



DIVISION OF
CORPORATION FINANCE

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549-7010

Mail Stop 7010

November 3, 2008

via U.S. mail and facsimile

Allen J. Carlson, Chief Executive Officer
Sun Hydraulics Corporation
1500 West University Parkway
Sarasota, Florida 34243

**RE: Sun Hydraulics Corporation
Form 10-K for the Fiscal Year Ended December 29, 2007
Filed March 12, 2008
Schedule 14A Filed on April 25, 2008
Forms 10-Q for the Fiscal Quarters Ended March 29, 2008 and
June 28, 2008
File No. 0-21835**

Dear Mr. Carlson:

We have reviewed your filings and have the following comments. Where indicated, we think you should revise your documents in future filings in response to these comments. If you disagree, we will consider your explanation as to why our comment is inapplicable or a revision is unnecessary. Please be as detailed as necessary in your explanation. In some of our comments, we may ask you to provide us with information so we may better understand your disclosure. After reviewing this information, we may raise additional comments.

Please understand that the purpose of our review process is to assist you in your compliance with the applicable disclosure requirements and to enhance the overall disclosure in your filing. We look forward to working with you in these respects. We welcome any questions you may have about our comments or on any other aspect of our review. Feel free to call us at the telephone numbers listed at the end of this letter.

Form 10-K for the Fiscal Year Ended December 29, 2007

Item 1. Business, page 2

1. We note that you discuss the costs of environmental compliance as a risk factor that could have a material impact on your business, financial condition and results of operations. In future filings, please provide additional disclosure regarding the

material effects of compliance with federal, state and local environmental provisions on capital expenditures, earnings and your competitive position, as required by Item 101(c)(1)(xii) of Regulation S-K.

Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations, page 18

Results of Operations, page 20

2. In future filings, please expand/revise your results of operations discussion for each period presented to address the following items, at a minimum:
 - Provide a discussion and analysis of your results of operations at both the consolidated level and at the reportable segment level. Your analysis at the consolidated level should focus on the line items included in your consolidated statement of operations. Whereas, your reportable segment analysis should focus on net sales and segment operating income, as your profit measure. Refer to Item 303(A) of Regulation S-K for guidance.
 - Separately quantify the impact changes in volume, pricing and the introduction of new products have had on net sales. Refer to Item 303(A)(3)(iii) of Regulation S-K for guidance.
 - Quantify the impact of other factors you identify that contributed to fluctuations. For example, you attribute the increase in your gross profit margin for fiscal year 2007 versus fiscal year 2006 to (a) fixed cost absorption; (b) higher sales volume; (c) sales price increase in July 2006; (d) productivity improvements in the US; (e) improvements in selective material pricing on high volume purchased parts; and (f) foreign currency exchange.
 - We note from your analyst conference call transcripts that you charge your customers a higher price for expedited orders. Please quantify the extent to which such orders impact sales and your gross profit margin, as appropriate.
 - Provide a more detailed analysis of the factors that impact the areas comprising your income from continuing operations, including a complete discussion of known trends or anticipated trends that are and/or may continue to have an impact on net sales, gross profit margins, selling, general and administrative expenses as a percentage of net sales, et cetera, including management's outlook as to the future impact. Your discussion and analysis is to provide investors with sufficient information to understand the historical trends and the expectations for the future as seen through the eyes of management. Currently, you quantify the percentage of the increase in net sales in your geographic locations without any explanation as to why. It is unclear how disclosing such information sufficiently explains to investors the material factors impacting your operating results.

Please note that this is not meant to represent an all-inclusive list of where your MD&A could be improved. We encourage you to provide further analysis throughout your discussion. Refer to Item 303 of Regulation S-K, Section 501 of the Financial Reporting Codification, and SEC Interpretive Release No. 33-8350 dated December 19, 2003 for additional guidance.

Other Material Commitments, page 24

3. Please briefly explain to us supplementally, with a view toward future disclosure in the notes to the contractual obligations table, the material terms of the supply agreement with Mannesmann Rexroth.

Critical Accounting Policies and Estimates, page 25

4. We note your statement, “[t]he effect of material non-recurring events is provided for when they become known.” We assume that you are referring to product liabilities. If this is correct, please state as such and disclose whether you have incurred material product liabilities in the past. Refer to Question 2 of SAB Topic 5:Y for guidance. Otherwise, please clarify what material non-recurring events you are referring and your historical experience with such events. Refer to Section 501.14 of the Financial Reporting Codification for guidance.

2. Summary of Significant Accounting Policies, page 35
Accruals, page 36

5. In future filings, please either name the third party administrator and insurance company you are relying on to estimate your health care benefit costs or remove your reference to such experts in your disclosures. We remind you that if you refer to experts in any filings under the 1933 Securities Act or filings that are incorporated by reference, you also must include their consent in the 1933 Securities Act filing. Refer to Section 436(b) of Regulation C for guidance.

