



SHELL ADVANCE PRODUCT PORTFOLIO

Shell
ADVANCE
MOTORCYCLE OILS





INTRODUCING SHELL ADVANCE

SHELL IS THE WORLD'S NUMBER ONE LUBRICANTS SUPPLIER*. WE SELL MORE LUBRICANTS THAN ANY OTHER COMPANY IN THE WORLD.

With more than 75 years of experience in developing and testing engine oils, Shell is a world leader in lubricant technology. Everything we know about motorbikes has gone into creating Shell Advance: a range of dedicated bike lubricants that help to keep bikes in peak condition, making them responsive to the slightest touch.

Our work with racing technical partners such as Ducati provides us with the most challenging environment in world motorsport for developing and testing lubricants. The technology we develop in the sporting arena is applied to the oil that you put in your bike.

**Source: Kline & Company, an independent worldwide consulting and research firm*



THE NEW **SHELL ADVANCE** PRODUCT PORTFOLIO

We have listened to many bikers like you to find out exactly what they want from the lubricants they use. Understanding their needs enabled us to develop a tailor-made portfolio of superior oil products.

CHOOSING THE OIL THAT IS RIGHT FOR YOUR BIKE

The Shell Advance range has been developed and fine-tuned so that bikers can easily select a lubricant that matches their bike and riding style. Each product is designed for a specific kind of bike, and this makes it easy for bikers to find the oil that best meets their needs.

UPGRADING TO HIGHER PERFORMANCE

The Shell Advance range covers a huge range of bikes, riding styles and riding conditions. Whatever kind of bike you ride, you could enhance its engine performance by upgrading to the next Shell Advance tier.

Increasing technology & performance ↑	Tier name	Product descriptor	Designed for	Specs	Additional products for special application
	Shell Advance ULTRA	Fully synthetic	Ultimate performance from all bikes	API SM/ JASO MA2	Ultra Racing Ultra Scooter
	Shell Advance AX7	Synthetic technology	Performance/ power bikes	API SL/ JASO MA2	AX7 Scooter
	Shell Advance AX5	Premium multigrade	Standard bikes	API SL/ JASO MA	
	Shell Advance AX3	Mono/ multigrade	Underbone and small engine bikes/mopeds	API SF/SG	AX3 cold start



ULTRA

FULLY SYNTHETIC OIL PROVIDING SHELL'S ULTIMATE PERFORMANCE FOR ALL BIKES



AX7

SYNTHETIC TECHNOLOGY OIL DESIGNED FOR POWER BIKES. ENHANCES THE PERFORMANCE OF STANDARD BIKES AND UNDERBONES



AX5

PREMIUM MULTIGRADE OIL DESIGNED FOR STANDARD BIKES. ENHANCES THE PERFORMANCE OF UNDERBONES



AX3

MONO/MULTIGRADE OIL DESIGNED FOR UNDERBONES AND MOPEDS

UNDERSTANDING THE NEW SHELL ADVANCE RANGE

The new Shell Advance range is not just beautiful to look at; it has also been designed to make it really easy for you to choose the right product for your bike. Here is a quick reference guide to help you select the right product.



ALPHANUMERIC TIER NAMES
MAKES IT EASY TO UNDERSTAND
PERFORMANCE LEVELS



ICONS HELP YOU TO CHOOSE
THE RIGHT OIL FOR YOUR BIKE



INFORMATION ZONE FOR
DETAILS SUCH AS VISCOSITY



TIER-SPECIFIC PACK
COLOURS HELP YOU TO
FIND YOUR OIL QUICKLY

THE TECHNOLOGY BEHIND **SHELL ADVANCE**

As a biker, you want to keep your bike in peak condition, making it responsive to your slightest touch. You can tell if it is in peak condition from the sound of your bike and from how it feels when you ride it.

As motorcycle experts, we know that when your bike is in peak condition it offers you a high degree of reliability and enhanced control, giving you an enjoyable ride at all times. The technology that we have developed for the new Shell Advance range of motorcycle oils helps to enhance each of these aspects of your bike.



