

# Title Blocks

All industrial drawings have certain elements in common. They consist of various lines, views, dimensions, and notes. Other general information is also supplied so that the object may be completely understood. The skilled print reader must learn to interpret and apply the information provided on the drawing.

## TITLE BLOCKS

A *title block* or *title strip* is designed to provide general information about the part, assembly, or the drawing itself. Title blocks are usually located in the lower right-hand corner of the print, Figure 2.1. Title strips extend along the entire lower section of the print, Figure 2.2. The location of each depends on the filing system each company uses.

Most companies select a standard title form for their drawings that is printed on the original drafting sheet, Figure 2.3. This enables the drafter to simply fill in the required information.

The most common information found in the title block or strip includes the following:

- *Company name* identifies the company using or purchasing the drawing.
- *Part name* identifies the part or assembly drawn.
- *Part number* identifies the number of the part for manufacturing or purchasing information.
- *Drawing number* is used for reference when filing the original drawing.
- *Scale* indicates the relationship between the size of the drawing and the actual size of the part. This scale may be a full-size scale of  $1 = 1$ ; half-size scale of  $\frac{1}{2} = 1$  or 6 inches on drawing equals 12 inches on the part; quarter-size scale of  $\frac{1}{4} = 1$  or 3 inches equals 12 inches; etc.

				CUST. _____	
				CITY _____	
				C.O. _____ S.Q. _____	
				QUAN.	DATE
RING DIVISION		DR. JSP	DATE 4/18/95	REFERENCE	
PRODUCTO MACHINE CO. JAMESTOWN, NEW YORK 14701		CK.	DATE		
		VG NO. —			
DWG. 24934-2 REV.		TEMP NO. T -		LATEST CHANGE	REC'D
		AISI - 02 Rc- 60 - 63			

FIGURE 2.1 ■ Sample title block

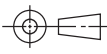
				DATE	DWN BY:	CKD BY:	APPR. BY:
				4/25/95	DLT	JLS	TRC
1	1.250 WAS 1.000	5-2-95	AWT	SCALE:		MATERIAL:	
NO.	CHANGE	DATE	BY	FULL		SAE 2335	
<b>STANDARD TOLERANCES</b> UNLESS OTHERWISE SPECIFIED  FRACTIONAL ± 1/64      2 PLC. DECIMAL ± .01 3 PLC. DECIMAL ± .005      4 PLC. DECIMAL ± .0005 LIMITS ON ANGULAR DIMENSIONS ± 1/2°  FINISH: BREAK ALL SHARP CORNERS				PART NAME:			
				CONTROL BRACKET			
				PART NUMBER:		D-15	
				A01-3002424-005			

FIGURE 2.2 ■ Sample title strip

STANDARD TOLERANCE UNLESS OTHERWISE SPECIFIED				DET.	SHT.	DESCRIPTION	STOCK: FIN. ALLOWED	MAT.	HT. TR.	REQ'D
SPREAD BETWEEN SCREW HOLES MUST BE HELD TO A TOLERANCE OF $\pm .008$ AND SPREAD BETWEEN DOWEL HOLES MUST BE HELD TO A TOLERANCE OF $\pm .0005$				BILL OF MATERIAL ONE						
				ABC MACHINE COMPANY						
				JAMESTOWN, NEW YORK						
				TOOL NAME						
				FOR:						
				OPER:						
				MACHINE:						
				DATE						
				DR.		SCALE	PART No.			
				CH.		No. OF SHEETS				
				APP.		SHEET No.	TOOL No.			

FIGURE 2.3 ■ An example of an industrial title block

- *Tolerance* refers to the amount that a dimension may vary from the print. Standard tolerances that apply to the entire print are given in the title block. Tolerances referring to only one surface are indicated near that surface on the print.
- *Material* indicates the type of material of which the part is to be made.
- *Heat treat information* provides information as to hardness or other heat treat specifications.
- *Date* identifies the date the drawing was made.
- *Drafter* identifies who prepared the original.
- *Checker* identifies who checked the completed drawing.
- *Approval* identifies who approved the design of the object.
- *Change notes or revision* is an area in the block that records for history changes that are made on the drawing. Often revision blocks are located elsewhere on the drawing.

