

13

Formal Reports

THE ELEMENTS OF A FORMAL REPORT

FRONT MATERIAL

PAGINATING THE FORMAL REPORT

END MATERIAL

Content same
longer & circulate often

Formal reports facilitate a company's decision-making process. The content of formal reports can be exactly the same as that of informal reports. The decision to present a document as a formal report depends on company policy or on such factors as length and circulation. Often longer reports (ten or more pages) or widely circulated reports use this format. This chapter explains the arrangement of reports and discusses front, body, and end devices.

THE ELEMENTS OF A FORMAL REPORT

To produce a formal report, the writer employs a number of elements that orient readers to the report's topics and organization. These elements occur at the front, in the body, or at the end of the report. Two of the elements — the conclusions and recommendations sections — can be placed either at the beginning or at the end.

Formal reports have two patterns, traditional and administrative (General Motors, ANSI). The traditional pattern leads the reader through the data to the inevitable conclusion (General Motors). Thus, in the traditional pattern, conclusions and recommendations appear at the end of the report. The administrative pattern presents readers with the information they

FRONT MATERIAL

- Traditional
- leads reader through the data to inevitable conclusion
- conclusion & recommendations appear at the end.
- Administrative
- presents readers with info they need early

need to perform their role in the company. Accordingly, conclusions and recommendations appear early in this report.

Traditional

- Title page
- Table of contents
- List of figures
- Summary
- Introduction
- Discussion — Body Sections
- Conclusions
- Recommendations
- Appendices
- References

Administrative

- Title page
- Table of contents
- List of figures
- Summary
- Introduction
- Conclusions
- Recommendations/Rationale
- Discussion — Body Sections
- Appendices
- References

① FRONT MATERIAL

Transmittal Correspondence

Transmittal correspondence is a memo or letter that directs the report to someone. A memo is used to transmit an internal, or in-house, report. An external, or firm-to-firm, report requires a letter. (See Chapter 18 for a sample letter.) In either form, the information remains the same. The correspondence contains

- the title of the report
- a statement of when it was requested
- a very general statement of the report's purpose and scope
- an explanation of problems encountered (for example, some unavailable data)
- acknowledgment of those who were particularly helpful in the assembling of the report

SAMPLE MEMO OF TRANSMITTAL

To: Mr. William O'Neill
Vice President
Industrial Engineering

From: Kevin Harris *Kevin Harris*
Production/Inventory Department

Subject: Feasibility Report on Industrial Scrubbers

Date: December 5, 1995

Memo head
format

I am submitting the attached report, entitled "Recommendation on Industrial Scrubbers for Production and Warehouse Areas," in accordance with your request of November 1, 1995.

The report examines two industrial scrubbers to determine which one would best alleviate the safety problems that have arisen in the production and warehouse areas. The scrubbers are compared in terms of five criteria established at a joint meeting of the Inventory, Production, and Industrial Engineering Departments. The Tennant 527 scrubber is recommended.

This project flowed smoothly from beginning to end. All departments involved cooperated generously with requests for time and data.

Title of report

Cause of writing

Purpose of report

Background for credibility

Praise to co-workers

contents of report!

RECOMMENDATION OF INDUSTRIAL SCRUBBERS FOR PRODUCTION AND WORK AREAS

left hand margin

All caps boldface

By
 Kevin Harris — *writer's name*
 Production/Inventory — *title*
 December 1, 1990 — *date*
 Final Project Report — *type*
 PIFR 06-03R — *report number*

Prepared for:
 Mr. William O'Neill — *recipient*
 Vice President — *title*
 Industrial Engineering

Title all caps,
 first line longer
 than second
 Left margin
 about 2 inches

Author
 Department
 Date
 Type of report
 Report number

Recipient

② Title Page

A well-balanced, attractive title page (see Figure 13.1) makes a good first impression on the reader. Some firms have standard title pages just as they have letterhead stationery for business letters.

Here are some guidelines for writing a title page.

- Name the contents of the report in the title.
- Set the left-hand margin for the title and all elements at about 2 inches.
- Use either all caps or initial caps and lower-case letters; use boldface when appropriate.
- Include the writer's name and title, the date, the addressee, and a report number (if appropriate).