13. Income Taxes, page 42

6. We note your statement on page 43, “[t]he Company intends to indefinitely reinvest the earnings of its non-U.S. subsidiaries ...[a]ccordingly, no provision has been made for U.S. income taxes that might be payable upon repatriation of such earnings.” We also note that during fiscal year 2006 you repatriated \$5 million from your foreign subsidiaries. We further note that in July 2008 you repatriated \$6 million from Sun Germany. As such, it is unclear how you determined that you have sufficient evidence to demonstrate you have or will invest the undistributed earnings indefinitely. Please advise. Refer to paragraph 31.a. of SFAS 109, paragraph 12 of APB 23 and FSP SFAS 109-2 for guidance.

Item 9A. Controls and Procedures page 51

Controls and Procedures, page 51

7. In future filings, pursuant to Securities Exchange Act of 1934 Rule 13a-15(b) and 15d-15(b) please specify in the first paragraph that your management evaluates with the participation of your principal executive officer and principal financial officer the effectiveness of your disclosure controls and procedures.

Internal Control Over Financial Reporting, page 51

8. In future filings, pursuant to Securities Exchange Act of 1934 Rule 13a-15(c) and 15d-15(c) please disclose: (a) that management evaluates with the participation of your principal executive officer and principal financial officer the effectiveness of your internal control over financial reporting and (b) that management with the participation of your principal executive officer and principal financial officer concludes whether or not your internal control over financial reporting is effective.

Schedule 14A Filed on April 25, 2008

Governance of the Company, page 4

9. In future filings, please disclose how long each of your directors have served in this capacity.

Code of Ethics, page 9

10. In future filings, please disclose whether your code of ethics applies to your principal executive officer, principal financial officer, principal accounting officer or controller, or persons performing similar functions pursuant to Item 406 of Regulation S-K.

Compensation Discussion & Analysis, page 13

11. In future filings, please clarify whether you benchmark compensation against compensation of other companies. We note disclosure under "2007 Executive Compensation" suggesting that you do. If so, please identify these companies, and disclose where actual salary payments fall within targeted parameters. We note your disclosure that you consider ranges of salaries paid to executives of other manufacturing companies in setting salary. Please see Item 402(b)(2)(xiv) of Regulation S-K.

12. In future filings, please disclose the elements of individual performance you consider when deciding to increase or decrease the salaries of your executive officers pursuant to Item 402(b)(2)(vii) of Regulation S-K.
13. In future filings, please elaborate on how the Committee establishes the monetary pool used for long-term compensation. We note disclosure that it varies with your performance; however, disclosure under “2007 Executive Compensation” suggests that the Committee considered only compensation surveys and the long term awards for the three prior years. Clarify how your performance is evaluated and how the amount in the pool is determined. Please also clarify what happens to the pool. We note that cash bonuses have been used infrequently, and that long-term compensation is generally awarded in the form of restricted shares of common stock. Lastly, please describe the elements of individual performance you consider when determining the amount of long-term incentives to award to your executive officers pursuant to Item 402(b)(2)(vii) of Regulation S-K.

Summary Compensation, page 17

14. In future filings, please file Mr. Robson’s employment agreement as an exhibit to the Form 10-K pursuant to Item 601(b)(10) of Regulation S-K.

Form 10-Q for the Fiscal Quarter Ended March 29, 2008

15. We note that your DSO was 46 days as of March 29, 2008 compared to 38 days as of December 29, 2007. You state that this significant increase is due to an increase in international sales with customary longer payment terms. However, we note from your March 29, 2007 quarter analyst conference call that the increase was also due to a large number of orders being made in March. Please ensure you provide explanations for the changes in DSO for each period presented and that your explanation includes all material factors. Refer to Instructions 1 and 5 of paragraph 303(A) of Regulation S-K for guidance.

* * * *

As appropriate, please respond to these comments within 10 business days or tell us when you will provide us with a response. Please furnish a letter on EDGAR that keys your responses to our comments and provides any requested information. Detailed response letters greatly facilitate our review. Please understand that we may have additional comments after reviewing your responses to our comments.

We urge all persons who are responsible for the accuracy and adequacy of the disclosure in the filing reviewed by the staff to be certain that they have provided all

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information investors require for an informed decision. Since the company and its management are in possession of all facts relating to a company's disclosure, they are responsible for the accuracy and adequacy of the disclosures they have made.

In connection with responding to our comments, please provide, in writing, a statement from the company acknowledging that:

- the company is responsible for the adequacy and accuracy of the disclosure in the filing;
- staff comments or changes to disclosure in response to staff comments do not foreclose the Commission from taking any action with respect to the filing; and
- the company may not assert staff comments as a defense in any proceeding initiated by the Commission or any person under the federal securities laws of the United States.

In addition, please be advised that the Division of Enforcement has access to all information you provide to the staff of the Division of Corporation Finance in our review of your filing or in response to our comments on your filing.

You may contact Tracey Houser, Staff Accountant, at (202) 551-3736, or in her absence, Al Pavot, at (202) 551-3738, or me at (202) 551-3355, if you have questions regarding comments on the financial statements and related matters. For other comments, please contact Sherry Haywood at (202) 551-3345, or in her absence, Pamela Long, Assistant Director, at (202) 551-3760.

Sincerely,

Terence O'Brien
Accounting Branch Chief