

DATA ITEM DESCRIPTION

Title: DD Form 1921-1 "Functional Cost-Hour and Progress Curve Report"

Number: DI-FNCL-81566A

Approval Date: 20031031

AMSC Number: D7516

Limitation:

DTIC Applicable:

GIDEP Applicable:

Preparing Activity: (D) OSD/PA&E/CAIG

Applicable Forms: DD Form 1921-1 (OMB Control No. 0704-0188); 45 hours

Use/Relationship: DD Form 1921-1 is used to obtain essential cost data from contractors for the purpose of establishing a cost database. Prime contractors and integrating contractors for teaming arrangements with Contractor Cost Data Reporting (CCDR) requirements in their prime contracts are responsible for informing subcontractors and team contractors who meet the reporting thresholds about these requirements. All contractors must submit reports electronically to the Defense Cost and Resource Center (DCARC), who maintains a database of CCDR data. The CCDR database will be used to do the following: (1) prepare program acquisition cost estimates for major systems reviewed by the Defense Acquisition Board (DAB) and other Component reviewed programs, (2) develop independent government contract estimates in support of cost and price analyses, and (3) develop estimates to support Analyses of Alternatives (AOAs), Cost as an Independent Variable (CAIV), and long-range planning efforts. DD Form 1921-1 consists of two major parts: Part I, Functional Cost-Hour Report, and Part II, Progress Curve Report. Information acquired through these data include actual and estimated incurred costs at completion for each selected Work Breakdown Structure (WBS) element.

Part I, Functional Cost-Hour Report, displays actual costs by functional category (i.e., Engineering, Manufacturing, Quality Control, Tooling, and Other); each functional area is broken out by direct labor hours and cost category (e.g., Direct Labor, Material, Other Direct Costs, and Overhead). General and Administrative (G&A) expenses and profit or fee are reported separately at the bottom of the report. Part I data is further subdivided into recurring and nonrecurring costs. Part I data must also be submitted for the total contract and for selected WBS elements as identified by the program manager and the Cost Working-Level Integrated Product Team (CWIPT) process. The elements selected for reporting should be high-cost, high-risk, or high-technological-interest items.

Part II, Progress Curve Report, shows actual and estimated "to complete" recurring costs by unit or lot for selected reporting elements. Part II data are required only on high-risk or high-quantity programs from research and development through the completion of low-rate initial production (LRIP) and the initial full-rate production rate. This determination is made by the CWIPT for approval by the Cost Analysis Improvement Group (CAIG) Chair. For cost-estimating purposes, the CWIPT is responsible for defining units and lots for its particular programs and contracts. Lot definition for reporting purposes should be agreed upon by the contractor and the DoD customer before reporting begins. Part II data also includes direct labor hours and costs for Quality

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Control and Manufacturing. Within these categories, costs are further subdivided by major cost category to include Manufacturing, Quality Control, Purchased Equipment, and Material and Purchased Parts. These data are primarily used to develop progress or learning curves.

DD Form 1921-1 reporting is mandatory on Acquisition Category (ACAT) IC and ID program contracts or subcontracts valued over \$50 million (in FY 2002 dollars). Contracts priced between \$7 million and \$50 million (in FY 2002 dollars) are subject to CCDR reporting requirements when the CWIPT determines, and the CAIG agrees, that they are high-risk or high-technical-interest items. Contracts priced below \$7 million (in FY 2002 dollars) are not subject to CCDR reporting. The 1921-1 requirement is limited to selected high-cost, high-risk, or high-technological-interest reporting elements on both contracts and subcontracts. Reporting frequency is tied to program estimating needs as determined by the program manager and the CWIPT for ACAT IC and ID programs and the program manager and the responsible Component reviewing authority for ACAT II and III programs.

This DID summarizes the format for DD Form 1921-1 and provides preparation instructions to support the specific data and frequency requirements specified in the contract. This report is one of two CCDR formats and is related to the other report, DD Form 1921, "Cost Data Summary Report" (DID number DI-FNCL-81565A). Both reports are available for inclusion on any given contract that meets the criteria specified above and any other conditions specified for a particular report.

This DID replaces DID numbers DI-FNCL-81566 and DI-FNCL-81567.

Requirements:

1. *Reference documents.* Mandatory CCDR requirements are contained in DoD Directive 5000.4.
2. *Format.* Use DD Form 1921-1 and the detailed instructions below. All CCDR reports for new or modified ACAT program I contracts awarded after October 1, 2003, must be submitted electronically using the standard Microsoft Excel template, Extensible Markup Language (XML), or the CCDR Pre-processor tool available at the DCARC Web site (<http://dcarc.pae.osd.mil>). Reports must be submitted as secure e-mail attachments, using a certificate issued by the DCARC for encryption and digital signature.