③ Table of Contents

A table of contents lists the sections of the report and the pages on which they start (see Figure 13.2). The table of contents previews the report's organization, depth, and emphasis. Readers with special interests often glance at the table of contents, examine the abstract or summary, and turn to a particular section of the report. Here are some guidelines for writing a table of contents.

- Present the name of each section in the same wording and format as it appears in the text. If a section title is all caps in the text, place it in all caps in the table of contents.

FIGURE 13.1
 A Title Page for a Formal Report

- Do not underline in the table of contents; the lines are so powerful that they overwhelm the words.
- Do not use "page" or "p." before the page numbers.
- Present only two levels of heads.
- Use a leader, a series of dots, to connect words to page numbers.

TABLE OF CONTENTS

SUMMARY	2	First-level heads
INTRODUCTION	3	Dots used for leader
Background	3	Second-level heads
Purpose	3	
Scope	4	
Procedure	4	
CONCLUSIONS	5	Page numbers
RECOMMENDATION	5	indicate only where the section starts
DISCUSSION	6	
Variety of Use	9	
Multi-Shift Use	10	
Cost	12	
Warranty and Service	12	
Special Features	13	

FIGURE 13.2
Table of Contents for a Formal Report

(4) List of Illustrations

The term *illustrations* includes both tables and figures. The list of illustrations gives the number, title, and page of each visual aid in the report. Here are guidelines for preparing a list of illustrations.

- Use the title *List of Illustrations* if it contains both figures and tables; list figures first, then tables.
- If the list contains only figures or only tables, call it *List of Figures* or *List of Tables*.
- List the number, title, and page of each visual aid.
- Place the list on the most convenient page. If possible, put it on the same page as the table of contents.

LIST OF ILLUSTRATIONS

Figure 1. MTTF Chart	10	Figures listed first, then tables
Table 1. Cost Comparison	11	
Table 2. Special Features	14	

(5) Glossary and List of Symbols

Traditionally, reports have included glossaries and lists of symbols. However, such lists tend to be difficult to use. Highly technical terminology and symbols should not appear in the body of a report that is aimed at a general

FRONT MATERIAL

or multiple audience. Place such material in the appendix. When you must use technical terms in the body of the report, define them immediately. Informed readers can simply skip over the definitions. If you need a glossary, follow these guidelines:

- Place each term at the left margin, and start the definition at a tab (2 or 3 spaces) farther to the right. Start all lines of the definition at this tab.
- Alphabetize the terms.

(6) Summary or Abstract

A summary or abstract is a miniature version of the report. (See Chapter 6 for a full discussion of summaries and abstracts.)

In the summary (or executive summary) present the main points and basic details of the entire report. After reading a summary, the reader should know

- the report's purpose and the problem it addresses
- the conclusions
- the major facts on which the conclusions are based
- the recommendations

Follow these guidelines to summarize your formal report:

- Concentrate this information into as few words as possible — one page at most.
- Write the summary after you have written the rest of the report. (If you write it first, you might be tempted to explain background rather than summarizing the contents.)
- Avoid technical terminology (most readers who depend on a summary do not have in-depth technical knowledge).

SUMMARY

This report recommends that the company purchase the Tennant 527 industrial scrubber for the Production and Inventory Departments. Increases in the production of precision metal parts have caused safety problems as a result of the condition of the floors. After two accidents, the departments involved requested that a solution be found. Two scrubbers — the Tennant 527 and the Fujico 200 — are compared in terms of variety of use, multi-shift capabilities, cost, warranty and service, and special features.

Recommendation given first
Background

The Tennant picks up small litter better, has a larger cleaning capacity, and will withstand multi-shift use better. The Fujico costs less — \$11,000, including all special features and training. The Tennant costs \$18,000. Tennant's service center is much more accessible to us. Only Tennant is able to provide a squeegee wand — essential in the opinion of the departments involved.

The Fujico is cheaper, but the Tennant is more flexible to use, is more durable in multi-shift use, has a closer service center, and is able to provide us with the squeegee wand.

(7)

Formal Introduction

A formal introduction orients the reader to the report's organization and contents. A formal introduction includes statements of

- purpose
- scope
- procedure
- problem and background

Purpose, Scope, and Procedure Statements Statements of *purpose*, *scope*, and *procedure* orient readers to the report's overall context.

