in accordance with DoD Directive 5230.24.

DESTRUCTION NOTICE. Mark documents with one of the following:

a. For unclassified limited documents: "DESTRUCTION NOTICE. Destroy by any method that will prevent disclosure of contents or reconstruction of the document."

b. For classified documents: "DESTRUCTION NOTICE. Follow the procedures in DoD 5220.22-M, *Industrial Security Manual,* section 11-19, or DoD 5200.1R, *Information Security Program Regulation,* chapter IX."

BLOCK 10: Revisions/changes to the final delivered data shall be furnished quarterly, commencing the first quarter after destination acceptance of the final reproducible data and continue until the contract is closed. Quarterly updates shall include an updated IDL, reference A.F. Drawing 9579776. Negative reports shall be submitted to WR-ALC/TILCC.

BLOCK 11: 15 days

BLOCK 12 AND 13:

1. All data submittals shall contain a shipping list prepared to include as a minimum, the document number, revision level, and number of sheets/pages. Part number, noun and drawing size is optional. The data delivered shall be in the same sequence as the shipping list. Unless prior approval is granted by WR-ALC/TILCC, shipments of data must be for complete assemblies, i.e., LRU's and SRU's. Shipping list shall specify whether the shipment is updates, final or make-up.

2. When a specific revision of an engineering document has been previously furnished and approved by a USAF Engineering Data Repository in microfilm or digital form as a result of any government contract, and is required by this DD Form 1423, the same data shall not be resubmitted providing it meets the requirements in the DD Form 1423 for existing data. This data shall be identified as being previously submitted and approved and shall include the document number, revision, and contract number under which the data were submitted. The receiving USAF Engineering Data Repository shall be identified. This action is required concurrent with all submittals.

3. Within 90 days after successful government verification of first article, an Indentured Data List (IDL) per Air Force (CAGE 98752) drawing 9579776 shall be delivered.

4. Within 90 days after successful government verification of first article, one set of paper copies of all "final reproducible data" (reference Block 14 of the DD 1423) shall be delivered. Submittal shall be accompanied by a letter of transmittal. Paper copy submittal will be reviewed within 120 days after receipt of data, unless additional time is required, at which time the contractor will be notified.

a. Submittal of programming files, per Air Force (CAGE 98752) drawing 9579776, Software and Firmware Data is not required for this (paper) submission.

b. Concurrent with the paper copies the contractor shall submit four (4) representative samples of each digital data format per Air Force (CAGE 98752) drawing 9579776, (Native, Neutral, HPGL, Drawing Metadata Spreadsheet, etc.).

5. Within 60 days after approval of paper copy, one set of all "final reproducible data" (reference Block 14 of the DD 1423) shall be delivered to WR-ALC/TILCC, 420 Richard Ray Blvd Suite 100, Robins AFB GA 31098-1640. If changes have been required to the IDL since delivery in 3 above, resubmittal shall be required.

BLOCK 16:

1. Contractor Activity and Part Identification: The contractor shall use his own design activity identifier (CAGE) and shall assign his own design activity drawing numbers. This number shall be or shall include the drawing number on which the item is described. Where more than one item is described on a drawing, unique identification shall be provided by the addition of a suffixed dash number with the following limitations:

a. The total length of the part number including dash numbers and spaces shall not exceed 32 characters.

b. The dash number shall have the same characteristics as drawing numbers and may be composed of numbers, letters, or any combination thereof.

c. Part numbers shall not include the drawing revision letter, the contractor CAGE, or the drawing format size letter.

2. Content, format, and media requirements for delivery of Digital Engineering Data: The contractor shall comply with Air Force (CAGE 98752) drawing 9579776.

3. Engineering Data: Product Drawings and Associated Lists shall document complete item design and manufacturing processes necessary to obtain and test hardware to the lowest component part that can be procured as a separate entity. This includes but is not limited to special tooling, interface hardware, special test equipment, and support equipment.

4. Relationship of Contractor with Subcontractors/Vendors: The contractor shall levy on subcontractors/vendors the same requirements for Technical Data Packages (TDPs) as are levied on them by this contract. This requirement shall be flowed down to the lowest tier subcontractor/vendor associated with the program.

5. Order of Preference:

Priority I
Documents mandated for use by law or regulation pursuant to law.

Priority II

Performance Oriented Documents: (a) Non-Government Standards; (b) Commercial Item Descriptions; (c) Federal Specifications and Standards; (d) Military Specifications and Standards.

