

SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

ANNUAL REPORT PURSUANT TO SECTION 15(d) OF THE SECURITIES EXCHANGE
ACT OF 1934

For the fiscal year ended December 31, 1996

OR

TRANSITION REPORT PURSUANT TO SECTION 15(d) OF THE SECURITIES
EXCHANGE ACT OF 1934

For the transition period from _____ to _____

Commission file number 1-475

A. Full title of the plan and the address of the plan, if different from
that of the issuer named below:

A. O. Smith Profit Sharing Retirement Plan

B. Name of issuer of the securities held pursuant to the plan and the
address of its principal executive office:

A. O. Smith Corporation
11270 West Park Place
Milwaukee, WI 53224

REQUIRED INFORMATION

1. Not Applicable.
2. Not Applicable.
3. Not Applicable.
4. The A. O. Smith Profit Sharing Retirement Plan (the "Plan") is subject to the requirements of the Employee Retirement Income Security Act of 1974 ("ERISA"). Attached hereto is a copy of the most recent financial statements and schedules of the Plan prepared in accordance with the financial reporting requirements of ERISA.

Exhibits

23.1 Consent of Independent Auditors

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the trustees (or other persons who administer the Plan) have duly caused this annual report to be signed by the undersigned thereunto duly authorized.

A. O. Smith Profit Sharing
Retirement Plan

Date: July 15, 1997

By: /S/ Duane R. Carlson
Duane R. Carlson
Manager Pension and Savings Plan

CONTENTS

A. O. Smith Profit Sharing Retirement Plan:

Independent Auditors' Report

	Page
Financial statements	
Statement of net assets available for benefits	1
Statement of changes in net assets available for benefits	2
Notes to financial statements	3-11

Supplementary information

A schedule of party-in-interest transactions has not been presented because there were no party-in-interest transactions which are prohibited by ERISA Section 406 and for which there is no statutory or administrative exemption.

INDEPENDENT AUDITORS' REPORT

Benefits Committee
A. O. Smith Profit Sharing
Retirement Plan
Milwaukee, Wisconsin

We have audited the accompanying statements of net assets available for benefits of the A. O. Smith Corporation Profit Sharing Retirement Plan as of December 31, 1996 and 1995, and the related statement of changes in net assets available for benefits for the year ended December 31, 1996. These financial statements are the responsibility of the Plan's management. Our responsibility is to express an opinion on these financial statements based on our audits.

Except as discussed in the following paragraph, we conducted our audits in accordance with generally accepted auditing standards. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

As permitted by 29 CFR 2520.103-8 of the Department of Labor's Rules and Regulations for Reporting and Disclosure under the Employee Retirement Income Security Act of 1974, investment assets held by M&I Trust Company, Milwaukee, Wisconsin, the trustee of the Plan, and transactions in those assets were excluded from the scope of our audit of the Plan's 1995 financial statements, except for comparing the information provided by the trustee, which is summarized in Note 4, with the related information included in the financial statements.

Because of the significance of the information that we did not audit, we are unable to, and do not, express an opinion on the Plan's financial statements as of December 31, 1995. The form and content of the information included in the 1995 financial statements, other than that derived from the information certified by the trustee, have been audited by us and, in our opinion, are presented in compliance with the Department of Labor's Rules and Regulations for Reporting and Disclosure under the Employee Retirement Income Security Act of 1974.

In our opinion, the financial statements, referred to above, of the A. O. Smith Corporation Profit Sharing and Retirement Plan as of December 31, 1996, and for the year then ended present fairly, in all material respects, the financial status of the A. O. Smith Corporation Profit Sharing and Retirement Plan as of December 31, 1996, and the changes in its financial status for the year then ended in conformity with generally accepted accounting principles.

July 14, 1997
Milwaukee, Wisconsin

Reilly, Penner & Benton LLP

A. O. SMITH PROFIT SHARING RETIREMENT PLAN

STATEMENT OF NET ASSETS AVAILABLE FOR BENEFITS

	December 31,	
	1996	1995
Assets:		
Investment in A. O. Smith Master Trust at fair market value (Notes 2 and 3)	\$172,613,605	\$144,663,057
Participant loans at estimated fair market value	3,815,476	3,548,289
	-----	-----
Total	176,429,081	148,211,346
Receivables:		
Due from broker for securities sold	119,773	--
Interest income	123,846	126,587
Company contribution	5,261,788	5,147,600
	-----	-----
Total receivables	5,505,407	5,274,187
	-----	-----
Net assets available for benefits	\$181,934,488	\$153,485,533
	=====	=====

The accompanying notes to financial statements are an integral part of this statement.