(A) State the *purpose* in one or two sentences. Follow these guidelines:

- State the purpose clearly. Use one of two forms: "The purpose of this report is to present the results of the investigation" or "This report presents the results of my investigation."
- Use the *present tense*.
- Name the alternatives if necessary. (In the purpose statement below, the author names the problem [to find a scrubber] and the alternatives which he investigated.)

(B) A *scope* statement reveals the topics covered in a report. Follow these guidelines:

- In feasibility and recommendation reports, name the criteria; include statements explaining rank order and source of the criteria.
- In other kinds of reports, identify the *main sections*, or *topics*, of the report.
- Specify the boundaries or limits of your investigation.

(C) The *procedure* statement — also called the *methodology* statement — names the process followed in investigating the topic of the report. This

Basic conclusions and data

Rationale

statement establishes a writer's credibility by showing that he or she took all the proper steps. For some complex projects, a methodology section appears after the introduction and replaces this statement. Follow these guidelines:

- Explain all actions you took: the people you interviewed, the research you performed, the sources you consulted.
- Write this statement in the *past tense*.

Here are the purpose, scope, and procedure statements of the report on industrial scrubbers.

INTRODUCTION

(A) Purpose

The purpose of this report is to present the results of my investigation of two industrial scrubbers, the Tennant 527 and the Fujico 200, and to recommend the purchase of one of them.

Present
Tense

Two-part purpose: to present and to recommend

(B) Scope

At the request of the Production and Inventory Departments, criteria were developed to decide which scrubber to purchase. The chosen scrubber will fulfill the needs of the two departments because it meets most or all of the criteria. The Production, Inventory, and Industrial Departments set the following criteria, in order of importance:

Past
Tense

1. The scrubber chosen should be able to handle a variety of cleaning needs: solvents, oils, small litter, etc.
2. The scrubber should be able to handle multi-shift use.
3. Capital investment should not exceed \$20,000.
4. The scrubber should have at least an 18-month warranty on major parts (engine, transmission).
5. An adequate selection of optional equipment should be available.

Source and rank of criteria

This report discusses each criterion and gives details on how the Fujico 200 and the Tennant 527 meet them.

(C) Procedure

All information for this report was gathered either from the manufacturers or from present users. All specifications and mechanical data were obtained from manufacturers' literature. Information on performance in industry for the Fujico 200

Methodology

methods

criteria / feasibility or recommendation

was provided by Fujico Inc. Information about the Tennant 527's performance in industry was provided by the U.S. Air Force, a present user of the 527.



Brief Problem and Background Statements You must explain the problem. Your goal is to help the readers understand — and agree with — your solution because they view the problem as you do. You also may need to provide background, especially for secondary or distant readers. Explain the origin of the problem, who initiated action on the problem, and why the writer was chosen. Follow these guidelines:

- Give basic facts about the problem.
- Specify the causes or origin of the problem.
- Explain the significance of the problem (short-term and long-term) by showing how new facts contradict old ways.
- Name the source of your involvement.

The following brief problem statement succinctly identifies the basic facts (two accidents), the cause (increases in production), the significance (violating safety standards), and the source (departmental recommendations).

PROBLEM

Increases in production at KLH have caused a problem with the safety conditions of the floors in the production and warehouse area. Recently two accidents occurred in one week in these areas. Both were caused by the condition of the floors, which might be violating OSHA standards. Both departments recommended that an industrial scrubber be purchased to solve the problem.

Optional Excerpted content of report

Lengthy Problem and Background Statements You can explain both the problem and its context in a longer statement called either *Problem* or *Background*. A *background statement* provides context for the problem and the report. In it you can often combine background and problem into one statement. To write an effective background statement, follow these guidelines:

- Explain the general problem.
- Explain what has gone wrong.
- Give exact facts.
- Indicate the significance of the problem.

Background
(cause)
Basic fact
Cause
Significance
Source of impetus
to solve problem

FRONT MATERIAL

- Specify who is involved and in what capacity.
- Tell why you received the assignment.

BACKGROUND

KLH Inc. has been extensively involved with the production of precision metal parts, both small and large. As production has gone up, the production and warehouse floors have become too soiled for maintenance to keep up with the cleaning, causing a safety problem. In one recent week, two accidents on the job were caused by the condition of the floors. Both the Production and Inventory Departments requested that the Industrial Engineering Department investigate and solve the problem.