RCE TECHNOLOGY

The new RCE technology of Shell Advance helps to keep your bike in peak condition, making it responsive to your slightest touch. RCE technology

- delivers exceptional **R**eliability of oil performance through careful formulation of the highest quality additives and base oils to enhance engine protection
- enhances **C**ontrol by helping to optimise gear changes, smooth clutch engagement and prevent slippage
- increases ride **E**njoyment by reducing vibration and dampening engine noise.

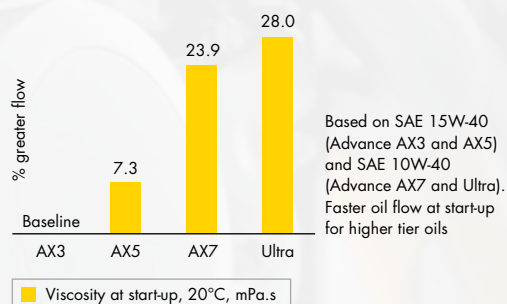


RCE TECHNOLOGY DELIVERS RELIABILITY OF OIL PERFORMANCE

Oil performance reliability leads to enhanced engine protection, thereby improving the reliability of your vehicle. Shell Advance products offer protection in five vital areas: start-up, oxidation control, piston deposit control, sludge control and valve train and gear protection.

START-UP PROTECTION

Engine wear begins as soon as the engine is started, so the low-temperature viscosity of lubricants is crucial for the protection and the smooth running of a bike. A cold-cranking simulator test checks the low-temperature performance of lubricants when starting a cold engine. These tests have shown that Shell Advance oils help to maintain the right viscosity and protect the engine from the moment it starts.

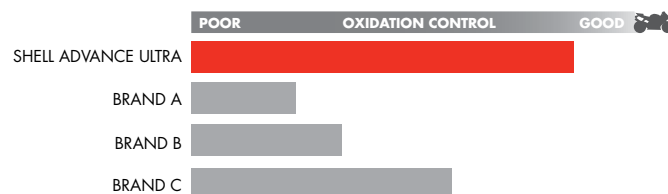


Tests have shown that Shell Advance Ultra can flow up to 28% faster than a conventional mineral-based oil (such as Shell Advance AX3) at ambient temperature.

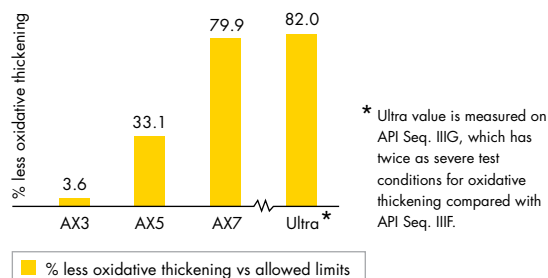
OXIDATION CONTROL

Over time, the oil in your bike will degrade. This process leads to a build-up of acids and increasing oil viscosity, which reduce your engine's performance and the protection that the oil can offer. The superior oxidation control of Shell Advance oil helps to maintain your bike's performance and protect its engine for longer.

Shell Advance motorcycle oils contain special antioxidant agents that help to counteract the oil degradation and maintain its viscosity.



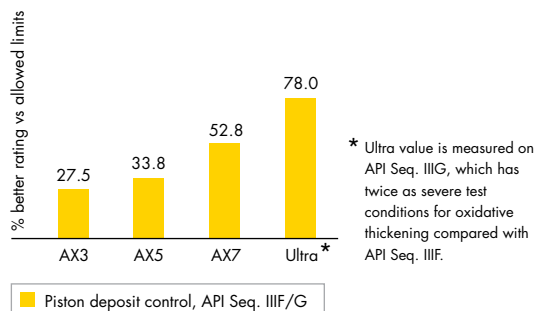
In oxidation control tests, Shell Advance Ultra outperformed corresponding oil from three competitors.