A. O. SMITH PROFIT SHARING RETIREMENT PLAN

STATEMENT OF CHANGES IN NET ASSETS AVAILABLE FOR BENEFITS

Years Ended December 31

Additions:	1996	1995
Investment in A. O. Smith Master Trust at fair market value:		
Net investment income	\$ 2,388,593	\$ 2,327,642
Realized gain on investment transactions	16,191,765	10,131,498
Unrealized appreciation on investments	4,085,625	15,127,258
Total	----- 22,665,983	----- 27,586,398
Interest income from participant loans at estimated fair market value	291,769	239,510
Total investment income	----- 22,957,752	----- 27,825,908
Contributions:		
Company	5,261,788	5,147,600
Participants	8,682,069	7,244,964
Total contributions	----- 13,943,857	----- 12,392,564
Total additions	----- 36,901,609	----- 40,218,472
Decreases:		
Benefit and withdrawal payments	9,007,833	7,904,107
Net increase before transfers	----- 27,893,776	----- 32,314,365
Transfers from (to) other plans	555,179	(98,289)
Increase in net assets available for benefits	----- 28,448,955	----- 32,216,076
Net assets available for benefits:		
Beginning of the year	153,485,533	121,269,457
End of the year	----- \$181,934,488 =====	----- \$153,485,533 =====

The accompanying notes to financial statements are an integral part of this statement.

A. O. SMITH PROFIT SHARING RETIREMENT PLAN
NOTES TO FINANCIAL STATEMENTS

December 31, 1996 and 1995

1. Basis of presentation and significant accounting policies

General - The A. O. Smith Profit Sharing Retirement Plan was established in 1956 to cover salaried or commissioned nonunion employees of the A. O. Smith Corporation, its subsidiaries and affiliates. Employees will be eligible to participate in the Plan if they are scheduled to complete 1,000 hours of service in a Plan year. Employees elect to participate by designating a portion of their salary to be contributed to an account maintained on behalf of the participant.

Investment valuation - All of the Plan's investments are invested in the A. O. Smith Corporation Profit Sharing Retirement Master Trust (Master Trust) (Note 2) which are valued at market price. The financial statements of the Master Trust are presented separately and are incorporated by reference to the financial statements of this Plan. The investments in the A. O. Smith Income Fund and the A. O. Smith Stable Asset Income Fund are valued at the redemption price established by the trustee. Participant loans receivable are valued at cost which approximates fair market value.

Contributions and benefit and withdrawal payments - The Plan is a defined contribution plan to which participants may make contributions of not less than 1% or more than 16% of their compensation. The Plan provides for all participant contributions to be made with tax-deferred dollars under Section 401(k) of the Internal Revenue Code. These contributions are excluded from the participant's current wages for federal income tax purposes. The Internal Revenue Code has set a maximum of \$9,500 for tax-deferred contributions that may be excluded for any individual participant in 1996. No federal income tax is paid on the tax-deferred contributions and growth thereon until the participant withdraws them from the Plan.

Contributions from participants are recorded when A. O. Smith Corporation (the Company) makes payroll deductions from Plan participants. Contributions from the Company are accrued in the period in which they become obligations of the Company in accordance with terms of the Plan.

For each \$1.00 of 401(k) Tax-Deferred contributions, up to 6% of a participant's salary, the Company guarantees a contribution of \$.35. Additional Company contributions in excess of \$.35 will be based on the Company's return on net worth. The additional Company matching contribution amount is \$.05 times the return on net worth between 5% and 10%, plus \$.10 times the return on net worth in excess of 10% up to a maximum of 18%. Therefore, the guaranteed and additional contributions can combine for a maximum Company contribution of \$1.40 of participant contributions up to 6% of salary.

Vesting - Participants of the Plan are 0% vested in employer contributions with less than two years of participation, 40% vested after two years, 60% after three years, 80% after four years and fully vested after five years of participation. Participants are always fully vested in their own contributions.

