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Eco7: Launching a New Motor Oil

In March 2014, Aaron Jonnerson, vice president of marketing for the automotive division of Avellin Corporation, was planning the launch of Eco7, a new environmentally friendly motor oil. Consumer interest in “green” automobile technology, such as hybrids or electric vehicles, had increased steadily. Most research and development focused on improving fuel efficiency, alternative energy sources, or reducing emissions. There had been little innovation in the motor oil used to maintain engines. Only Sevoline, a competitor to Avellin, had introduced a motor oil, SevoGreen, which was manufactured from recycled oils. It had generated significant buzz within the industry and initial sales penetration of channel partners had shown promise, but the green motor oil market was clearly in its infancy.

Jonnerson believed that Eco7 offered performance and cost advantages over SevoGreen and could help grow Avellin’s business in the **passenger-car motor oil (PCMO) market**. During the past decade, the “do-it-yourself” segment had shrunk dramatically as more consumers began to use **professional oil-change services**. Many consumers viewed motor oil as a commodity product. Car dealers and mass merchandisers had also grown their share of sales. In contrast, the “fast-lube” channel—comprising service outlets focused on quick oil changes—had peaked. This was of concern to Avellin, which had a strong customer base among independent fast-lube stores. Only the national fast-lube chains, most of which were affiliated with motor oil manufacturers, had seen meaningful revenue growth.

Although Avellin remained the number three player in branded motor oil, its market share had fallen slightly, making Eco7 an important product launch. As he presented the product concept to the board, Jonnerson, knowing the career implication of this launch, spoke confidently of Eco7’s prospects: “Despite recent challenges in the motor oil market, Avellin remains a well-respected, innovative company that consumers trust. We have a great platform to launch a new product, and Eco7 is a tremendous offering that is expected to result in profitable growth. This innovation will strengthen our customer relationships and create new momentum in our motor oil business.”

Avellin had experienced sluggish growth since 2005. It had fought a takeover bid in 2007 by SinoPLT, a foreign oil and gas company. The resulting management buyout kept Avellin independent, but had saddled it with significant debt and interest payments. In 2013, Avellin’s net income was only 4% on total revenues of \$2.2 billion.

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PCMO was a significant part of Avellin's business, so expectations were high for Eco7. Despite his confident message to the board, Jonnerson worried about the launch: "Consumers are not excited by motor oil, and building momentum for Eco7 will be difficult. What positioning and pricing will work with channel partners and resonate with consumers?"

Company Background

Founded in the United States in 1936 as an oil refiner, Avellin had diversified into industrial and specialty chemicals manufacturing. In 1995, Avellin divested its petroleum division, exiting the lower-margin business of refining and marketing fuels, within which it lacked the scale to compete with its large, integrated competitors. Avellin then focused on its remaining divisions: Industrial Materials, which sold resins and adhesive technologies, and Automotive, which sold lubricants and other automotive care products to commercial and consumer markets. Approximately 60% of Avellin's revenues and 40% of its profits came from the automotive division.

In 2014, Avellin operated ten lubricant blending and packaging plants in the United States and seven regional distribution centers. Like its competitors, Avellin had its own fast-lube chain, AvellinAuto. Within the automotive division, PCMO accounted for nearly 65% of revenues, with gross margins of 20% to 22%. The remaining revenues came from motor oil sales to commercial fleet managers (e.g., trucking companies) and other automotive chemicals, such as brake fluid and coolants.

The Market for Passenger Car Motor Oil

Motor oil is used to lubricate internal combustion engines in automobiles, reducing the wear on moving parts and cooling the engine by carrying heat away. The market for PCMO manufacturers in the United States, excluding service revenues, was approximately \$10.5 billion in 2012. Key drivers of the market included car sales, mileage, and frequency of maintenance. The industry was mature, and analysts expected annual growth of no more than 2% through 2020.