Preparation Instructions:

1. *General Instructions.* The following instructions apply for entering data items 1 through 13 in DD Form 1921-1. These items apply to both Part I and Part II reporting requirements.
 - a. Item 1a. Program. Enter the approved system designator or the type, model, and series of the primary end item(s) being purchased under contract or being proposed for contract. If the contract or proposal includes services (research, flight tests, etc.), provide details of the work to be performed. Associate contractors and subcontractors required to report separately must enter the end item being purchased on the contract and the program for which it is being

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- procured (e.g., afterbody section of the F-X, wind tunnel tests for the B-X, launch equipment for missile X).
- b. Item 1b. Approved Plan Number. Enter the number of the approved Contract Plan that authorized the collection of data for this report.
 - c. Item 2. Report As Of. Enter the appropriate numbers for the month, last day, and year of the reporting period, e.g., December 31, 2002 would be shown as 12/31/02.
 - d. Item 3. FY Funded. Enter the fiscal year for which data are being reported. If the contract data being reported relate to more than one fiscal year, show the most current fiscal year in Item 3 and the remaining years in the “Remarks” section (Item 32). If the data being reported are program estimates, select from the following options of years to be covered: prior fiscal years, fiscal year – 2, fiscal year – 1, current fiscal year, fiscal year + 1, fiscal year + 2, fiscal year + 3, fiscal year + 4, fiscal year + 5, fiscal year + 6, balance to complete, or total program. Always include values for prior fiscal year, balance to complete, and total program in contractor program estimates.
 - e. Item 4. Contractor Type. Check “Prime/Associate” if you are the prime or associate contractor for the work. If you are a subcontractor reporting to the Department of Defense or to the prime contractor, check “Subcontractor.” Check “Subcontract” if you are the prime contractor preparing subcontract estimates for nonreporting subcontractors. Enter the name, division (if applicable), and address of the reporting prime contractor, associate contractor, or subcontractor in the space provided.
 - f. Item 5. Dollars In. Report all cost data in thousands of dollars rounded to the nearest tenth, unless otherwise specified in the RFP or contract.
 - g. Item 6. Hours In. Report all labor-hour data in thousands rounded to the nearest tenth, unless otherwise specified in the RFP or contract. Where contractor data-gathering systems do not supply the data rounded as specified, complete the reporting requirements in the manner in which the data are generated and make a note in the “Remarks” section (Item 32).
 - h. Items 7a. Customer (Subcontractor Use Only). Item 7a is applicable only if you are a subcontractor submitting the report. If you are a prime or associate contractor, leave this item blank. Otherwise, enter the name of the customer (prime contractor) for whom the work on contract is being performed. Also enter the number of the prime contractor’s contract with the government customer.
 - i. Items 7b. Subcontractor (Estimate by Reporting Contractor). If the prime contractor is estimating the subcontractor’s cost, enter the name and address of the subcontractor. Otherwise, leave this item blank.
 - j. Item 8. Subcontract No. If you are the prime contractor, enter the subcontract number you have for each subcontract that has CCDR reporting requirements.

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- k. Item 9. Number of Reporting Subcontractors. If there are any subcontractors with CCDR requirements, enter the number of subcontractors reporting. Otherwise, leave this item blank.
 - l. Item 10. Type Action. If you are reporting on a contract estimate, check “Contract No.” and enter the assigned contract number as well as the number of the latest contract amendment. If you are reporting data in response to an RFP, check “RFP No.” and enter the RFP number. To enter a program estimate, check “Program Estimate” and enter the estimate in the space provided.
 - m. Item 11. Multi-Year Contract. If the contract is funded from a single fiscal year, check “No” and enter the specific fiscal year funding for the contract in the “Remarks” section (item 32). However, if the report pertains to an incrementally funded research and development contract, check “Yes” and enter all the fiscal years covered by the contract in the “Remarks” section (item 32). In some cases, contractors may be operating under a multi-year contract that provides for annual increments of the quantities procured under the contract. This type of contract is an example of multi-year procurement (MYP). For MYP contracts, check “Yes” and enter the fiscal year of funding covered by the report. If contractually required, a separate report by type of funds and fiscal year on designated reporting elements may be required. MYP contracts are identified by the following characteristics: the government negotiates the contract for the quantities to be procured in more than one year; contract quantities are budgeted and funded in accordance with the program year for which each quantity is authorized; funds are obligated only for the first year’s quantity, with succeeding year’s contract quantities funded annually thereafter. In the event funds are not made available to support one or more succeeding year’s quantities, the contract shall be canceled. However, contractors are protected from loss by the terms of the contract cancellation-ceiling clause.
 - n. Item 12. WBS Element Code. Enter the numeric/alpha code assigned to the WBS element being reported on.
 - o. Item 13. Reporting Element. Enter the WBS reporting element specified in the contract or by the DoD Component for which cost data are to be reported. These reporting elements must match those listed in the approved CCDR Plan or provide a mapping scheme that tracks the approved WBS to the newly proposed WBS. The CWIPT shall incorporate all proposed reporting element changes in a revised CCDR Plan for review and approval by the CAIG Chair before changing the contract or other reporting direction. Nevertheless, if there have been changes to the list of reporting elements that are not reflected in the contract or approved CCDR Plan, note these discrepancies in the “Remarks” section (item 32).
2. *Part I, Functional Cost-Hour Report:* Complete items in Part I using data extracted from accounting records for the designated cost elements and functional categories defined at the end of this DID. If your accounting system aggregates incurred costs in a manner that does not coincide with those definitions, estimate the costs required for CCDR effort and describe the estimation method in the “Remarks” section (Item 32). For example, if overtime and shift premiums for direct labor are charged to overhead,

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show these costs in Item 32 by functional category. Report fringe benefits charged as direct rather than to an overhead account separately and show them in Item 32.

- a. **Item 14. Cost Type.** Check the appropriate box to indicate whether the data reported in Part I is for nonrecurring, recurring, or total effort. Nonrecurring costs are those elements of development and investment costs that generally occur only once in the life cycle of a system. Recurring costs are repetitive elements of development and investment costs that may vary with the quantity being produced. Total cost (cost incurred) is the sum of nonrecurring and recurring cost incurred. For more comprehensive definitions of these terms, refer to the definitions beginning in Section 7 of this document and in the CCDR Manual. The following guidelines apply to the total contract and to each WBS element selected for reporting as noted in the CCDR Plan.