A separate account is maintained for each participant. The separate account balances are adjusted periodically as follows:

- a. Semi-monthly for participant's contributions.
- b. Annually for Company contributions.
- c. Daily for a proportionate share of increases and decreases in the market value of Plan assets.
- d. The accounts are periodically adjusted for forfeitures which are used to pay plan expenses by an equivalent amount.
- e. Daily for benefit and withdrawal payments which consist of the following:
 - i. Upon retirement, death, disability, or termination of employment resulting from permanent reduction of personnel, an employee may withdraw any amount or the entire account balance for any reason. One withdrawal of this type is

allowed per calendar year, up to age 70 1/2. At 70 1/2 an account distribution election must be made.

- ii. Upon termination of employment for other reasons, the balance in the separate account (reduced for nonvested company contributions and growth thereon based on years of service) may be paid in a lump sum.
- iii. An active participant age 59 1/2 or older may withdraw the balance in the separate account. The balance in the separate account is paid to the participant in a lump sum.
- iv. A participant may withdraw all or any portion of the principal balance attributable to after-tax contributions and earnings and rollover contributions and earnings. All or any portion of the balance attributable to Company contributions and earnings may also be withdrawn if the participant has five full years of employment with the Company.
- v. A participant may withdraw at any time any amount attributable to participant contributions and growth to purchase, prevent eviction from or foreclosure on, a principal residence or to pay certain expenses (namely post-secondary education and unreimbursed medical expenses). Withdrawals may not include earnings on 401(k) contributions posted to a participant's account after 1988.
- vi. No lump sum cash distribution in excess of \$3,500 will be made without the consent of the participant.

Participants should refer to the Plan document for a more complete description of the Plan's provisions.

Realized gains and losses - The realized gains and losses recognized on the financial statements are calculated by comparing the sales proceeds to the original cost of the investment as prescribed by generally accepted accounting principals. The realized gains and losses recognized in the Form 5500 (annual federal filing) are recalculated by comparing the sales proceeds to the value of the investment at the beginning of the plan year. If the investment is purchased in the same year as the sale, the gain or loss is calculated by comparing the sales proceeds to the purchase price.

2. A. O. Smith Corporation Profit Sharing Retirement Master Trust

The Plan assets are held in the A. O. Smith Corporation Profit Sharing Retirement Master Trust at the Marshall and Ilsley Trust Company. The Plan offers nine investment vehicles in which participants may invest their account balances. The amount of Master Trust assets, income and change in value which is allocated to the Plan is determined by the ratio of participant account balances in the Plan to the total participant account balances of all participating plans. The defined contribution plans participating in the Master Trust are the A. O. Smith Profit Sharing Retirement Plan, the A. O. Smith Employee Savings Plan, the A. O. Smith Employee 401(k) Savings Plan, the A. O. Smith Saving and Investment Plan and the A. O. Smith Savings and Security Plan.

Significant information related to the investments in the Master Trust as of and for the year ended December 31, 1996 is as follows:

a. Registered Investment Company Mutual Funds:

	December 31, 1996 Balance	1996 Income	1996 Change in Value
American EuroPacific Growth Fund	\$ 7,100,668	\$ 916,381	\$ 4,624,948
Portico Growth and Income Fund	30,048,024	5,460,381	11,419,672
Fidelity Aggressive Equity Portfolio	96,212,023	18,300,687	16,257,499
Vanguard Institutional Index Trust Fund	21,674,023	4,139,955	4,471,527
Vanguard Fixed Income Short-term Corp. Fund	7,440,943	352,530	(834,561)
American Balanced Fund	16,146,773	1,848,768	1,454,649
Sub-total	178,622,454	31,018,702	37,393,734

b. Common/Collective Trusts:

A. O. Smith Stock Fund	1,049,076	54,462	1,049,076
A. O. Smith Stable Asset Income Fund	50,029,586	2,611,898	5,486,903
	-----	-----	-----
Sub-total	51,078,662	2,666,360	6,535,979
	-----	-----	-----

c. Short-term, High quality liquid securities:

A. O. Smith Income Fund	62,301,690	3,295,061	(157,519)
	-----	-----	-----
Total	\$292,002,806	\$ 36,980,123	\$43,772,194
	=====	=====	=====