The performance of a PCMO was gauged by how well it provided lubrication under different conditions, including low temperatures when the engine was first started and very high temperatures as the vehicle was running. A higher quality lubricant could be used longer before it broke down and needed to be replaced. PCMOs came in three basic categories: conventional, full synthetic, and synthetic blend. Of these, the most widely used was conventional motor oil. It met performance specifications and, at \$2.50 to \$4.00 per quart, was the most affordable motor oil. Full synthetic motor oil also used petroleum as its base material, but was further refined and modified and had more additives to boost performance.

Synthetics offered greater longevity and withstood high temperatures more effectively than did conventional oil. They could be used in any vehicle, but were often specified for higher performance vehicles that generated more engine heat. Proponents of synthetic oil argued that its higher price (from \$5.50 to \$9.00 per quart) was offset by the oil's longevity, which allowed consumers to change oil less frequently. Even so, synthetic oils accounted for less than 20% of industry sales because of their high price point. Synthetic blends offered moderately better performance at a slightly higher cost. Leading manufacturers invested in continued product development, but most innovations offered only modest improvements to existing products and typically went unnoticed by consumers.

PCMO Consumers

Most PCMO consumers viewed oil changes as a nuisance that cost them time and money. In addition, most of them were price sensitive, and very little price growth was expected for either PCMO manufacturers or oil change providers. Traditionally, car owners were advised to get an oil change every 3,000 miles or three months, whichever came first. Delaying an oil change for too long would reduce a car's performance and eventually lead to engine damage. As engine design and motor oils had improved, oil changes were required less frequently. Automotive manufacturers' guidelines varied by vehicle, but newer cars could be driven much farther before requiring an oil change: typically 5,000 miles with conventional oil, over 7,500 miles with some synthetic blends, and over 10,000 miles with the highest performing full synthetics. Service providers had no incentive to encourage infrequent changes, however, and most continued to recommend more frequent oil changes than automobile manufacturers deemed necessary. In 2013, the average consumer drove nearly 4,500 miles before getting an oil change.

Consumers of motor oil fell into two broad segments: do-it-yourself (DIY) and do-it-for-me (DIFM). The DIY segment comprised consumers who changed their own motor oil. These consumers purchased PCMO in bottles from mass merchandisers, convenience stores, automotive specialty stores, or online. In contrast, the DIFM consumer segment used professional service providers. Through the 1980s, PCMO was predominantly a DIY market in the United States. The growth of low-cost DIFM options, however, as well as changing consumer demographics and behavior, had led to a shift away from DIY. In 2000, the split between DIY and DIFM was approximately 50/50. DIFM accounted for 75% of all oil changes.

The DIY segment was younger overall than the DIFM segment and more likely to live in smaller towns or rural areas. On average, DIY consumers were slightly less affluent, favored trucks and sports utility vehicles, and were more cost-conscious when it came to automotive maintenance. They were most likely to purchase their motor oil from a mass merchandiser, such as Walmart, or an automotive parts store, such as AutoZone or Advance Auto Parts. They tended to know more about their vehicles and had a better understanding of the differences between motor oils.

The typical DIFM consumer was usually older, had more education and a higher income, and was more likely to live in a large metropolitan area. DIFM consumers tended to prefer foreign cars and luxury vehicles, and were more likely to drive fuel-efficient diesel or hybrid cars. They were less likely than DIY consumers were to do any maintenance on vehicles. DIFM consumers also relied on professionals for routine maintenance such as tire rotations, brake service, and tune-ups.

Surveys indicated that most vehicle owners understood the importance of regular oil changes and knew the leading PCMO brands. Most DIFM consumers, however, could not explain the product classifications (conventional, full synthetic, and synthetic blend) and could not recall what brand of motor oil they had last purchased. One fast-lube operator commented, "Our customers are just happy to know they're doing an oil change on time. Most of them don't worry much about the details."

PCMO Distribution

PCMO manufacturers sold products directly and through wholesale distributors. Approximately 25% of industry sales went directly to large retail accounts, such as the national tire dealer chains and mass merchandisers. For sales to other retail and DIFM service outlets, manufacturers relied on a network of wholesale distributors, which helped manufacturers by maintaining strong relationships with local fast lubes, car dealers, repair shops, and specialty stores and by providing effective, timely

order fulfillment and service. While distributors were usually not exclusively bound to a single PCMO brand, most carried only a few brands. This focus allowed them to benefit from exclusive sales territories, volume discounts, and incentive programs that manufacturers offered.