If either nonrecurring or recurring cost is projected to be more than 5 percent but less than 95 percent of the estimated incurred costs at completion; separate reports for nonrecurring and recurring cost are needed. A third report for total costs for that reporting element is also required. However, if either recurring cost or nonrecurring cost represents 95 percent or more of the costs for each element selected for reporting, mark the "Total" box as well as the "Recurring" or "Nonrecurring" box. The table below shows these reporting requirements for prime contractors.

Application of the reporting requirements in the table may result in different recurring/nonrecurring splits for the total contract and for individual elements selected for reporting. For example, if 96 percent of the total contract is recurring, all costs for total contract reporting would be shown as recurring. However, if an individual WBS element selected for reporting on that same contract is 80 percent recurring and 20 percent nonrecurring, two reports would be required to reflect the split and a third report would also be required for total costs.

Reporting Recurring and Nonrecurring Costs on DD Form 1921-1

If the split is:	The prime submits:	And marks:
95% or more Recurring 5% or less Nonrecurring	One report—show total costs	"Recurring" in Item 14 and notes in Item 32, Remarks, that data reflect total costs
50% Recurring 50% Nonrecurring	Two reports—one for recurring and one for nonrecurring	"Recurring" or "Nonrecurring" in Item 14 as appropriate
5% or less Recurring 95% or more Nonrecurring	One report—show total costs	"Nonrecurring" in Item 14 and notes in Item 32, Remarks, that data reflect total costs

Note: Contractors may report the recurring and nonrecurring breakout regardless of the percentage split.

- b. **Item 15. Quantity.** Enter for this contract the quantity of equivalent units completed to date and the total number of completed units at contract completion. Equivalent units represent work on fully completed units plus work on partially

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completed units translated into an equivalent number of totally completed units. Note the methodology used to determine equivalent units in the “Remarks” section (item 32). For research and development contracts, enter two quantity amounts for any reported WBS element that includes items to be procured or produced. The first entry is the quantity to be procured and delivered to the government. The second quantity represents the number of units the contractor will use internally during contract performance e.g., testing. For example, in an interim CCDR report, assume the actual quantities (equivalent units) produced to date were 5.4 and the number of internal units produced to date was 2.3. In this case, enter 5.4/2.3 in the number of units or quantity field to date for the specific WBS element. Further assume that at completion of the contract 12 units were to be delivered and 4 systems would be used internally. Then, enter 12/4 in the number of units or quantity field at completion for that same WBS element. Reported quantities must be consistent with the quantities reported in the DD Form 1921.

- c. Item 16. Appropriation. Check the appropriate box to indicate the type of appropriation, Research, Development, Test and Evaluation (RDT&E) or Procurement, used to fund the contract. If funding other than RDT&E and Procurement is used, leave this item blank and note the specific type of funds in the “Remarks” section (Item 32 of Part I).
- d. Reporting Contractor—Columns A and B. To Date and At Completion. The reporting contractor can be the prime, associate, subcontractor, or lower tier subcontractor who is responsible for preparing and submitting the report. Enter the recurring and nonrecurring costs and hours that have been incurred to date for the reporting contractor. The estimated costs at completion of the contract shall be based on the planned or expected costs to be incurred regardless of contract price, ceiling, or funds available.
- e. Subcontract or Outside Production and Services—Columns C and D To Date and At Completion. Enter the estimated total recurring and nonrecurring costs and hours that may be incurred at completion. The estimated costs at completion of the contract shall be based on the planned or expected costs to be incurred regardless of contract price, ceiling, or funds available.

The following table illustrates reporting requirements for subcontractor and outside production and services in Part I of DD Form 1921-1. The total of the individual categories to date and at completion must agree with the estimated cumulative price to date and the total contract price at completion.

Outside Production and Services is a special category of costs on subcontracts for the Airframe reporting element. Prime contractors shall fill out the appropriate data items for subcontractors not reporting separately. Estimate each line item. Distribute all subcontracts for Airframe by function in Outside Production and Services, either among all categories or as purchased equipment.

Special instructions for the Airframe reporting element within ACAT I, II, and III program contracts are provided in part 4 of these preparation instructions. All subcontractors for items or services normally produced or performed in airframe

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plants are to be distributed as appropriate among all functional categories of cost. Include as purchased equipment all subcontracts for items defined as purchased equipment for the Airframe reporting element. Final entries shall be the subcontractor's G&A and profit or fee.

Reporting Requirements in Part I of DD Form 1921-1

Line #	Data	Prime Contractor Data	Subcontractor Data		
			Subcontractors Reporting to the DoD	Nonreporting Subcontractors	Nonreporting Subcontractors (Airframe)
1-5	Engineering Line Items	◆	□		❖
6	Total Engineering	◆	□	❖	❖
7-11	Tooling Line Items	◆	□		❖
12	Total Tooling	◆	□	❖	❖
13-16	Quality Control Line Items	◆	□		❖
17	Total Quality Control	◆	□	❖	❖
18-22	Manufacturing Line Items	◆	□		❖
23	Total Manufacturing	◆	□	❖	❖
24-26	Other Costs	◆	□		❖
27	Total Cost Less G&A	◆	□		❖
28	G&A*	◆	□		
29	Total Cost Plus G&A*	◆	□	❖	❖
30	Profit/Fee*	◆			
31	Total Price*	◆	◆**	◆	◆

◆ Actual data included in report.

