

FORM 4

UNITED STATES SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

OMB APPROVAL	
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Check this box if no longer subject to Section 16. Form 4 or Form 5 obligations may continue. See Instruction 1(b).

STATEMENT OF CHANGES IN BENEFICIAL OWNERSHIP OF SECURITIES

Filed pursuant to Section 16(a) of the Securities Exchange Act of 1934 or Section 30(h) of the Investment Company Act of 1940

(Print or Type Responses)

1. Name and Address of Reporting Person * CARLSON ALLEN J		2. Issuer Name and Ticker or Trading Symbol SUN HYDRAULICS CORP [SNHY]		5. Relationship of Reporting Person(s) to Issuer (Check all applicable) <input checked="" type="checkbox"/> Director <input type="checkbox"/> 10% Owner <input checked="" type="checkbox"/> Officer (give title below) <input type="checkbox"/> Other (specify below) President, CEO	
(Last) (First) (Middle) 1500 WEST UNIVERSITY PARKWAY		3. Date of Earliest Transaction (Month/Day/Year) 05/31/2011			
(Street) SARASOTA, FL 34243		4. If Amendment, Date Original Filed(Month/Day/Year)		6. Individual or Joint/Group Filing(Check Applicable Line) <input checked="" type="checkbox"/> Form filed by One Reporting Person <input type="checkbox"/> Form filed by More than One Reporting Person	
(City) (State) (Zip)		Table I - Non-Derivative Securities Acquired, Disposed of, or Beneficially Owned			

1. Title of Security (Instr. 3)	2. Transaction Date (Month/Day/Year)	2A. Deemed Execution Date, if any (Month/Day/Year)	3. Transaction Code (Instr. 8)		4. Securities Acquired (A) or Disposed of (D) (Instr. 3, 4 and 5)			5. Amount of Securities Beneficially Owned Following Reported Transaction(s) (Instr. 3 and 4)	6. Ownership Form: Direct (D) or Indirect (I) (Instr. 4)	7. Nature of Indirect Beneficial Ownership (Instr. 4)
			Code	V	Amount	(A) or (D)	Price			
Common Stock	05/31/2011		M		4,049	A	\$ 12.27	55,302.0377 (1)	D	
Common Stock								8,109.342	I (2)	BY ESOP TRUST

Reminder: Report on a separate line for each class of securities beneficially owned directly or indirectly.

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Table II - Derivative Securities Acquired, Disposed of, or Beneficially Owned (e.g., puts, calls, warrants, options, convertible securities)

1. Title of Derivative Security (Instr. 3)	2. Conversion or Exercise Price of Derivative Security	3. Transaction Date (Month/Day/Year)	3A. Deemed Execution Date, if any (Month/Day/Year)	4. Transaction Code (Instr. 8)		5. Number of Derivative Securities Acquired (A) or Disposed of (D) (Instr. 3, 4, and 5)	6. Date Exercisable and Expiration Date (Month/Day/Year)		7. Title and Amount of Underlying Securities (Instr. 3 and 4)	8. Price of Derivative Security (Instr. 5)	9. Number of Derivative Securities Beneficially Owned Following Reported Transaction(s) (Instr. 4)	10. Ownership Form of Derivative Security: Direct (D) or Indirect (I) (Instr. 4)	11. Nature of Indirect Beneficial Ownership (Instr. 4)	
				Code	V		Date Exercisable	Expiration Date						
Employee Stock Option (right to buy)	\$ 12.27	05/31/2011		M		4,049	(3)	12/09/2012	Common Stock	4,049	\$ 0	0	D	

Reporting Owners

Reporting Owner Name / Address	Relationships			
	Director	10% Owner	Officer	Other
CARLSON ALLEN J 1500 WEST UNIVERSITY PARKWAY SARASOTA, FL 34243	X		President, CEO	

Signatures

Gregory C. Yadley, as Attorney-in-Fact for ALLEN J. CARLSON	06/02/2011
<small>Signature of Reporting Person</small>	<small>Date</small>

Explanation of Responses:

* If the form is filed by more than one reporting person, see Instruction 4(b)(v).

** Intentional misstatements or omissions of facts constitute Federal Criminal Violations. See 18 U.S.C. 1001 and 15 U.S.C. 78ff(a).

(1) Includes 194.364726 shares purchased through the Sun Hydraulics Corporation Employee Stock Purchase Plan during the quarter ended January 1, 2011, and 210.722776 shares purchased through the Sun Hydraulics Corporation Employee Stock Purchase Plan during the quarter ended April 2, 2011.

(2) Reflects allocations of shares under the Sun Hydraulics Corporation Employee Stock Ownership Plan.

(3) Options exercisable as follows: 899 shares on 12/09/06; an additional 899 (adjusted to 1,349) shares on 12/09/07; an additional 900 (adjusted to 1,349) shares on 12/09/08; an additional 900 (adjusted to 1,350) shares on 12/09/09; and an additional 900 (adjusted to 1,350) shares on 12/09/10.

Note: File three copies of this Form, one of which must be manually signed. If space is insufficient, *see* Instruction 6 for procedure.

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