Priority III
Design Based Documents: (a) Non-Government Standards; (b) Federal Specifications and Standards; (c) Military Specifications and Standards

Priority IV
Standards, specifications and related publications issued by the Government outside the military or federal series for the non-repetitive acquisition of developmental items.

Priority V
Company Specifications

6. ENGINEERING DRAWING PRACTICES: The contractor shall use the practices described in MIL-STD-100F. For clarification the documents listed in paragraph 2 of MIL-STD-100F shall be considered first tier and shall apply. ANSI Y14.1 is tailored as follows: Para 7.1, remove "should", and add "shall". Paragraph 12.2 add, "Sheets shall be numbered beginning with one (1) and continue, using consecutive whole integers." The contractor may find it useful to incorporate the concepts of MIL-HDBK-288 into the preparation of the TDP. MIL-HDBK-288 refers to Engineering Drawing Package (EDP); this term shall be considered synonymous with TDP.

7. Source Control Drawings: Source Control Drawing Approval Requests shall be submitted. The request (letter) shall be submitted to the requiring office in Block 6 of this DD Form 1423 prior to the preparation or use of a Source Control Drawing. The letter shall be marked with Distribution Statement "A" in accordance with DoD-D-5230.24. Preparation instructions are as follows:

a. Format - The Source Control Drawing Approval Request shall be in the contractor's format.

b. Content - The request shall specify the following:

(1) Nomenclature and description of the item.
(2) The critical application (s) for which the item is to used.
(3) Number of applications per end item.
(4) Item status as a repair part.
(5) System performance requirements requiring source qualification.
(6) Procedures and criteria required to qualify a source.
(7) Sources of supply and manufacturers' part numbers.
(8) Cost of the item involved.
(9) Estimated cost to qualify a source.
(10) Impact on contract cost, schedule and performance if use of source control drawing is not permitted.
(11) Copy of the Non-standard part approval request, if the DoD Parts Control Program is applicable under the contract or purchase order.

8. Control Drawings: The contractor shall not identify his own company as a source on control drawings, unless one additional source is also shown. A separate division of the contractor's company, with a different manufacturers code (CAGE) may be shown, if it is actually a source. Control drawings not developed for this contract (existing drawings) shall be updated, to show current information (i.e., performance/qualification requirements, vendors/sources names and part numbers).

9. Existing Data: When existing data meets the following criteria, or will be modified or revised to meet the following criteria, it shall be used in lieu of preparing new data:

a. It is furnished with rights-in-data consistent with the contract stipulations regarding data rights;

b. It is furnished at a cost to the government equal to or less than preparing new data;

c. It meets the highest quality of legibility and reproducibility available in the commercial world. (Reproduced paper copies shall be direct reading and shall not require magnification).

d. It meets the design disclosure requirements of the TDP element of which it is to be a part of.

e. It is identified by a Commercial and Government Entity (CAGE) Code, document number, title and applicable contract number(s).

f. Any nonstandard symbols, drawing or documentation practices used are explained in the document or in a document referenced on the document containing the nonstandard symbol or practice.

Note: Any revisions to existing Government CAGE non CAD data shall be redrawn in AutoCad and shall meet the contractual requirements for new Air Force drawings.

10. Legibility and Reproducibility: All documents prepared or submitted shall meet the highest legibility and producibility requirements available in the commercial market controlling the media in which the data is to be delivered.

11. Parenthetical Information: Design activity identifying numbers may be referenced parenthetically to identify in-house peculiar documents (documents not necessary for the production and quality of the item). Parenthetically identified documents are not a required deliverable; however, if the government deems this document necessary, it shall be delivered. Engineering drawings and Part Lists (PL) using parenthetical identification shall carry a note thereon indicating parenthetical identities are for reference only.

12. Referenced Documents: Documents referenced in a TDP shall be furnished as an integral part of that TDP except where the documentation meets the requirement of the paragraph titled Existing Data above, and has been furnished and approved under a previous contract in the same revision to any USAF repository. When first tier references do not provide the technical information required by the TDP element, subordinate reference documents shall be provided until the design disclosure requirements are met. Technical manuals/orders, procedural manuals, and maintenance manuals shall not be referenced within the TDP. When information essential to meeting TDP design disclosure requirements (such as

default surface finish values) are contained in such documents, that information must be incorporated in a document acceptable for inclusion in the TDP.