◆** Actual data included in "Remarks" section of report (item 32).

❖ Estimated data included in report.

□ Data available to DoD analysts only.

* Report data for total contract only.

f. Total—Columns E and F To Date and At Completion Recurring/Nonrecurring.

Enter the total of Columns A and C (To Date) in Column E and the total of Columns B and D (At Completion) in Column F.

g. Data Elements. Lines 1 through 31.

- (1) Line 1. Direct Labor Hours (Engineering). Enter direct labor hours related to the Engineering functional category for the reporting element.
- (2) Line 2. Direct Labor Dollars (Engineering). Enter direct labor dollars related to the Engineering functional category for the reporting element.
- (3) Line 3. Overhead (Engineering). Enter overhead costs related to the Engineering functional category for the reporting element.
- (4) Line 4. Material (Engineering). Enter material costs for the reporting element.
- (5) Line 5. Other Direct Charges (Engineering). Specify and enter any other direct charges related to the Engineering functional category for the reporting element.
- (6) Line 6. Total Engineering Dollars. Enter the sum of Lines 2 through 5.

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- (7) Line 7. Direct Labor Hours (Tooling). Enter direct labor hours related to the Tooling functional category for the reporting element.
- (8) Line 8. Direct Labor Dollars (Tooling). Enter direct labor dollars related to the Tooling functional category for the reporting element.
- (9) Line 9. Overhead (Tooling). Enter overhead costs related to the Tooling functional category for the reporting element.
- (10) Line 10. Materials and Purchased Tools (Tooling). Enter materials and purchased tools costs related to the Tooling functional category for the reporting element.
- (11) Line 11. Other Direct Charges (Tooling). Enter other direct charges related to the Tooling functional category for the reporting element and specify what the charges are for.
- (12) Line 12. Total Tooling Dollars. Enter the sum of Lines 8 through 11.
- (13) Line 13. Direct Labor Hours (Quality Control). Enter direct labor hours related to the Quality Control functional category for the reporting element.
- (14) Line 14. Direct Labor Dollars (Quality Control). Enter direct labor dollars related to the Quality Control functional category for the reporting element.
- (15) Line 15. Overhead (Quality Control). Enter overhead costs related to the Quality Control functional category for the reporting element.
- (16) Line 16. Other Direct Charges (Quality Control). Specify and enter any other direct charges related to the Quality Control functional category for the reporting element.
- (17) Line 17. Total Quality Control Dollars. Enter the sum of Lines 14 through 16.
- (18) Line 18. Direct Labor Hours (Manufacturing). Enter direct labor hours related to the Manufacturing functional category for the reporting element.
- (19) Line 19. Direct Labor Dollars (Manufacturing). Enter direct labor dollars related to the Manufacturing functional category for the reporting element.
- (20) Line 20. Overhead (Manufacturing). Enter overhead costs related to the Manufacturing functional category for the reporting element.
- (21) Line 21. Material and Purchased Parts (Manufacturing). Enter material and purchased parts costs related to the Manufacturing functional category for the reporting element.
- (22) Line 22. Other Direct Charges (Manufacturing). Specify and enter any other direct charges related to the Manufacturing functional category for the reporting element.
- (23) Line 23. Total Manufacturing Dollars. Enter the sum of Lines 19 through 22.

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- (24) Line 24. Purchased Equipment (Other Costs). Enter purchased equipment costs not assigned to the functional categories (Engineering, Manufacturing, Quality Control, and Tooling).
 - (25) Line 25. Material Overhead (Other Costs). Enter overhead costs attributable to procured or subcontracted products, including the costs of purchasing, expediting, and storing materials, parts, equipment, and assemblies.
 - (26) Line 26. Other Costs Not Shown Elsewhere. Specify and enter all direct costs for the reporting element not assigned to the functional categories (Engineering, Manufacturing, Quality Control, and Tooling). Include undistributed budget, management reserve, and facilities capital cost of money, as appropriate. Provide details for all of these costs in the "Remarks" section (item 32). For all items not segregated by WBS, also enter this element on the total program report.
 - (27) Line 27. Total Cost Less G&A (Functional Cost-Hour Summary). Enter the total of all direct and overhead costs for the Functional Cost-Hour elements.
 - (28) Line 28. G&A (Functional Cost-Hour Summary). Enter total contract G&A costs when reporting for the total contract; otherwise, leave this item blank.
 - (29) Line 29. Total Cost Plus G&A (Functional Cost-Hour Summary). When reporting on the total contract, enter the total of Lines 27 and 28. Otherwise, leave this item blank.
 - (30) Line 30. Profit/Fee (Functional Cost-Hour Summary). When reporting on the total contract, enter the amount of profit or fee. Otherwise, leave this item blank.
 - (31) Line 31. Total Price (Functional Cost-Hour Summary). Enter the total of all costs, both direct and indirect, plus G&A and profit or fee, for the total contract.
 - h. Item 32. Remarks. Note any relevant information that could be used in the interpretation of the data provided via this report.
 - i. Point of Contact (POC) Information. Items 33a through g. Enter the relevant information about the POC as follows: Item 33a, last name, first name, and middle initial; Item 33b, department name; Item 33c, telephone number, including area code; Item 33d, e-mail address; Item 33e, fax number, including area code; Item 33f, signature, if not submitting the form electronically; and Item 33g, date signed, if not submitting the form electronically.
3. *Part II, Progress Curve Report*
- a. Line 1. WBS Element Code. Enter the numeric/alpha code assigned to the WBS element being reported on.
 - b. Line 2. Reporting Element. Enter the WBS reporting element specified in the contract or by the DoD Component for which cost data are to be reported. These reporting elements must match those listed in the approved CCDR Plan. The CWIPT shall incorporate all proposed reporting element changes in a revised

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CCDR Plan for review and approval by the CAIG Chair before changing the contract or other reporting direction. Nevertheless, if there have been changes to the list of reporting elements that are not reflected in the contract or approved CCDR Plan, note these discrepancies in the “Remarks” section (item 36).