Branded fast-lube outlets were affiliated with a specific PCMO brand and offered this brand exclusively. Independent DIFM outlets, like wholesale distributors, usually offered a limited number of brands or focused on private label in order to benefit from bulk purchase discounts and manufacturer incentives. The DIFM service provider would then steer its customers to a preferred brand. When the installer purchased in bulk, the average gross margin on oil changes — excluding labor and overhead — was approximately 55% for branded PCMO and 65% for private label.

PCMO Service Providers

DIFM consumers could choose from **five types of service providers:**

Fast lubes. Also known as “quick lubes,” these outlets offered few other services besides oil changes. As the name suggested, the value proposition was the speed with which the oil change service could be completed — often in just thirty minutes. The largest national fast-lube chains were owned and branded by the major PMCO manufacturers; these accounted for approximately 30% of the 17,000 fast-lube outlets in the U.S. and had enjoyed nearly all the growth in this distribution channel over the last decade. A typical fast-lube outlet performed 1,200 oil changes per month and generated \$650,000 to \$700,000 in annual sales. Customers using fast lubes cared most about the convenience of the location, the speed of the service, and the professionalism of the installer.

Oil change-plus. “Oil change-plus” outlets were usually specialty stores focused primarily on a specific product or service, such as tires, mufflers, or brakes, rather than on motor oil. Typically, to attract more customers and maximize capacity utilization, they also offered oil-change services or tire rotations, which vehicle owners required more frequently than other services. The average oil change-plus store performed 40% to 50% the number of oil changes provided by an average fast-lube outlet.

Repair shops. These were typically small, independent outlets offering auto mechanic services and sometimes tire changes or gasoline sales. Their share of automotive maintenance services had declined in favor of lower-cost, higher-volume outlets.

Car dealers. Car dealers focused on the sale or lease of vehicles and usually provided after-sales service, particularly as part of the vehicle warranty. Dealers already provided predetermined maintenance checks as recommended by the vehicle manufacturer and had the diagnostic equipment specific to a given make and model. Because vehicle quality had improved and repair revenues had declined, dealers had become more likely to promote their services for routine maintenance, such as oil changes. For their part, customers appreciated having a “one-stop shop” for all maintenance and knew that the oil change would be done in strict accordance with the manufacturer recommendation.

Mass merchandisers and warehouse clubs. Mass merchandisers and clubs were large-format retail chains that sold clothing, household goods, food, and electronics. Most offered automotive care products for DIY consumers and also provided basic auto services for the DIFM segment. DIFM oil changes were priced very competitively and generated little profit for the retailers, but drove customers to these stores, where they could shop while they waited for the service to be completed.

The fast-lube model had helped to drive the consumer shift from DIY to DIFM. The price of an oil change at a fast-lube outlet was, however, 15% to 20% higher than it was at repair shops, dealers, and mass merchandisers. Other DIFM channels had begun to recognize and promote oil changes as an

upselling and relationship-building opportunity (see **Exhibit 1** for share of DIFM purchases by channel).

Competitive Landscape

In the U.S., the market leaders for PCMO were Baud and Motoline, which accounted for 23% and 15%, respectively, of branded sales in 2012. Avellin ranked third among PCMO manufacturers with 11% of the market (see **Exhibit 2** for PCMO brand share data). Sales of private-label motor oil, which accounted for only 18% of market share in 2000, had grown steadily as consumers perceived fewer differences among PCMO brands. Mass merchandisers, warehouse clubs, and convenience stores led the push toward private-label PCMO. For the DIFM installers, private label offered lower prices while generating high gross margins. A consumer might be unwilling to pay full price for a branded synthetic, but could be upsold from conventional motor oil to private-label synthetic oil. Due to the favorable margins for private label, some wholesale distributors promoted such off-brand motor oils aggressively to DIFM outlets and retailers. Of the three leading PCMO companies, only Motoline had entered the private-label market, where it sold to national accounts and large wholesale distributors.