IE decided that a large industrial scrubber should be purchased to clean the production and warehouse floors. As the industrial engineer who works in both the production and inventory areas, I was asked to recommend which of two scrubbers should be purchased. Investigation narrowed the choice of scrubbers to either a Tennant 527 or a Fujico 200.

General problem

Data on what is wrong

Who is involved and in what capacity

Why the author received the assignment



Conclusions and Recommendations/Rationale

Writers may place these two sections at the beginning of the report or at the end. Choose the beginning if you want to give readers the main points first and if you want to give them a perspective from which to read the data in the report. Choose the end if you want to emphasize the logical flow of the report, leading up to the conclusion. In many formal reports, you will only present conclusions because you will not make a recommendation.

Conclusions The conclusions section emphasizes the report's most significant data and ideas. You must base all conclusions on material presented in the body. Follow these guidelines:

- Relate each conclusion to specific data.
- Use concise, numbered conclusions.
- Keep commentary brief.
- Add inclusive page numbers to indicate where to find the discussion of the conclusions.

CONCLUSIONS

This investigation has led to the following conclusions. (The page numbers in parentheses indicate where supporting discussion may be found.)

1. The Tennant 527 is the more versatile in handling a variety of detergents for the cleaning of oils, solvents, and cooling fluids. The Tennant is also capable of handling small litter, glass, and metal chips (6–7).
2. The Tennant is more capable of handling multi-shift use. Investigation of charted maintenance history shows that the Tennant will operate in more hostile environments for a longer time between interruptions for maintenance (8–9).
3. The Fujico 200 costs \$11,000, including special features and training. The Tennant costs \$18,000, including special features and training (10–11).
4. The warranties available for the Tennant and the Fujico are comparable. The service available for the Tennant is superior because the Tennant service center is more accessible to KLH (12).
5. The Tennant is able to supply all the special features that KLH desires. The Fujico cannot supply the essential squeegee wand attachment (13–14).



Recommendations/Rationale If the conclusions are clear, the main recommendation is obvious. The main recommendation usually fulfills the purpose of the report, but do not hesitate to make further recommendations. Not all formal reports make a recommendation.



In the rationale, explain your recommendation by showing how the "mix" of the criteria supports your conclusions. In this case, the Tennant "lost" on one major criterion — cost. The sentence that follows the recommendation shows how the results of the other four criteria offset that important failing. Follow these guidelines:

- Number each recommendation.
- Make the solution to the problem the first recommendation.
- If the rationale section is brief, add it to the appropriate recommendation. If it is long, make it a separate section.

RECOMMENDATIONS

1. The Tennant 527 Industrial Scrubber should be purchased. Although the Fujico is \$7000 cheaper, the Tennant is superior in its ability to clean more kinds of debris, in its reliability over a number of years, in the closeness of its service center, and in its ability to supply the essential squeegee wand.
2. All the essential features should be purchased, as outlined in the Special Features section of this report.

Conclusions presented in same order as in the text.

Solution to the basic problem
Rationale explains reason for not following rank order of criteria

3. A training session should be contracted for and scheduled at the earliest possible date.

FORMATS

PAGINATING THE FORMAL REPORT

Assign a number to each page in the report, regardless of whether the number actually appears on the page. There are many page numbering systems. The key is to be consistent within your own report. Follow these guidelines:

- Place the numbers in the upper right-hand corner or bottom middle of the page, with no punctuation.
- Use headers and footers (phrases in the top and bottom margins) to identify the topic of a page or section.
- Consider the title page as page 1. Do not number the title page. Most word processing systems allow you to delete the number from the title page.
- Give each full-page table or figure a page number.
- In very long reports, use small roman numerals (i, ii, iii) for all the pages before the text of the discussion.
- Paging the appendix is discussed in "End Material" (below).

The end material (references and appendixes) is placed after the body of the report.

References

The list of references (included when the report contains information from other sources) is discussed along with citation methods in Appendix B (pp. 463–476).

Appendix

The appendix contains information of a subordinate, supplementary, or highly technical nature that you do not want to place in the body of the report. Follow these guidelines:

- Refer to each appendix item at the appropriate place in the body of the report.

Other recommendations outline how to implement decision effectively

- Number illustrations in the appendix in the sequence begun in the body of the report.
- For short reports, continue page numbers in sequence from the last page of the body.
- For long reports, use a separate pagination system. Because the appendixes are often identified as Appendix A, Appendix B, and so on, number the pages starting with the appropriate letter: A-1, A-2, B-1, B-2.