- c. Line 3. Units/Lots Completed. Check the appropriate box to indicate whether the hour and cost data entered on this report are for unit or lot totals or unit or lot averages.
- d. Completed Units/Lots. Columns A1 through A4. Report appropriate data for each unit or lot completed even if the DoD contracting component has not yet accepted the item. Include all completed units whether designated as test, operational, or spare. Do not report on items such as spare parts or mock-ups, which represent only partially completed units. If needed, additional columns may be added sequentially (i.e., A5, A6, etc.).
- e. Work-in-Process (WIP). Column B. Enter incurred cost and hour data for all units started but not yet completed during the reporting period.
- f. To Complete. Column C. Enter estimates for recurring cost and hour data to complete the work-in-process. For lot data, show the costs and hours estimated to complete the entire lot even if all the units were not started and reported in Column B.
- g. Data Elements. Lines 1 through 4.
 - (1) Line 1. Model and Series. Enter the basic model and series designation in Columns A through C for each test unit, operational unit, or lot being reported. A basic model includes all units whose weight, dimensions, performance characteristics, and manufacturing process are so similar that the Department of Defense considers them to be identical. If a lot includes more than one series of a model, note the number and series designation of each in the “Remarks” section (item 36).
 - (2) Lines 2 through 4. First Unit of Lot/WIP Units, Last Unit of Lot, and Concurrent Units/Lots. Enter the cumulative number of units completed at the beginning of the reporting period and the number of units completed at the end of the reporting period in Column A2 and A3, respectively. Unless otherwise specified, cumulative units are to be total units of a given model the reporting contractor has accepted since the inception of a program/model, regardless of the number of contracts under which the model has been procured. Enter data for units or lots that are in process during the period in Column B and those to be started later in Column C.

Concurrent units or lots are items being produced within a given lot or in another lot in the same FY buy, respectively, that do not apply to the contract being reported. Included in this category are items for commercial delivery or delivery to the other DoD Components or programs (e.g., Military Assistance Program) on separate contracts. For Column A4, enter the number of concurrent units in each lot that applies to that FY buy. In a production situation when the relevant costs cannot be isolated, use the unit

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average costs for all units in the lot, regardless of whether they are delivered under the contract being reported or are concurrent units.

When reporting on a unit, enter the cumulative number of each unit completed during the period in Line 2. Unless otherwise specified, cumulative units are to be total units of a given model the reporting contractor has completed since the inception of a program/model, regardless of the number of contracts under which the model has been procured.

Where unit- or lot-accounting systems are not available, equivalent units may be used as the basis for reporting in Line 2. This method may be followed if, in the judgment of the procuring contracting officer, workstation standards are of such quality that standard equivalent units may be reasonably accurate and provide a consistent measure of acceptable work. If you use this equivalent units method, lots shall include the standard equivalent units of production for time periods no greater than one month. Include explanations in the "Remarks" section (item 36).

- h. Characteristics. Lines 5 through 7. The contractor reports the specific characteristics (e.g., weight, range, and speed) based on the approved CCDR Plan. The CWIPT is responsible for identifying the characteristics proposed for reporting in the CCDR Plan that is forwarded to the CAIG for approval. Airframe weight is a mandatory requirement for aircraft contracts. In Columns A, B, and C, enter the unit or average lot characteristics for units produced under the contract. Distinguish "make weight" between prime contractors and subcontractors, if applicable. If additional space is required, use the "Remarks" section (item 36). See the special instructions on the Airframe reporting element (part 4 of these preparation instructions) for instructions on entering Airframe weight on Line 5.
- i. Prime Contractor. Lines 8 through 16. Enter for each unit or lot the contractor's direct labor hours and dollars per unit (or average per lot) for Quality Control and Manufacturing Labor, Raw Materials and Purchased Parts, and Purchased Equipment as shown below. Complete the reporting requirements using data extracted from existing accounting records. If your records do not provide actual figures, give an estimate and indicate the basis for the estimate in the "Remarks" section (item 36). Also, when reporting hours and costs incurred to date, leave fields blank if none have actually been incurred.
 - (1) Line 8. Direct Quality Control Labor Hours. Enter direct labor hours related to the Quality Control functional category for each unit or lot.
 - (2) Line 9. Direct Manufacturing Labor Hours. Enter direct labor hours related to the Manufacturing functional category for each unit or lot.
 - (3) Line 10. Total Direct Labor Hours. Enter the sum of lines 8 and 9.
 - (4) Line 11. Direct Quality Control Labor Dollars. Enter direct labor dollars per unit (or average per lot) related to the Quality Control functional category.
 - (5) Line 12. Direct Manufacturing Labor Dollars. Enter direct labor dollars per unit (or average per lot) related to the Manufacturing functional category.