Consumer brand loyalty differed between the DIY and DIFM segments. The DIY segment was more likely to research the characteristics and performance benefits of different types of motor oils. Nearly 70% of DIY consumers reported purchasing one PCMO product consistently because of trust and familiarity with the brand. For the DIFM segment, the convenience of the installer's location and the speed of the service were paramount in the purchase decision. 56% of DIFM consumers said that they sought a specific PCMO product. 83% were willing to accept a professional installer's recommended PCMO brand if it met their price expectations and the vehicle manufacturer's requirements.

Because the DIFM consumer's loyalty was tightly linked to convenience and service quality, **Baud** and **Motoline** had invested heavily in expanding their fast-lube chains in the 1990s. Through strategically located outlets and loyalty programs for repeat customers, the two market leaders had made themselves the easy, obvious choice for consumers in the most attractive metropolitan markets. With nearly 2,000 stores that sold its products exclusively, Baud had the largest fast-lube chain in the country. The company also enjoyed a strong presence in mass merchandisers and clubs, where it was the preferred brand for oil changes at Walmart and was granted significant shelf space, which helped it capture DIY sales. Similarly, Motoline had more than 1,200 stores in its fast-lube chain and long-term relationships with major chains for brakes and mufflers, as well as national tire dealers. Avellin had historically been favored by independent fast-lube stores, oil change-plus stores, and repair shops.

Avellin regularly surveyed consumers to gauge both brand perception and intent to buy at the next oil change. Intent to buy was similar for the leading PCMO brands across consumers, but there were differences within segments. Baud was relatively stronger with the DIY segment and among DIFM consumers that prioritized quality. Among DIFM consumers seeking the best price, Avellin held the strongest position. According to Avellin's surveys, more than 40% of consumers were undecided about the brand for their next oil change (see **Exhibit 3** for consumer intent to buy branded PCMO).

Avellin Distribution Channel Strategy

Beginning in the 1980s, Avellin had focused on becoming the preferred brand in the DIFM channel. Because it was easy for fast-lube stores and other independent installers to switch PCMO brands, Avellin worked hard to provide the best service and promotional programs to wholesale distributors and their DIFM customers. By 2013, its revenues came from **three key customer types**:

Independent DIFM. Avellin was the leading PCMO brand among independent DIFM customers, which included fast lubes, oil change-plus stores, and repair shops. Order fulfillment was handled through a network of independent wholesale distributors. To build loyalty, the company promoted its Aventure program, which involved dedicated sales managers, management of in-store displays, provision of consumer education and support, and bulk discounts. Sales managers provided Avellin with insight on consumer behavior and trends, and helped the company to ensure that wholesale distributors served DIFM customers effectively. In 2013, Avellin had approximately 6,000 independent fast-lube customers, of which approximately 4,400 were in the Aventure program. It also sold to 6,500 oil change-plus stores and repair shops. Independent DIFM customers accounted for 68% of its sales.

National retailers. Large mass merchandisers, warehouse clubs, and auto parts stores sold Avellin's PCMO line. Sales to these customers were for the DIY segment only. Major retailers that also offered DIFM services, such as Walmart, usually promoted their own private label, Baud, or Motoline. In order to build loyalty among its base of DIFM customers, Avellin had been satisfied to put products on the shelf for the DIY segment. National retailers accounted for 9% of Avellin's PCMO sales.

AvellinAuto. Avellin also sold via its own AvellinAuto stores, comprised of mostly company-owned and some franchised outlets that sold Avellin products exclusively. Reluctant to anger its other DIFM customers, Avellin had been less aggressive than its competitors were in expanding its fast-lube chain. When selecting sites for new stores, the company aimed for locations that would minimize the impact on existing customers. Because AvellinAuto stores were serviced directly through the company's regional distribution centers, rather than through a wholesaler, the effective manufacturer gross profit was about \$0.75 higher per five quarts, the amount typically required for an oil change. With 436 stores open as of 2014, the AvellinAuto chain generated approximately 7% of PCMO sales, as measured by manufacturer prices. The remainder of PCMO revenues came from a mix of national DIFM chains, car dealers, convenience stores, and online sales.