SUMMARY

The format for formal reports uses various standard elements to indicate content. Among these elements, *transmittal correspondence* directs the report to the person who requested the project. The *title page* gives the title, author, date, and other pertinent material. The *table of contents* lists first-level and second-level heads, indicating the page on which each section begins. The *list of illustrations* gives the page on which each visual aid is found. The *introduction* contains brief statements on (1) the purpose of the report, (2) its scope or boundaries, (3) the procedure or method of solving the problem, (4) background information, and (5) an explanation of the problem and its significance. The *summary*, usually placed near the beginning, is a miniaturization of the body. The *conclusions* and *recommendations/rationale* sections explain the main results derived in the paper. The first recommendation provides the solution to the problem posed in the paper. A clear pagination system makes the paper easier to grasp. A *reference list* documents any information used from other sources. The *appendix* presents highly technical material.

WORKSHEET FOR PREPARING A FORMAL REPORT

- Determine the audience for this report.
Who is the primary audience and who the secondary? How much does the audience understand about the origins and progress of this project? How will they use this report? Will it be the basis for a decision?
- Plan the visual aids that will convey the basic information of your report.
- Construct those visual aids.
Follow the guidelines in Chapter 8.

MODEL

- Prepare a style sheet for up to four levels of heads and for margins, page numbers, and captions to visual aids.
- Decide whether each new section should start at the top of a new page.
- Create a title page.
- Prepare the table of contents.
How many levels of heads will you include? (Two is normal.) Will you use periods for leaders?
- Prepare the list of illustrations.
Present figures first, then tables.
- Determine the order of statements (purpose, scope, procedure, and so forth) in the introduction.
In particular, where will you place the problem and background statements? In the introduction? In a section in the body?
- Prepare a glossary if you use key terms unfamiliar to the audience.
- List conclusions.
- List recommendations, with most important first.
- Write the rationale to explain how the mix of conclusions supports the recommendations.
- Write the summary.
- Prepare appendixes of technical material.
Use an appendix if the primary audience is nontechnical or if you have extensive tabular or support material.

MODEL

The following model is a complete formal report written by a student. To save space, the last two sections of the Discussion are not included. They have exactly the same structure as the section that is printed here.