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- (6) Line 13. Total Direct Labor Dollars. Enter the sum of lines 11 and 12.
- (7) Line 14. Raw Material and Purchased Parts. Enter material and purchased parts costs per unit (or average per lot) related to the Manufacturing functional category.
- (8) Line 15. Purchased Equipment. Enter purchased equipment costs per unit (or average per lot).
- (9) Line 16. Total Direct Dollars. Enter the sum of Lines 13, 14, and 15.
- j. Subcontract/Outside Production and Services. Lines 17 through 25. The following table illustrates reporting requirements for subcontractor and outside production and services in Part II of DD Form 1921-1. The total of the individual categories to date and at completion must agree with the estimated cumulative price to date and the total contract price at completion.

Reporting Requirements in Part II of DD Form 1921-1

Line #	Data	Prime Contractor Data	Subcontractor Data	
			Subcontractors Reporting to the DoD	Nonreporting Subcontractors
11	Direct Quality Control Labor Dollars	◆		
12	Direct Manufacturing Labor Dollars	◆		
14	Raw Materials and Purchased Parts	◆		
15	Purchased Equipment	◆		
16	Total Direct Dollars (Prime Contractor)	◆		
18	Direct Manufacturing Labor Hours		<input type="checkbox"/>	❖
20	Direct Quality Control Labor Dollars		<input type="checkbox"/>	❖
21	Direct Manufacturing Labor Dollars		<input type="checkbox"/>	❖
23	Raw Materials and Purchased Parts		<input type="checkbox"/>	❖
24	Purchased Equipment		<input type="checkbox"/>	❖
25	Total Direct Dollars (Subcontractor/Outside Production and Services)		◆*	◆

◆ Actual data included in report.

◆*Actual data included in "Remarks" section of report (item 36).

❖ Estimated data included in report.

☐ Data available to DoD analysts only.

Outside Production and Services is a special category of costs on subcontracts for the Airframe reporting element. See the special instructions on Airframe reporting element (in part 5 of these preparation instructions).

- (1) Line 17. Direct Quality Control Labor Hours. Enter direct labor hours related to the Quality Control functional category for each unit or lot.
- (2) Line 18. Direct Manufacturing Labor Hours. Enter direct labor hours related to the Manufacturing functional category for each unit or lot.
- (3) Line 19. Total Direct Labor Hours. Enter the sum of lines 17 and 18.
- (4) Line 20. Direct Quality Control Labor Dollars. Enter direct labor dollars per unit (or average per lot) related to the Quality Control functional category.
- (5) Line 21. Direct Manufacturing Labor Dollars. Enter direct labor dollars per unit (or average per lot) related to the Manufacturing functional category.

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- (6) Line 22. Total Direct Labor Dollars. Enter the sum of lines 20 and 21.
- (7) Line 23. Raw Materials and Purchased Parts. Enter material and purchased parts costs per unit (or average per lot) related to the Manufacturing functional category.
- (8) Line 24. Purchased Equipment. Enter purchased equipment costs per unit (or average per lot).
- (9) Line 25. Total Direct Dollars. Enter the sum of Lines 22, 23, and 24.
- k. Total per Unit/Lot. Lines 26 through 35.
 - (1) Line 26. Direct Quality Control Labor Hours. Enter the sum of lines 8 and 17.
 - (2) Line 27. Direct Manufacturing Labor Hours. Enter the sum of lines 9 and 18.
 - (3) Line 28. Total Direct Labor Hours. Enter the sum of lines 10 and 19.
 - (4) Line 29. Direct Quality Control Labor Dollars. Enter the sum of lines 11 and 20.
 - (5) Line 30. Direct Manufacturing Labor Dollars. Enter the sum of lines 12 and 21.
 - (6) Line 31. Total Direct Labor Dollars. Enter the sum of lines 13 and 22.
 - (7) Line 32. Raw Materials and Purchased Parts. Enter the sum of lines 14 and 23.
 - (8) Line 33 Purchased Equipment. Enter the sum of lines 15 and 24.
 - (9) Line 34. Total Direct Dollars. Enter the sum of lines 31, 32, and 33.
 - (10) Line 35. % Subcontract or Outside Production and Services. For subcontracted work, enter the percentage of subcontracted cost to total cost per unit, excluding the Airframe reporting element. For outside production and services involving the Airframe reporting element, enter the percentage of outside production and service hours to total hours per unit.
- l. Item 36. Remarks. Note any relevant information that could be used in the interpretation of the data provided via this report.
- m. Items 37a through g. Point of Contact (POC) Information. Enter the relevant information about the POC as follows: Item 37a, last name, first name, and middle initial; Item 37b, department name; Item 37c, telephone number, including area code; Item 37d, e-mail address; Item 37e, fax number, including area code; Item 37f, signature, if not submitting the form electronically; and Item 37g, date signed, if not submitting the form electronically.
- 4. *Special Instructions for the Airframe Reporting Element.* The purpose of these instructions is to achieve comparability of airframe costs, both aircraft and missiles, among contractors who prepare DD form 1921-1, "Functional Cost-Hour and Progress Curve Report." These instructions apply to all ACAT programs that report airframe costs. The Airframe reporting element is used to describe the collection of

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certain structural assemblies, equipment, and functional costs as defined in MIL-HDBK-881 and expanded upon here.

- a. Categories of Cost. For cost consistency purposes, airframe costs are divided into Airframe Manufactured Equipment and Airframe Purchased Equipment. The primary distinction between these categories lies in where the airframe components are typically made. Components normally fabricated and assembled by airframe plants are considered Airframe Manufactured Equipment, and components normally procured from non-airframe plants are identified as Airframe Purchased Equipment. A detailed description of each follows.