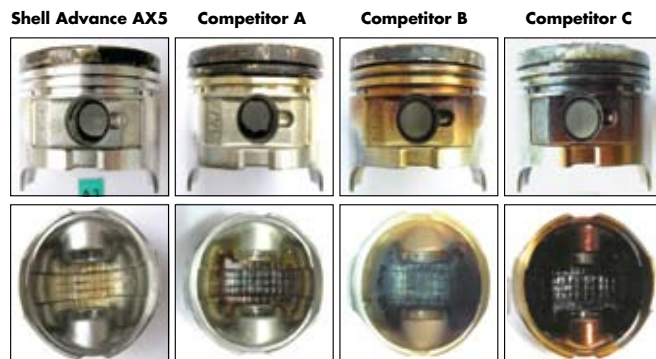
The API Sequence IIIF and IIIG engine tests measure oxidative oil thickening over simulated high-temperature motorway service conditions. The oil viscosity after the test is compared against the original fresh oil. The chart shows the percentage less oxidative thickening versus the allowed limits in the Sequence IIIF and IIIG tests. Shell Advance beat the test limits across the product range.

PISTON DEPOSIT CONTROL

If pistons are not kept clean, ring sticking, start-up problems or engine seizure may occur. The additives we use in Shell Advance oils help to keep piston rings moving freely, clean the engine, neutralise the corrosive acids that form as fuel is burned and maintain oil viscosity at high temperatures without causing unwanted deposits.



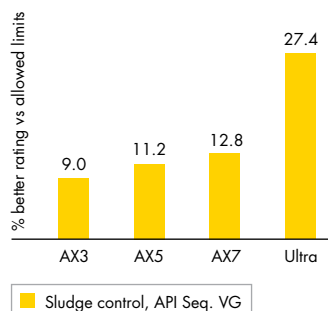
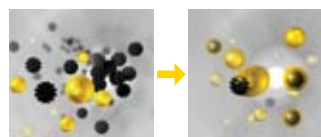
Standard industry tests such as API Sequence IIIF and IIIG show excellent piston deposit control, even for Shell Advance AX3, and increasing performance as you go up the tiers.



These are images of pistons taken from bike engines that were put through stringent field trials (11,000 km in the tough driving environment of Bangkok). Pistons from bikes that ran on Shell Advance AX5 were much cleaner than those running on other oils.

SLUDGE CONTROL

The intense heat and shear forces generated by motorbike engines can break down your oil and release small carbon particles into the engine. Over time, these could accumulate and form sludge deposits. Shell Advance products remove these carbon particles, and this helps to maintain engine performance and high levels of protection.



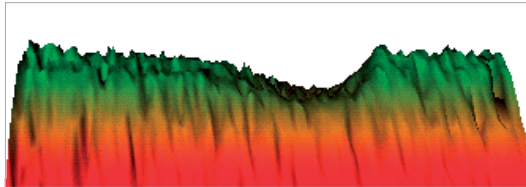
The API Sequence VG test evaluates the ability of an engine oil to prevent sludge and varnish formation under moderate temperatures and simulated stop-start operation. Merit rating allowed: 7.8 minimum; 10.0 is completely clean

Industry-standard API Sequence VG tests have shown that the special additives used in Shell Advance oils give much better sludge ratings compared with the allowed limits, and that performance increases as you go up the tiers.

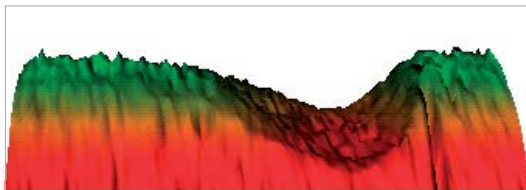
VALVE TRAIN AND GEAR PROTECTION

The valve train is a critical part of the engine where there is high-pressure contact at very high temperatures. It is important to minimise wear on this critical engine component. Shell Advance products offer excellent valve train protection.