13. Protecting Classified Information: TDPs or parts thereof, containing classified information shall be protected and marked in accordance with the Department of Defense Industrial Security Manual for Safeguarding Classified Information, DoD Manual 5220.22-M.

14. Contract Numbers: When a TDP document is prepared under a Government contract, the Government contract number under which it is prepared shall appear on the first sheet of the document original. When a TDP document is delivered under a Government contract other than the one under which it was prepared, the Government contract number under which it is delivered shall also appear on the first sheet of each copy submitted. If the document is prepared and submitted under the same contract, only the entry for the contract under which it is prepared is required.

15. Application of Contract Numbers: When TDP documents or copies thereof are to be delivered under a subsequent or other contract, cost effective techniques may be used to apply the delivery contract numbers. Examples of such techniques are using a rubber stamp for paper copies, photographic overlays for microfilm, or electronic application to digital data.

16. Application Block: All new and revised drawings shall contain an Application Block. The Application Block is mandatory for all drawings. The Application Block shall be near the Title Block. The Application Block shall show the "Next Assembly" and "Used On". When an item is used in more than three applications, the entry "general usage" may be used.

17. Environmental Stress Screening (ESS): TDP documents shall contain ESS criteria, and the implementation of that criteria, necessary to ensure system performance at design levels directly or by reference on TDP elements.

a. Selected item drawings are required for all items and assemblies that require the application of ESS selection criteria to meet system requirements. The TDP element shall define, directly or by reference, the ESS selection criteria applied to the item or assembly identified.

b. Incoming ESS inspection procedures used on materiel/items which do not require selected item drawing delineation shall be required directly or by reference on the TDP element identifying that materiel/item.

c. Any ESS utilized during manufacturing/production in addition to the selected item ESS or incoming inspection criteria, shall be required either directly or by reference on applicable TDP documents.

18. Traceability: The contractor shall prepare the TDP in such a manner to insure that all applicable documents i.e., Artwork, Schematics, and Test Criteria, etc., are referenced within the TDP for traceability.

19. Preparation Method: American English language shall be used in the preparation of this TDP. All drawings shall be prepared using Third Angle Orthographic Projection method of

presentation. The symbol for angle of projection shall be delineated in the Title Block of newly prepared or revised engineering data. (see ANSI Y14.3 figure 2).

20. TDP Validation: The contractor shall validate that the TDP and elements thereof conform to the contractual requirements, and that they accurately depict the item(s) developed, modified, or produced under the contract. Successful use of the TDP in producing, inspecting and testing the item(s) is considered acceptable evidence that the validation requirement has been met.

21. Test Criteria: Test criteria is an inherent part of the TDP. Test criteria shall be incorporated, either directly on each TDP document or by reference, for each end item, top assembly item, configured item, and lowest assembled item IAW Air Force (CAGE 98752) drawing 9579777, titled "Clarification of Detailed Test Criteria for Electrical and Avionics Items.

22. Associated Lists: Parts Lists per ASME Y14.34M-1989 are required. Parts Lists are required at assembly level. Parts Lists for Contractor Activity identifier CAGE code may be an integral part of a document or it may be a separate document. An Indentured Data List at top assembly/system level is required per Air Force (CAGE 98752) drawing 9579776.

23. Software and Firmware Documentation: Software and Firmware documentation is to be delivered as a part of this data requirement per Air Force (CAGE 98752) drawing 9579776.

24. Marking: Drawings shall specify requirement for marking part number identification on items as required by MIL-STD-130 and other applicable documents referenced therein. The drawings shall identify the method and location of marking on the part.

25. Engineering Data Updates and Revisions: The contractor shall (and shall cause subcontractors and vendors to) update and maintain engineering data for the item(s) designed/ developed/modified/produced by this contract for the life of this contract and shall incorporate all changes in accordance with the following:

a. All engineering changes shall be incorporated into the applicable engineering data within 90 days after engineering release/Government concurrence or at intervals of five changes, whichever occurs first, except a change involving safety, which shall be incorporated immediately.

b. All engineering changes shall be incorporated into the applicable engineering data prior to delivery of preliminary data for review.

c. All engineering changes shall be incorporated into the applicable engineering data prior to delivery of final media (this includes all EO's generated as a result of the preliminary data review).