## STANDARD ABBREVIATIONS FOR MATERIALS

A variety of materials are used in industry. The drafter or designer must select materials that will best fit the job application. The ability to do this comes from experience and from understanding material characteristics.

To save time and drawing space, material specifications are usually abbreviated on drawings. Table 2–1 describes the most common abbreviations used. Refer to this table as a guide to material abbreviations used later in the text. Additional tables are found in the Appendix.

TABLE 2-1 STANDARD ABBREVIATIONS FOR MATERIALS

Alloy Steel	AL STL	Hot-Rolled Steel	HRS
Aluminum	AL	Low-Carbon Steel	LCS
Brass	BRS	Magnesium	MAG
Bronze	BRZ	Malleable Iron	MI
Cast Iron	CI	Nickel Steel	NS
Cold-Drawn Steel	CDS	Stainless Steel	SST
Cold-Finished Steel	CFS	Steel	STL
Cold-Rolled Steel	CRS	Tool Steel	TS
High-Carbon Steel	HCS	Tungsten	TU
High-Speed Steel	HSS	Wrought Iron	WI

# PARTS LISTS

A *parts list*, also called a *bill of materials*, is often included with the blueprint, Figure 2.4. This list provides information about all parts required for a complete assembly of individual details. The bill of materials is most frequently found on the print that displays the completed assembly and is known as the *assembly drawing*. The assembly drawing is a pictorial representation of a fully assembled unit that has all parts in their working positions.

Additional drawings called *detail drawings* usually accompany the assembly drawing and are numbered for identification. Each assembly detail found in the bill of materials is also provided with a reference number that is used to locate the detail on the detail drawing. Detail drawings give more complete information about the individual units.

Assembly drawings are covered more completely in a later unit of the text.

# ASSIGNMENT D-1: RADIUS GAUGE

1. What is the name of the part? \_\_\_\_\_
2. What is the part number? \_\_\_\_\_
3. What is the scale of the drawing? \_\_\_\_\_
4. Of what material is the part made? \_\_\_\_\_
5. What finish is required? \_\_\_\_\_
6. What tolerances are allowed on two-place decimal dimensions? \_\_\_\_\_
7. What are the tolerances allowed on three-place decimal dimensions? \_\_\_\_\_
8. What are the tolerances allowed on the fractional dimensions? \_\_\_\_\_
9. What are the tolerances allowed on the angular dimensions? \_\_\_\_\_
10. What is another name for the parts list? \_\_\_\_\_
11. What is the area on the drawing where general information is provided? \_\_\_\_\_
12. What is the number used for filing drawings called? \_\_\_\_\_
13. Have any changes been indicated on the radius gauge? \_\_\_\_\_
14. What are copies of originals called? \_\_\_\_\_
15. What is the date of this drawing? \_\_\_\_\_