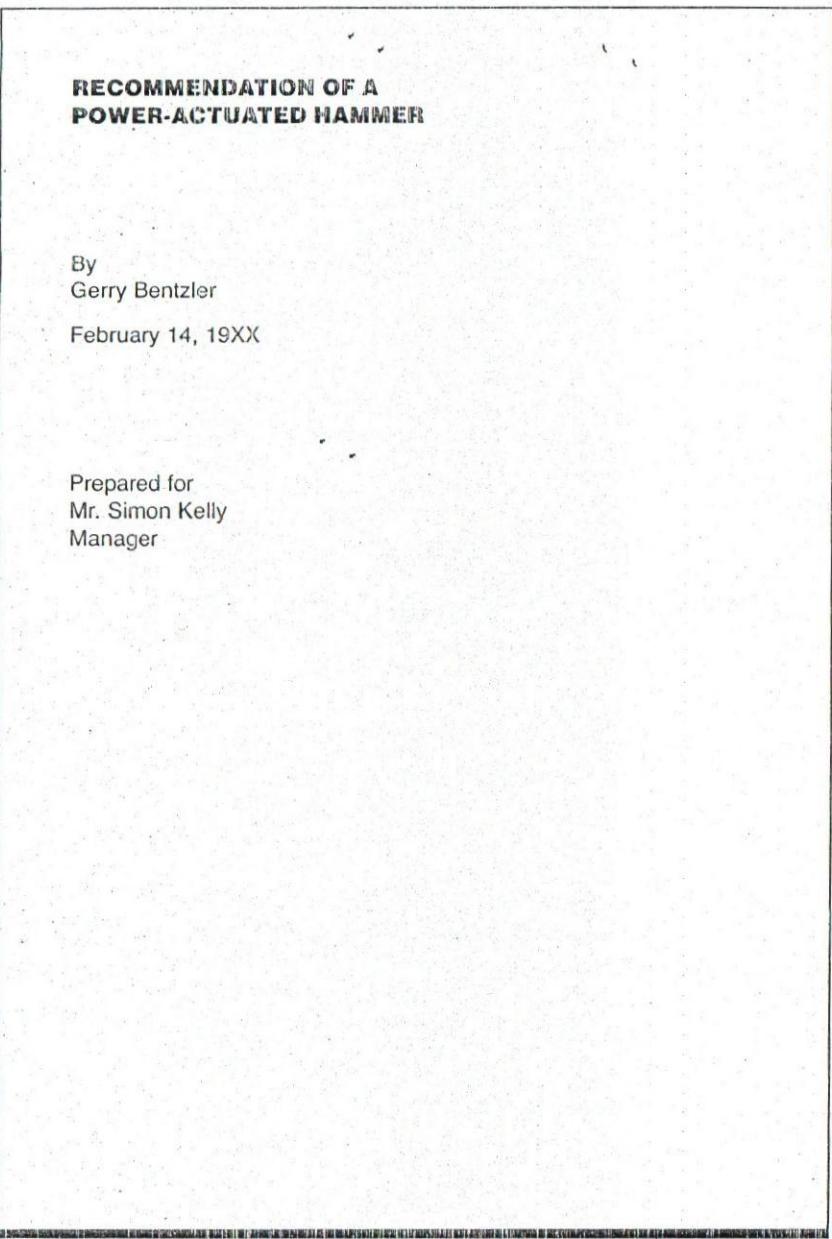


FIGURE 13.3
Formal Report

**RECOMMENDATION OF A
POWER-ACTUATED HAMMER**

By
Gerry Bentzler

February 14, 19XX

Prepared for
Mr. Simon Kelly
Manager

TABLE OF CONTENTS	
SUMMARY	3
INTRODUCTION	3
Background	3
Purpose	3
Scope	3
Method	4
CONCLUSIONS	4
RECOMMENDATION AND RATIONALE	4
DISCUSSION	4
Speed of Repeated Use	4
Cost	7
LIST OF ILLUSTRATIONS	
Figure 1. Reloading Procedures	5
Table 1. Cost Comparison	7

FIGURE 13.3 (continued)

Summary

This report investigates two power-activated hammers, the Hunter DX350 and the Emerson RO6. I researched the hammers because our current method of installing acoustic partition wall systems is too slow.

Construction crews used both tools for four weeks. During that time I witnessed demonstrations, interviewed the workers, and talked to distributors.

I evaluated the hammers in terms of four criteria: speed in repeat use, ease and safety of use, availability of services and supplies, and cost.

The Hunter DX350 meets our needs better in each criterion, particularly safety. I recommend that we purchase 10 of them.

INTRODUCTION

Background

Builders Unlimited specializes in erecting acoustic partition wall systems. These systems are secured in place to existing concrete and steel building members by the use of several fastening devices. The present devices are proving too time-consuming to use. For the frequent installation of large quantities of metal wall plate, hat channel, wood furring, and acoustic "z" strips, we need a fastening device that is strong, holds well in steel and masonry, and requires little time and effort to use. I recommended to management that a tempered steel stud, power-driven or shot into concrete or steel surfaces, be used to secure the wall system in place. The installation time for this fastener is much shorter than the time for our present devices; the change will be a great time saver. To install these tempered steel studs, however, a suitable explosive power-activated tool is required.

As a result of my earlier suggestion, I was asked to survey the tool market and select the tool best suited to the needs of our installation procedures. Two makes of such a tool were selected and purchased for comparison.

Purpose

The purpose of this report is to determine which power-activated tool is more suitable for driving tempered steel studs into concrete and steel building members for various fastening purposes.

Scope

I selected four criteria that reflect the needs of our installation methods. The four criteria, which are of almost equal value, are speed in repeat use; the ease, simplicity, and safety of the tool during use; the availability of maintenance service and related supplies; and cost.

FIGURE 13.3 (continued)

MODEL

Method

After reviewing the market for explosive power-activated tools, I chose two as suitable for our installation situation: the Hunter DX350 and the Emerson Ramset RO6. Two of each tool were purchased, and one of each was given to two of our installation crews. Each crew used both brands of tools and was asked to note the performance of each over a four-week period. At the end of this time, I interviewed all operators about the performance of each tool. I also witnessed demonstrations of each tool by its operator and interviewed distributors and suppliers of the tools and related materials.