Significant information related to the investments in the Master Trust as of and for the year ended December 31, 1995 is as follows:

a. Registered Investment Company Mutual Funds:

	December 31, 1995 Balance	1995 Income	1995 Change in Value
American EuroPacific Growth Fund	\$ 2,475,721	\$ 317,793	\$ 2,475,721
Portico Growth and Income Fund	18,628,351	4,386,363	7,937,150
Fidelity Aggressive Equity Portfolio	79,954,524	25,193,614	31,270,200
Vanguard Institutional Index Trust Fund	17,202,495	3,990,634	9,593,710
Vanguard Fixed Income Short- term Corp. Fund	8,275,505	877,389	1,626,901
American Balanced Fund	14,692,124	2,533,453	6,970,196
	-----	-----	-----
Sub-total	141,228,720	37,299,246	59,873,878
	-----	-----	-----

b. Common/Collective Trusts:

A. O. Smith Stable Asset Income Fund	44,542,683	2,861,853	(3,633,702)
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c. Short-term, High quality liquid securities:

A. O. Smith Income Fund	62,459,209	3,797,254	(1,581,077)
	-----	-----	-----
Total	\$248,230,612	\$43,958,353	\$54,659,099
	=====	=====	=====

At December 31, 1996 and 1995 the Plan was allocated 59.114% and 58.278%, respectively, of the Master Trust assets.

3. Investments

Investments held by the Plan at December 31, are as follows:

Investments:	1996		1995	
	Cost	Fair Market Value	Cost	Fair Market Value
A. O. Smith Corporation Profit Sharing Retirement Master Trust:				
American EuroPacific Growth Fund	\$ 4,086,625	\$ 4,335,674	\$ 1,229,332	\$ 1,281,247
A.O. Smith Stock Fund	985,871	1,049,076	--	--
A. O. Smith Income Fund	27,080,989	27,080,989(1)	26,174,241	26,174,241(1)
Portico Growth and				

Income Fund	17,376,824	20,503,275(1)	11,216,735	13,592,574(1)
Fidelity Aggressive Equity Portfolio	39,597,934	59,954,423(1)	32,573,846	50,608,538(1)
Vanguard Institutional Index Trust Fund	9,590,937	12,094,566(1)	7,293,196	8,911,078(1)
Vanguard Fixed Income Short-Term Corp. Fund	4,578,329	4,592,607	4,645,506	4,732,120
American Balanced Fund	9,164,987	9,494,758(1)	7,594,638	8,048,622(1)
A. O. Smith Stable Asset Income Fund	31,164,037	33,508,237(1)	29,034,115	31,314,637(1)
	-----	-----	-----	-----
Total	\$143,626,533	\$172,613,605	\$119,761,609	\$144,663,057
	=====	=====	=====	=====

(1) - Investments representing at least 5% of the net assets available for benefits.

During 1996 and 1995, the Plan's investments appreciated (depreciated) in value by \$4,085,625 and \$15,127,258, respectively, as follows:

	1996	1995
Investments:		
A. O. Smith Corporation Profit Sharing Retirement Master Trust:		
American EuroPacific Growth Fund	\$ 197,135	\$ 51,915
A.O. Smith Stock Fund	63,205	--
A.O. Smith Income Fund	--	--
Portico Growth and Income Fund	750,612	2,080,322
Fidelity Aggressive Equity Portfolio	2,321,797	10,495,489
Vanguard Institutional Index Trust Fund	885,748	1,471,100
Vanguard Fixed Income Short-Term Corp. Fund	(72,336)	220,844
American Balanced Fund	(124,214)	653,459
A. O. Smith Stable Asset Income Fund	63,678	154,129
	-----	-----
Total	\$ 4,085,625	\$15,127,258
	=====	=====

The Plan provides that contributions to the plan will be invested in certain individual programs as directed by each participant. Amounts included in net assets and changes in net assets in the accompanying financial statements by investment programs at December 31, are as follows:

	1996			
	Investment at Fair Market Value	Investment Income	Contributions	Benefits Paid to Participants
American EuroPacific Growth Fund	\$ 4,335,674	\$ 538,426	\$ 290,930	\$ 28,152
A.O. Smith Stock Fund	1,049,076	54,462	575,866	4,893
Vanguard Fixed Income Short-term Corp. Fund	4,592,607	221,195	356,823	404,969
Fidelity Aggressive Equity Portfolio	59,954,423	11,788,511	4,759,650	2,106,926

A. O. Smith Stable Asset Income Fund	33,508,237	1,782,890	1,351,102	2,420,236
Vanguard Institutional Index Trust Fund	12,094,566	2,230,077	1,001,804	471,728
A. O. Smith Income Fund	27,080,989	1,457,976	3,350,083	2,162,579
American Balanced Fund	9,494,758	1,071,662	859,542	380,968
Portico Growth and Income Fund	20,503,275	3,812,553	1,398,057	1,027,382
Total	<u>\$172,613,605</u>	<u>\$22,957,752</u>	<u>\$13,943,857</u>	<u>\$9,007,833</u>

1995

	Investment at Fair Market Value	Investment Income	Contributions	Benefits Paid to Participants
American EuroPacific Growth Fund	\$ 1,281,247	\$ 145,383	\$ 151,486	\$ 5,529
Vanguard Fixed Income Short- term Corp. Fund	4,732,120	486,639	389,453	156,232
Fidelity Aggressive Equity Portfolio	50,608,538	16,739,241	3,933,586	1,453,354
A. O. Smith Stable Asset Income Fund	31,314,637	1,975,779	1,942,057	2,524,803
Vanguard Institutional Index Trust Fund	8,911,078	2,112,976	694,970	143,842
A. O. Smith Income Fund	26,174,241	1,701,063	3,443,933	2,780,799
American Balanced Fund	8,048,622	1,373,941	719,771	426,777
Portico Growth and Income Fund	13,592,574	3,290,886	1,117,308	412,771
Total	<u>\$144,663,057</u>	<u>\$27,825,908</u>	<u>\$12,392,564</u>	<u>\$7,904,107</u>

4. Information certified by trustee

The plan administrator has elected the method of annual reporting compliance permitted by Section 2520-103.8 of the Department of Labor's Rules and Regulations for Reporting and Disclosure under the Employee Retirement Income Security Act of 1974. Accordingly, the Plan's independent public accountants, Reilly, Penner & Benton LLP, did not perform any generally accepted auditing procedures with respect to the Plan's funds on deposit with Marshall and Ilsley Trust Company, Milwaukee, Wisconsin, the Plan's Trustee, or the interest credited to that deposit.

5. Income tax status

The Plan obtained its latest determination letter on April 27, 1995, in which the Internal Revenue Service stated the Plan as then designed, was in compliance with the applicable requirements of the Internal Revenue Code. The Plan has been amended since receiving the determination letter. However, the plan administrator and the Plan's tax counsel believe that the Plan is currently designed and being operated in compliance with the applicable requirements of the Internal Revenue Code. Therefore, they believe that the Plan was qualified and the related trust was tax-exempt as of the financial statement date.

6. Plan termination

While the Company has not expressed any intent to terminate the Plan, it is free to do so at any time. In the event of termination, each participant automatically becomes vested to the extent of the balance in his separate account.

7. Use of estimates

The preparation of financial statements in conformity with generally accepted accounting principles requires management to make estimates and assumptions that affect the reported amounts in the financial statements. Actual results could differ from those estimates.

8. Subsequent event

On January 27, 1997, the Company reached a definitive agreement to sell its automotive products operations. Closing occurred in the second quarter and is subject to customary conditions. As soon as administratively feasible, the account balances of employees affected by this transaction will be directly transferred to the purchaser's defined contribution plan.

EXHIBIT INDEX

Exhibit No.	Name
23.1	Consent of Independent Auditors

CONSENT OF REILLY, PENNER & BENTON LLP

We consent to the incorporation by reference in the Registration Statement (Form S-8 No. 333-05799) pertaining to the A.O. Smith Profit Sharing Retirement Plan (the Plan) of our report dated July 14, 1997, with respect to the financial statements and schedules of the Plan included in this Annual Report (Form 11-K) for the year ended December 31, 1996.

Milwaukee, Wisconsin
July 15, 1997

REILLY, PENNER & BENTON LLP