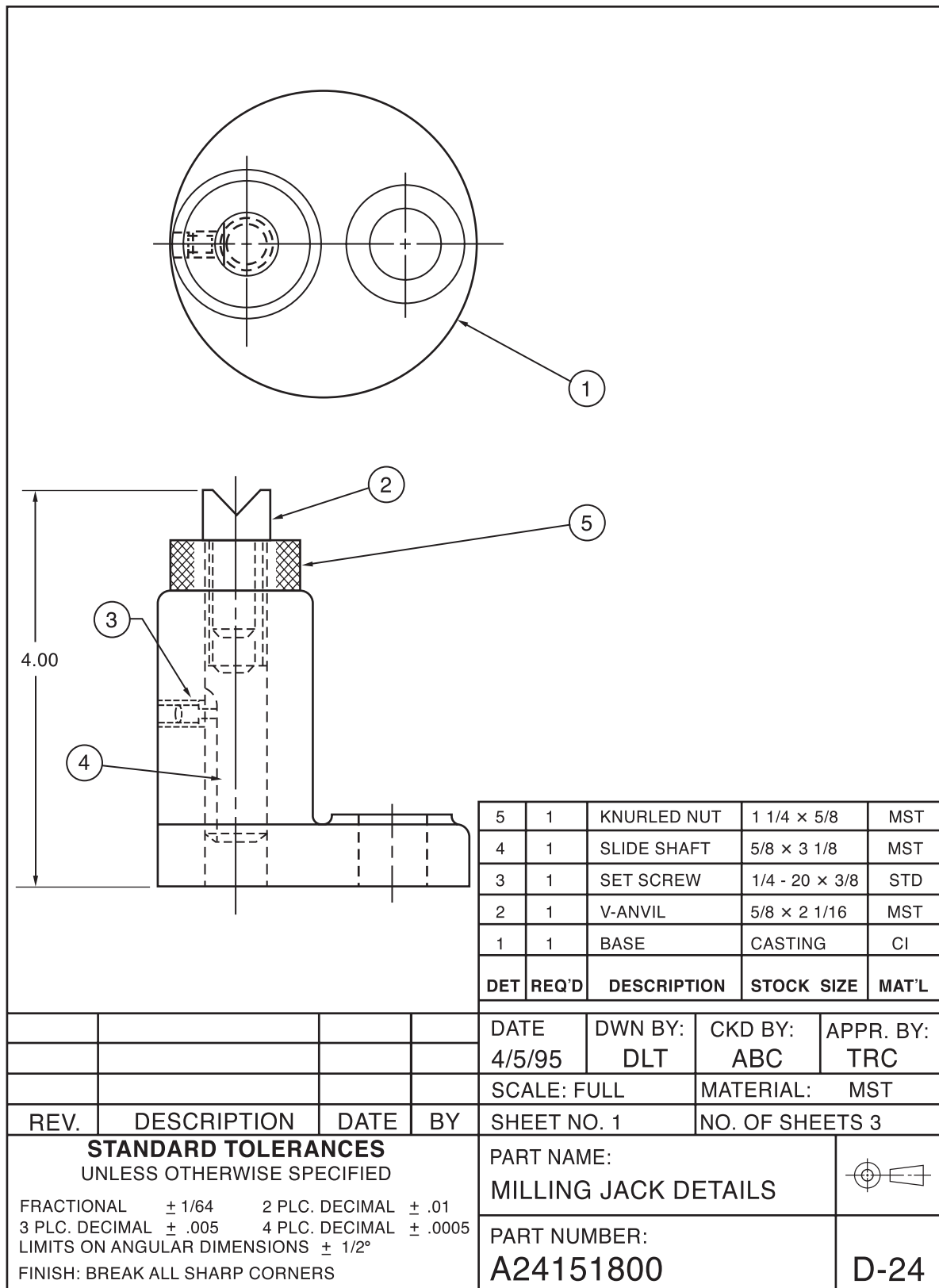


FIGURE 2.4 ■ Example of a parts list on an assembly drawing

NOTE: .12 THICK

				DATE 8/9/95	DWN BY: WDL	CKD BY: LAD	APPR. BY: AFJ
				SCALE: FULL		MATERIAL: CRS	
NO.	CHANGE	DATE	BY	PART NAME: RADIUS GAUGE			
<b>STANDARD TOLERANCES</b> UNLESS OTHERWISE SPECIFIED FRACTIONAL $\pm 1/64$ 2 PLC. DECIMAL $\pm .01$ 3 PLC. DECIMAL $\pm .005$ 4 PLC. DECIMAL $\pm .0005$ LIMITS ON ANGULAR DIMENSIONS $\pm 1/2^\circ$ FINISH: BREAK ALL SHARP CORNERS							