

**FY2022/12 Q2 Financial Results Briefing: Q&A**

**Date and Time: 10:00 a.m. to 11:20 a.m., Monday, August 8, 2022**

No	Item	Q	A
1	Precision Reduction Gears	You have been enjoying a high level of orders for precision reduction gears against the backdrop of the spread use of EVs and the further progress of automation. Do you see any signs of a change to this trend of demand?	We expect that demand will continue to be brisk for the time being, supported by new demand for precision reduction gears to be used in equipment to manufacture lithium-ion batteries for EVs. Also, regarding demand from robot manufacturers, we do not think that it will diminish soon, because of the fact that the shortage of electronic components has been hindering the manufacturers from making their products in the quantity initially planned.
2	Precision Reduction Gears	While the assumption remains that demand for robots will continue to increase, but the amount of orders received at robot manufacturers decreased year on year according to the Japan Robot Association. Moreover, the amount of orders received at Nabtesco also decreased from April to June. Doesn't this imply that demand will peak out?	Demand for robots will remain at a high level and we are not concerned about a decrease in demand at present.
3	Precision Reduction Gears	Is the increase in orders received purely attributable to expanded demand for precision reduction gears or is it because you have taken market share from your competitors? I would like to know the background to the increase in the amount of orders.	We have received new orders from overseas customers on a long-term basis, and this contributed to the favorable result, which is therefore purely due to expanded demand and not because we have taken market share from our competitors.
4	Precision Reduction Gears	When will you install production equipment for precision reduction gears and start production at the Hamamatsu Plant?	We plan to start production in the fourth quarter of 2023. Initially we will install production equipment with an annual standard production capacity of several ten thousand units, and will subsequently expand the facility in consideration of the trend of demand and in a timely manner to meet the demand, which we expect to continue to be brisk going forward.
5	Precision Reduction Gears	According to reports in the media, you aim to achieve a 95% and a 92% automation rate for the processing line and the assembly line, respectively, at the Hamamatsu Plant. I would like to know the automation rate at the Tsu Plant.	We have not disclosed the automation rate at the Tsu Plant, but it is not very high. We have set challenging targets for the automation rate at the Hamamatsu Plant, and in order to attain the targets we will limit the number of product items to be manufactured at the Plant and foster the mass production of specific products, while operating the Tsu Plant as the mother plant where a variety of products can be manufactured each in a small quantity.
6	Precision Reduction Gears	What is the purpose of manufacturing bearings internally?	We aim to make bearings internally for the stable supply of our products rather than for cost reduction. When demand for precision reduction gears substantially expanded in the automobile industry and others, we faced cases in which it was difficult to procure bearings. We will therefore make bearings internally for the stable supply of our precision reduction gears. It will also bring us financial benefits on a medium- to long-term basis.
7	Hydraulic Equipment	What is the outlook for demand for hydraulic equipment in the Chinese market in the second half of the fiscal year?	At the beginning of the fiscal year, we expected that demand for construction machinery would drop by 20% year on year, but actually, in the first half of the year demand dropped by 36%. Demand in the second half of the year will remain at the same level as in the first half. We see there will be special demand in the second half toward the Chinese New Year in 2023, and demand will also be driven by the exhaust gas regulations to be enforced at the end of December 2022.
8	Aircraft Equipment	On what grounds do you say that demand for the aircraft equipment to be used in small aircraft has recovered in the first half of the fiscal year?	As for the sales of aircraft equipment in the first half, 55% of the total (5.7 billion yen) was from the private sector and the remaining 45% from the defense industry. The MRO sales accounted for 35% of the sales for the private sector, showing a year-on-year increase. Following the lifting of the restrictions imposed on people's movement due to COVID-19, demand for aircraft has been recovering mainly for domestic flights.
9	CMP segment	For the operating profit margin in the CMP segment, the target for the second half of the fiscal year was revised to 19%. How can you achieve such a high margin?	Originally, we set the initial plan with more focus on the second half of the fiscal year. We will recover from the stagnant production caused by the lockdown in Shanghai in the first half to make more profit in the second half. In response to hikes in materials costs, we will take new measures for higher productivity in the second half, thereby covering the increase in costs and achieving the targeted operating profit margin.
10	TRS segment	The performance in the TRS segment was nearly the same as initially planned for the first half of the fiscal year. However, you have revised the full-year plan downward. Why?	This is mainly due to the delays in the Chinese subway project implemented for railroad vehicle equipment. Also, we regard the following as risks: lingering quality issues in the aircraft industry and the production adjustment made by users of our commercial vehicle equipment due to the shortage of semiconductors.

11	ACB segment	For the ACB segment, you have listed increased personnel expense and differences in product mix as the reasons for the drop of the operating profit margin in the first half of the fiscal year. Are they transient factors?	Both the increased personnel expense and differences in product mix are temporary factors. The personnel expense increased due to the outsourcing of temporary staff at our subsidiary in Europe, which was caused by the restrictions imposed on people's movement by COVID-19.
12	Shanghai lockdown	Due to the impact of the lockdown in Shanghai, sales dropped by 4.5 billion yen in the first half of the fiscal year relative to the target set at the beginning of the year. Have you disclosed the corresponding impact on operating profit?	No, we have not disclosed the impact on operating profit, but the hydraulic equipment business was most badly affected.
13	Passing costs on to customers	When will the effect of passing higher costs on to customers be felt?	We have been negotiating individually with each customer according to the details of the respective sales agreement. Also, we need to consider issues related to the lead time. It will therefore take three to six months for the effect to be felt. By raising prices, we posted an operating profit of about 200 million yen for the first half of the fiscal year and aim for an operating profit of about 600 million yen for the second half. For the full year, we will cover the rise in materials costs at the rate of around 35%. The effect will be felt mainly in the next fiscal year although we will be able to feel some within this fiscal year.
14	MRO	Which of your departments will raise its MRO service prices?	For our railroad vehicle equipment and marine vessel equipment, we are conducting negotiations with our customers to raise the prices of components and repair service to cover the increased materials cost. Also, for commercial vehicle equipment, our customers have agreed to the rise in prices to cover the increased materials costs.
15	Shortage of electronic components to be procured	Will the shortage of electronic components be eliminated in the second half of the fiscal year?	We see some signs of improvements in procurement toward the fall of 2022. We have been badly affected by the shortage of electronic components in the TRS and MFR segments. In response to the shortage, we have been increasing the inventory since the latter half of 2021. Also, as a measure against the risk that the shortage will be prolonged, we are changing our product design so that we can use components that are easier for us to procure.
16	Improvement of operating profit	You depend on production by your customers for your sales across the company, but can't you increase your productivity and raise your prices to improve your profitability for the self-help efforts?	As profitability improvement measures, we are promoting sales of our precision reduction gears to a wider range of industries from a medium- to long-term viewpoint. For higher productivity, we have been working to deal with hikes in materials costs since the second half of 2021 and are making progress steadily also under the plan set for this fiscal year.
17	HDS* shares	What do you think about the stock price of HDS dropped as a result of your selling your shares in the company. What will you do with the remaining half?	We sold the shares over a time frame designed to avoid exerting undue influence on the stock price, and we sold them by the right method, we think. As for the remaining half (about 9.16 million shares) still in our possession, we will eventually sell them as well. However, we have not yet decided on the method or timing.

HDS: Harmonic Drive Systems Inc.