Price competition among channels had long been a cause of tension. Avellin had never actively sold to national accounts for DIFM services, but mass merchandisers and clubs occasionally ran local promotions featuring Avellin products. Invariably, this led to complaints from independent fast lubes that felt they were losing local business. Recently, Aventure customers had begun to demand their own private-label product that could give them good margins and a low price to compete against the low-cost oil changes at mass merchandisers and clubs. It would also serve as a reference point for consumers to see the low end of PCMO, which installers would use to help them trade up to the better Avellin products. To date, the company had avoided this strategy for fear that it would merely cannibalize existing Avellin sales and exacerbate the price pressure that already existed.

The Eco7 Launch

Recycled Motor Oil

There was a trend towards more fuel-efficient, environmentally friendly vehicles. Hybrid vehicles featuring both gasoline and electric engines, such as the Toyota Prius, had mass market appeal. Surveys indicated that increasing numbers of consumers valued environmentally friendly options and would pay a premium to be green. In 2012, Avellin began developing a new motor oil manufactured from recycled materials that would be much more environmentally friendly than were existing products. Jonnerson reflected on the original impetus for the recycled oil project that led to Eco7: "A lot of the buzz is around hybrids or electric vehicles, but these are expensive, infrequent purchases, which are 3% of 2013 sales. Most consumers still have standard cars that require regular oil changes. An

environmentally friendly motor oil with competitive performance would be compelling. We can create buzz and regain share if we beat the competition to the punch.”

The environmental case for recycled motor oil was clear. Used motor oil harmed soil and water if not disposed of properly. When managed properly, it could be refined and reused. For example, it could be recycled as heating oil or used to make asphalt. Nearly 80% of discarded PCMO was usable. Used motor oil could also be recycled into new motor oil through an efficient refining process. Discussing the product with the R&D team, Jonnerson laid out the pitch he wanted to make for recycled oil: “Customers should know that, with every quart, they reduce the amount of oil that needs to be extracted from the ground, thereby reducing the toll on the environment. Each quart should mean a little less dependency on imports from foreign producers. It also means we are not recycling the used oil just once, but potentially multiple times.”

To date, the motor oil industry’s efforts to be green had been modest. Sevoline, ranked fifth in the market, became the first major manufacturer with a green motor oil when it introduced SevoGreen, in 2011. Like Eco7, SevoGreen was manufactured with recycled motor oil. It performed on par with other conventional oils, although, at \$7.50 per quart, it cost nearly twice as much. Sevoline sold primarily through the DIFM channel, where it focused on oil change-plus outlets, such as tire and muffler repair shops. Avellin’s research suggested that one-third of Sevoline’s DIFM customers had agreed to carry SevoGreen, but few were motivated or trained to promote it. Sales to DIY consumers were modest, as Sevoline invested little in a national marketing campaign to build awareness. Avellin’s own consumer research confirmed interest in green motor oil, but indicated that pricing would be important. (**Exhibit 4** provides information about consumer interest in green oil.) Survey results did not always correspond to consumer purchase decisions, but the results suggested a market opportunity. Jonnerson believed that the market for green PCMO would grow, but that it needed the right product— marketed in the right way and at the right price.

Eco7 Test Marketing

After two years of research and development, Eco7 was ready for launch. Made of 65% recycled oil, it was manufactured using 45% less energy than was typically used to produce conventional PCMO. In addition, Avellin’s refining process and additives gave Eco7 a longevity and performance comparable to a synthetic blend, making it superior to conventional oil. The product performed better at extreme temperatures without breaking down and, for most vehicles, would require replacement only after 7,500 miles. Avellin’s cost to produce Eco7 was approximately \$2.01 per quart, as compared to \$1.95 and \$1.20 for Avellin’s synthetic and conventional oils, respectively. Jonnerson explained: “Producing recycled motor oil is more costly for us, which means it will be more expensive for the consumer. The challenge for us is to make sure they see the premium paid for Eco7 is not only for an environmentally friendly product, but also for better driving performance.”