- (1) Airframe Manufactured Equipment. This category of airframe costs includes labor (Engineering, Tooling, Quality Control, Manufacturing), tools, test equipment, raw materials, and purchased parts required to design, fabricate, and assemble the airframe plus the installation and checkout of all the air vehicle equipment. This category also includes installation parts, wiring, tubing, and so on, for installing all equipment (known as Group A equipment), all actuating hydraulic cylinders, primary landing gear components such as struts, trunnions, shock absorbers, axles and launch bars (brakes, wheels, tires, hydraulic lines, and actuators should be included in Purchased Equipment), radomes, canopies, ducts, seats (except ejection mechanism) for passenger and crew, and food preparation equipment such as galleys, stoves, refrigeration units, and fixed external tanks.

Report all Airframe Manufactured Equipment items on DD Form 1921-1 using the functional categories of Engineering, Tooling, Manufacturing, and Quality Control in Part I, Functional Cost-Hour Report, within either the Reporting Contractor or Subcontract or Subcontract or Outside Production and Services sections. Report Airframe Manufactured Equipment items using the functional categories of Quality Control and Manufacturing in Part II, Progress Curve Report. If any major portion of Airframe Manufactured Equipment is subcontracted, report it under the Subcontract or Outside Production and Services section at the same level of indenture as the prime manufacturer's costs and hours.

While make-or-buy decisions often change throughout the performance of a contract, always use the appropriate functional categories to show components identified as Airframe Manufactured Equipment, whether the contractor makes or buys the items.

- (2) Airframe Purchased Equipment. This category consists of components normally procured from non-airframe plants, including landing gear (wheels, brakes, tires, floats, skids, and skis), environmental control equipment, air conditioning equipment, multipurpose hydraulic and pneumatic pumps, power conversion equipment, instrumentation/navigation equipment, fire detection/extinguishing equipment, flight control instrumentation, heat exchangers, electrical actuators, compressors, pressure control equipment, pressure storage vessels, multipurpose power supplies, guns/gun turrets, starters, propellers, cameras, and trapped fuel.

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While make-or-buy decisions often change throughout the performance of a contract, always show components identified as Airframe Purchased Equipment under either the Reporting Contractor section or the Subcontract or Outside Production and Services section, regardless of whether the particular contractor makes or buys the items.

Report the price paid to vendors for purchased equipment. If the prime contractor makes the equipment in house, the cost should still be reported in the Airframe Purchased Equipment category.

- b. Subcontracts and Outside Production and Services. Prime contractors shall fill out the appropriate data items in Lines 17 through 25 in Part II for subcontractors not reporting separately. Estimate each line item. Distribute all subcontracts for Airframe by function in Outside Production and Services, either among all categories or as purchased equipment.

The following additional guidelines apply for the Airframe reporting element within ACAT I, II, and III program contracts. All subcontractors for items or services normally produced or performed in airframe plants are to be distributed as appropriate among all functional categories of cost. Include as purchases equipment all subcontracts for items defined as purchased equipment for reporting element Airframe.

- c. Relationship of Airframe and Selected WBS Elements. The following paragraphs clarify the cost relationships between the airframe and the WBS elements of Systems Test and Evaluation, Systems Engineering, and Data.
- (1) Systems Test and Evaluation. Report all tests for the airframe or interfaces between the airframe and installed mission-oriented equipment as airframe recurring costs if the tests will continue in production. All development tests performed by the airframe manufacturer for the airframe and its interfaces with the avionics equipment should fall within the specific test program called out under Systems Test and Evaluation (e.g., static, fatigue, flight tests, etc.) or Other Systems Test and Evaluation. Include instrumentation for the engineering and manufacturing development test program in Flight Test under System Test and Evaluation.
 - (2) Systems Engineering. Systems Engineering should be limited to engineering for the interfaces of the total weapon system with the external environment (e.g., support equipment, test facilities, etc.). Include engineering of all internal interfaces such as avionics to airframe, engines to airframe in Airframe as nonrecurring. Also include all tradeoffs, design, and so on, for the air vehicle in Airframe as nonrecurring.
 - (3) Data. Include in the Data category only costs that will not be incurred if the data are eliminated from DD Form 1423, "Contract Data Requirements List."
- d. Airframe Weight Reporting. Enter Airframe unit weight (AUW) in Line 5 of Part II, Progress Curve Report. AUW, as shown in the Defense Contractors' Planning Reports and Aeronautical Manufacturers' Reports, was developed to isolate the portion of the empty weight normally produced in an aircraft manufacturer's

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facility. In order to use aircraft weight statements in conjunction with CCDRs, the portions of cost not associated with the AUW must be discretely identifiable. This information can be used to develop meaningful cost and weight relationships only when the equipment included in the AUW is directly related to the airframe manufacturer's cost.

AUW is the empty weight minus the weight of specific items not included in AUW, regardless of their method of acquisition. Empty weight is the combined weight of the airframe's manufactured structure, purchased equipment, propulsion, and avionics.

For airplanes, empty weight is configured in the airplane detail specification. The following table shows the items not included in AUW (items 6 through 15 and 17 through 21) for airplanes. If more than one configuration exists (as may occur in cargo/personnel transports due to cargo configuration versus personnel seat arrangements), two different empty weights may result. In that case, furnish data for both configurations.