CONCLUSIONS

1. In speed of repeat use, the Hunter DX350 tool is superior to the Emerson RO6.
2. The Hunter DX350 has an advantage over the Emerson RO6 in safety characteristics; both tools are easy to use.
3. Hunter service and supply availability are superior.
4. Hunter is slightly cheaper, but the difference is minimal.

RECOMMENDATION AND RATIONALE

On the basis of the conclusions of this study, I recommend the Hunter DX350 power-activated tool for use by our installation crews. The only criterion in which the Emerson rates close to the Hunter is that of easy and safe operation. Both tools are easy to use, but the Hunter has an advantage over the Emerson with respect to safety during reloading procedures.

DISCUSSION

Speed of Repeated Use

The speed of repeated use of such a tool or gun is of great importance because of the large quantities of materials our crews install. A few minutes saved on the installation of each piece of wall plate, for example, can easily add up to a considerable amount of time saved during an entire installation project.

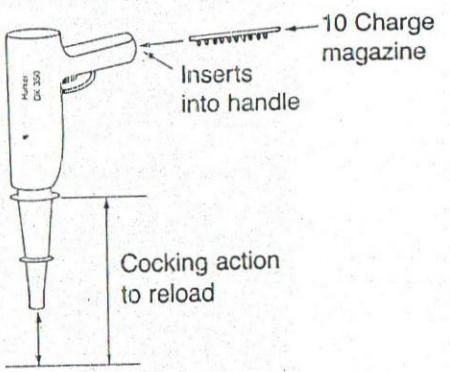
Hunter. The Hunter has a plastic magazine that holds ten charges in the handle of the tool and that allows the tool to be reloaded immediately after firing by cocking the barrel of the gun. It is almost identical in operation to a semiautomatic pistol.

FIGURE 13.3 (continued)

Emerson. The Emerson requires the operator to open the breech of the tool, remove the spent charge by hand, load one charge into it, close the breech, and then fire. (See Figure 1.) During the demonstration I witnessed, the Hunter averaged two to three shots to the Emerson's one; this gives the Hunter a clear advantage when such a tool is used to install a large number of fasteners.

Conclusion. Because of the reloading nature of the gun, the Hunter DX350 is superior to the Emerson model for rapid repeat use.

HUNTER DX350



EMERSON R06

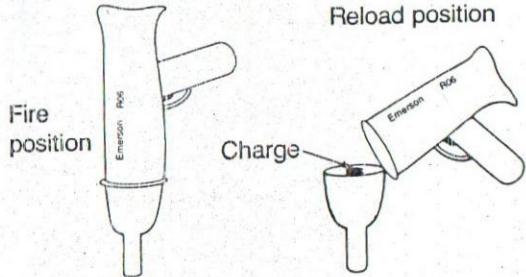


FIGURE 1
Reloading Procedures

FIGURE 13.3 (continued)

Cost

Cost is the purchase price of the hammers, including sales tax. Table 1 represents the discounted price of each if we buy 10 or more. The cost of the studs is the discounted price for purchases of 100 pounds or more.

TABLE 1
Cost Comparison

	Hunter	Emerson
Purchase cost (including tax)	\$31.49	\$33.08
100# studs	\$25.00	\$25.00

Conclusion. The price differential between the two is minimal. It is not a factor in the decision.

FIGURE 13.3 (continued)

Formal Report

Transmittal Correspondence

directs report to someone

Memo
internal report

Letter
External report

Title Page

- Contents.
- left hand margin
- All caps or initial caps & lowercase letters
- bold face if needed.
- Report number (optional) at report
- Sender & Receiver details.

Table of Contents

- name each section
- same sequence
- no underline
- no use of 'page' or 'p.'
- only two-level leads
- leader or a series of dots

List of Illustrations

- (A) List of illustrations; figures & tables.
(B) List of figures
(C) List of Tables.

number, title, page

Summary / Abstract

- Report purpose
- problem
- conclusion
- Major facts
- write after you have written report
- Avoid technical terminology

Intro

- purpose
- scope
- procedure
- problem/background.

Conclusion
at
Recommendation.

All this is front material

* (Exceptional) Background:

discuss problem + context here instead of Intro

End Material

Reference

info from other sources

Appendix

highly Technical info

Patterns

Traditional

leads to conclusion

Administrative

presents with info needed.