In two test markets, Avellin and the wholesale distributor recommended a retail price of \$6.75 per quart, similar to that of synthetics. In the third test market, Avellin tested a retail price of \$5.25 (see **Exhibit 5** for DIFM prices and market structure). The product was packaged in an eye-catching green bottle and came with accompanying in-store display materials. The company advertised on local television and in newspapers, touting Eco7’s advances in combining superior performance and environmental friendliness. Avellin also used the opportunity to gauge the effectiveness of its Eco7 campaign slogan, *You have the green light*.

As part of the test-market program, Avellin surveyed buyers of both Eco7 and other motor oils. The survey found that buyers of Eco7 were more likely to have consciously switched from a competing PCMO, and to drive imported and hybrid vehicles. Relatively few consumers reported seeing the local

advertisements for Eco7, and most were made aware by the in-store display or the suggestion of their DIFM installer. A mystery-shopper study found that installers tended to offer Eco7 only to drivers who appeared to be affluent. Furthermore, although Avellin's wholesale price and supporting displays were consistent at every DIFM outlet, there was significant variation in the retail price, the execution of the displays at each store, and the delivery of the Eco7 "message" from the installers.

After a three-month trial, Avellin conducted follow-up interviews with the DIFM outlets that had carried Eco7 to gather their reactions to the product. Jonnerson described the concerns that the test marketing had raised. First, there was the matter of pricing:

Internally, we debated Eco7's price point. At \$6.75, it is nearly as expensive as Avellin's most popular synthetic oil. In the markets where we set Eco7 at the full price, the DIFM installers who understood how to pitch Eco7 had no problem selling it. They reported that emphasizing the significant green factor, with no sacrifice in quality, was most important. They addressed price concerns by mentioning the greater longevity of Eco7 compared to conventional, although I am sure that the reminder sticker on the customer's windshield still suggested an oil change after 3,000 miles!

A price of \$5.25 would squeeze everyone's margins, devalue the innovation, and undermine efforts to market Eco7 as a premium product, but the lower price makes for a much easier sale. Even at stores where the messaging was muddled, we saw good sales with the lower price.

Based on the test market sales and customer feedback, Jonnerson's team projected penetration and sales performance for Eco7 by price point. If the DIFM installer understood Eco7 well enough and explained it effectively to consumers, the team expected 3.5 sales per day at the \$6.75 price. At the lower price point of \$5.25, the team projected 4.5 sales per day. At the firm's own AvellinAuto stores, the team believed Eco7 would generate five sales per day at full price and six per day at the discounted price. These estimates assumed that the service provider would still sell Avellin synthetic oil whenever possible, and would try to convince purchasers of conventional oil to upgrade to the environmentally friendly, higher performing Eco7 (see **Exhibit 6** for estimates of Eco7 penetration and sales projections).

Jonnerson had to select a distribution strategy. To gain support from wholesale distributors and DIFM installers, Avellin would need to offer the right incentives. He planned to offer Eco7 exclusively through the independent DIFM customer base and AvellinAuto stores while keeping it out of the national mass merchandisers, clubs, and major auto-parts chains. He was willing to ignore the DIY segment in order to gain support from the DIFM installers and limit the encroachment of private label, which some key wholesalers were starting to promote because of its higher margins. Another approach would be to offer Eco7 only to AvellinAuto stores and independent DIFM customers in the Aventure program. Based on prior experience, the Avellin team projected that penetration with this approach would grow to 95% among Aventure stores, which valued exclusivity over a discount. Proponents of this approach suggested that working with fewer, but more engaged, stores already in the Aventure program would improve the odds that the Eco7 rollout would be executed effectively. Either approach could work in the near term, although Jonnerson knew he could not keep a good product off the shelves of the national account outlets for very long.