Items in Airplane Empty Weight and AUW

	Item	Empty Weight	Airframe Unit Weight
1	Fuselage	X	X
2	Wing	X	X
3	Empennage	X	X
4	Primary Landing Gear	X	X
5	Nacelle	X	X
6	Propellers	X	
7	Engines (Main & Auxiliary)	X	
8	Rubber or Nylon Fuel Cells	X	
9	Starters (Main & Auxiliary)	X	
10	Batteries & Electrical Power Supply	X	
11	Auxiliary Power Plant Unit	X	
12	Instruments	X	
13	Air Conditioning Unit	X	
14	Anti-Icing	X	
15	Avionics Hardware (Group B)	X	
16	Avionics Install (Group A)	X	X
17	Camera & Optical Viewfinders	X	
18	Turrets & Power Operated Mounts	X	
19	Wheels	X	
20	Brakes	X	
21	Tires & Tubes	X	

For missiles and space launch vehicles, empty weight is configured in the missile and space launch vehicles detail specification. The following table shows the items not included in AUW (items 4, 6 through 8, 10, and 12) for missiles and space launch vehicles.

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	Item	Empty Weight	Airframe Unit Weight
1	Aerodynamic Surface	X	X
2	Body	X	X
3	Takeoff and Recovery	X	X
4	Propulsion	X	
5	Power Generator	X	X
6	Orientation	X	
7	Guidance	X	
8	Electronics	X	
9	Environmental Protection	X	X
10	Armament	X	
11	Separation System	X	X
12	Destruct System	X	
13	Emergency Equipment	X	X
14	Visual Identification	X	X

- e. Outside Production and Services. For the Airframe reporting element, Outside Production and Services is a special category of subcontracts the prime contractor must fill out for all subcontracts not reporting separately to Department of Defense. Distribute all subcontracts for Airframe by function as Outside Production and Services, either among all categories or as purchased equipment. The following guidelines apply (even when make-or-buy decisions change during contract execution): all subcontracts for items or services normally produced or performed in airframe plants must be distributed as appropriate among all functional categories of cost whether the particular contractor makes or buys the items; all subcontracts for items that fall within the definition of Purchased Equipment (described by the special instructions for reporting Airframe in Appendix 1) must be included as purchased equipment whether the particular contractors make or buy the items; final entries shall be subcontractor's G&A and profit or fee.

DI-FNCL-81566A**Definitions:**1. *Functions*

- a. Manufacturing. The Manufacturing functional category includes the effort and costs expended in the fabrication, assembly, and functional testing of a product or end item. It involves all the processes necessary to convert a raw material into finished items. Note that test activities that routinely continue during production should be recorded as recurring.
- b. Quality Control. The Quality Control functional category includes activities that check, physically inspect, measure, and test the product. Quality control efforts typically focus on manufacturing, shops, receiving and shipping, and records that are necessary to assure that hardware, end items, parts, components, processes, and tests are being fabricated, assembled, and tested in accordance with engineering drawings and specifications.

2. *Performing Contractor*

- a. Contractor. The contractor is the party performing the task or service or providing the equipment, hardware, facility, or end item specified in a contract for delivery to a customer or buyer, generally the Department of Defense.
- b. Subcontract. A subcontract is any agreement, purchase order, or instrument other than a prime contract calling for work or for the material required for the performance of one or more prime contracts. It usually covers procurement of major components or subsystems that require the subcontractor to do extensive design, development, engineering, and testing to meet a prime contractor's procurement specifications. A company that has a subcontract without CCDR reporting requirements with a company whose prime contract contains CCDR reporting requirements is referred to as a nonreporting subcontractor.

3. *Cost Categories*

- a. Direct Labor Dollars (All Functions). Direct labor dollars are those dollars that can be specifically and consistently identified or assigned to a particular cost objective (e.g., work order).
- b. Direct Labor Hours (All Functions). Direct labor hours are those hours that can be specifically and consistently identified or assigned to a particular cost objective (e.g., a work order).
- c. Purchased Equipment. Manufactured and assembled items the contractor procures from outside sources that are required for installation in the reporting element. Such equipment normally costs over \$1,000 per unit and exhibits a wide range of complexity. Examples of purchased equipment for large weapon systems are multipurpose hydraulic and pneumatic pumps, motors, generators, air conditioning equipment, batteries, landing gear, instruments, pedestals, and so on. Where the reporting contractor specifically controls the design of such equipment for the unique requirements of the WBS element, purchased equipment is subcontracted and reported. Subcontracts for items falling within the definition of

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Purchased Equipment must be included as purchased equipment whether the particular contractor makes or buys the items.

- d. Raw Materials and Purchased Parts. Raw Materials and Purchased Parts within the Manufacturing functional category include the costs of raw and semi-fabricated material plus purchased parts used in the manufacture of the specified reporting element. The purchased parts are essentially off-the-shelf items that are widely used in industry and supplied by a specialized manufacturer who has the proprietary right to the product. The following are examples of materials and purchased parts: raw materials in typically purchased forms and shapes (sheets, bars, rods, etc.); semi-fabricated materials in typically purchased forms and shapes (wires, cables, fabrics, conduits, tubing, sealing strips, fiberglass, windshield glass, etc.); raw castings and forgings; manufactured proprietary clips, fasteners, hose clamps and assemblies, and seat belts; standard and proprietary valves, cocks, and hydraulic and plumbing fittings and fixtures; and standard electrical fittings (conforming to underwriters and other standard specifications). Purchased parts are distinguished from purchased equipment by cost and complexity.

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