26. Contractor Quality Control System: The contractor shall develop and maintain a quality control system for the detailed examination and technical review of the TDP, to be supplied under the terms of the contract or purchase order. The quality control system shall assure conformance of the TDP to all requirements specified herein. The quality control system shall be documented and subject to review by the Government's representative. If the contractor's methods and procedures do not comply with the

quality control system or do not attain their objectives, the quality control system shall be subject to disapproval by the Government.

27. TDP Quality Control System Requirements: The contractor's quality control system shall address:

a. The methods and procedures to be used to control the development, maintenance and delivery of the TDP, including the use of electronic approvals or authorizations, if applicable.

b. Assignments of responsibilities and procedures for the detailed examination, review and final approval of the TDP by the contractor.

c. Qualifications of the personnel performing the examinations and reviews of the TDP.

d. Procedural flow of information and documentation within the organization for the development, review and approval processing of the TDP and components thereof.

e. Procedures for ensuring that nonstandard items used in the design have been documented as required for the TDP.

f. Methods of ensuring that approved engineering changes have been incorporated into the TDP in accordance with contract requirements.

g. Procedures for ensuring that security markings, distribution statements, and right-in-data legends are assigned and applied in accordance with applicable specifications, standards, regulations and public laws.

h. Methods of detecting, correcting, and preventing the recurrence of deficiencies with the TDP and discrepancies between the elements and components thereof.

28. Inspection of TDP: The TDP components thereof, including data prepared by subcontractors, shall be inspected for the following:

a. Compliance with the requirements of this contract.

b. Inclusion of all documents, including sub-tier references, required to meet the design disclosure requirements of the TDP, except those already furnished to the government as referenced in paragraph above titled "Referenced Documents".

29. In-Process Review (IPR) of the TDP (Engineering Data IPT Review): The contractor shall host, support, and cochair (at his facility) an IPR of the engineering drawings and associated lists and other documentation to be included in the TDP. The contractor will have a copy of all data available at IPR. The IPR will be conducted only after the contractor's quality assurance personnel have completely reviewed the data and determined that data are of sufficient quality that Government time will be effectively utilized during the review. IPR may be scheduled when data has reached the 50% percent completion point and shall be held, when possible, in conjunction with other reviews (i.e., PDR, CDR). The contractor shall notify WR-ALC/TILCC a minimum of 30 days prior to the anticipated date of completion point. The IPR shall focus on the contractor's progress in the preparation of the TDP. The contractor shall support and provide

the necessary resources, i.e., meeting agenda, conference room, applicable data, minutes, and appropriate personnel available to answer any questions to perform the IPR effectively. The contractor shall correct all discrepancies identified in the IPR. All subcontractor/vendor data shall be made available for review. If quantity is sufficient, the Government may schedule a separate IPR at the subcontractor's/vendor's facility.

30. Engineering Data Guidance Conference (Engineering Data Post Award IPT Meeting): A formal Guidance Conference is not required. Contractor shall within 60 days of Contract award have a teleconference with TILCC, David Brown/ 478-926-1183 to discuss the items in A thru H below.

a. Understanding of all CDRL requirements, applicable DIDs, specifications and standards.

b. TDP review requirements and schedules.

c. TDP delivery requirements and schedules.

d. Contractor's drafting practices/procedures/TDP drawing formats.

e. The contractor's quality assurance procedures relating to TDP documents, including quality control of subcontractor and vendor data.

f. The role of subcontractors and vendors who may deliver TDP documents under this contract.

g. The contractor's configuration management system, including methods for releasing documents, approving documents, and incorporating changes into documents.

h. Digital Technical Data Package (TDP) deliverables.

31. Printed Board Artwork Master Drawing. The printed board artwork master drawing shall include images of all artwork required to manufacture the printed board. These images will serve as a referenced to those images produced from the Gerber data files IAW Air Force drawing 9579776 (CAGE 98752), titled "Digital Data Description Requirement". This requirement is in addition to those in ASME Y14.24M and other related standards.

32. Restrictions:

a. Wiring whose jacket or insulation material that contains Polyvinyl chloride (PVC) or other potentially corrosive elements shall not be used for Air Force aerospace equipment. This encompasses multiconductor cable, internal hookup wire, and interconnection cable and wire. Use of PVC in any other application requires prior approval from the office identified in block 6 of this DD Form 1423.

b. MIL-W-16878 shall not be used for Air Force aerospace equipment.

c. Wiring whose jacket or insulation material that contains Aromatic polyimide film shall not be used.