Exhibit 1 Share of DIFM purchases by channel

	2000	2002	2004	2006	2008	2010	2012
Fast lube	36%	37%	36%	36%	34%	33%	32%
Oil change-plus	10%	10%	11%	11%	12%	12%	12%
Car dealer	25%	25%	26%	26%	28%	29%	29%
Mass merchandisers and club	6%	6%	6%	7%	8%	9%	10%
Repair shop	11%	10%	10%	9%	9%	9%	9%
Other	12%	12%	11%	11%	9%	8%	8%

Source: Adapted from multiple sources, including Valvoline, Desrosiers, Aftermarket.org, Packaged Facts, Frost & Sullivan, NPD, Kline

Exhibit 2 Share of sales for private label and by brand

	2000	2002	2004	2006	2008	2010	2012
Private label sales	18%	20%	24%	27%	29%	31%	32%
Branded sales	82%	80%	76%	73%	71%	69%	68%
Brand share							
Baud	16%	18%	19%	20%	22%	23%	23%
Motoline	13%	13%	14%	14%	15%	15%	15%
Avellin	14%	13%	14%	13%	12%	11%	11%
Texoil	9%	8%	8%	9%	10%	9%	9%
Kemia	7%	7%	6%	8%	8%	8%	8%
Sevoline	5%	6%	6%	7%	7%	7%	8%
Others	36%	35%	33%	29%	26%	27%	26%

Sources: Adapted from Petroleum Trends International, *National Oil & Luke News*

Exhibit 3 Intent to buy branded PCMO by consumer segment

	Overall	DIY	DIFM, Price-focused	DIFM, Quality-focused
% of PCMO customers		25%	45%	30%
Baud	16%	25%	9%	18%
Motoline	15%	15%	12%	19%
Avellin	15%	16%	17%	10%
Other brands	13%	11%	13%	16%
Undecided	41%	33%	49%	37%

Exhibit 4 Consumer interest in green motor oil

<i>What is your interest in a green motor oil?</i>	<u>DIY consumer</u>	<u>DIFM consumer</u>
Very interested	13%	23%
Interested	28%	32%
Unsure	25%	15%
Not interested	34%	30%

<i>Assuming similar quality and performance, how likely are you to purchase a green motor oil if it is . . .</i>	<u>Same price as current PCMO</u>	<u>50% more</u>	<u>100% more</u>
Definitely	17%	10%	4%
Very likely	28%	21%	10%
Unsure	21%	28%	35%
Unlikely to purchase	34%	41%	51%

<i>What information source will be most influential in your decision to purchase green motor oil?</i>	
Personal sources, e.g., friends or family	8%
Public sources, e.g., online consumer reviews	18%
Analysis or scientific study conducted by neutral party	7%
Professional service provider	67%

Exhibit 5 DIFM prices and margin structure

	<u>Avellin Conventional</u>	<u>Avellin Synthetic</u>	<u>Private Label Synthetics</u>	<u>Eco7 full price</u>	<u>Eco7 discounted</u>
DIFM Retail					
Average retail price, per quart	\$3.25	\$7.00	\$4.75	\$6.75	\$5.25
Average revenue, per oil change (5 quarts)	\$16.25	\$35.00	\$23.75	\$33.75	\$26.25
Gross margin %, DIFM outlet	50.0%	60.0%	65.0%	55.0%	50.0%
Wholesaler					
Gross margin %, wholesaler	12.5%	12.5%	15.0%	12.5%	10.0%
Avellin					
Average revenue, per oil change (5 quarts)	\$7.11	\$12.25	N/A	\$13.29	\$11.81

Exhibit 6 Eco7 estimates of market penetration (%) and number of monthly oil changes

	Eco7 full price Aventage only	Eco7 full price	Eco7 discounted
Adoption of Eco7			
Independent fast-lube			
Aventage stores	95%	75%	90%
Other stores		45%	60%
Other independent stores (oil change-plus, repair shops, etc.)		30%	40%
Retail sales of Eco7			
Fast lube: Monthly upgrades to Eco7 from conventional	105	105	135
AvellinAuto stores	150	150	180
Other independents	25% of fast lube	25% of fast lube	25% of fast lube