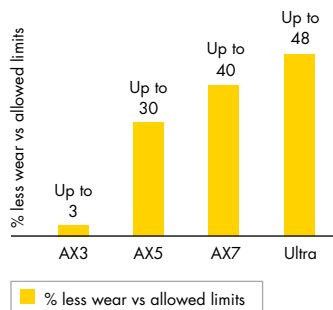
SHELL ADVANCE AX3



BRAND A



A Shell-designed wear rig was used to simulate the valve-train wear performance between two oils. The test, which is designed to replicate actual engine conditions, shows that Shell Advance AX3 gave a much lower wear scar volume compared to the equivalent competitor oil.



The API Sequence IVA test evaluates a lubricant's performance in preventing valve train wear. Test results show good valve train wear protection even for Advance AX3, and increasing performance as you go up the tiers.

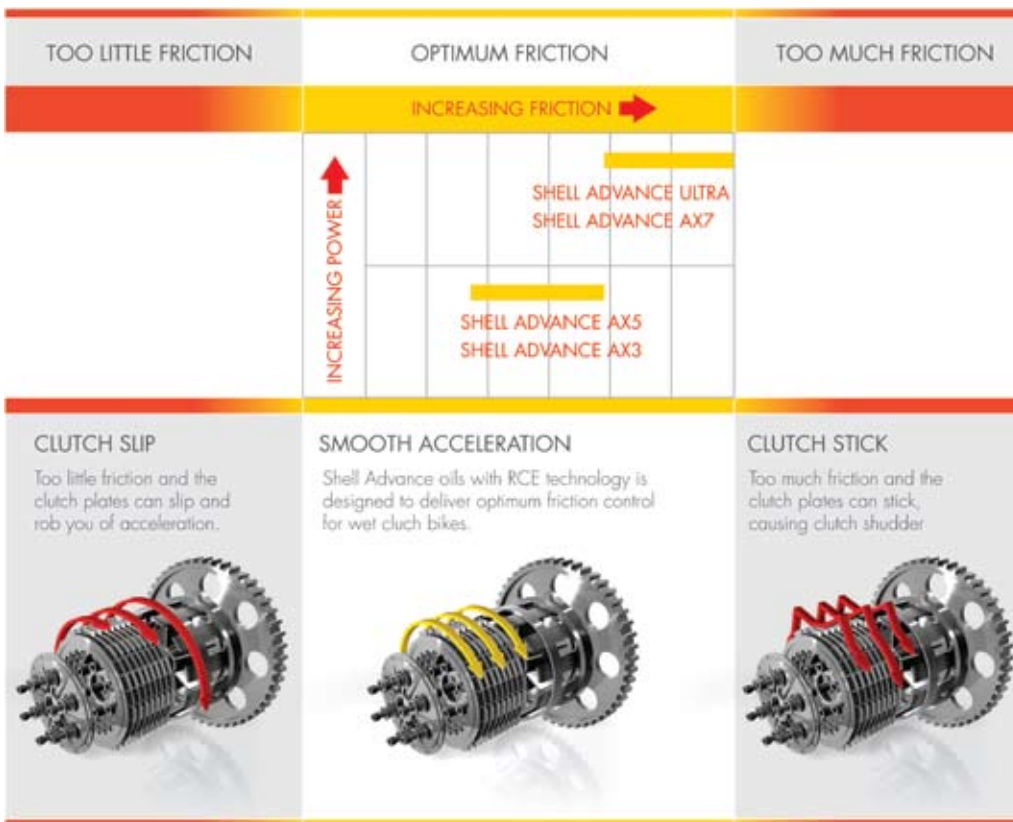
In comparing the anti-wear performance of Shell Advance AX3 against a competitor's oil, we found that Shell Advance AX3 provided excellent wear protection and that the competitor's oil failed to protect the valve train. The scar volume with the competitor's oil was 2.7 times larger than with Shell Advance AX3.

Valve wear protection increases up the Shell Advance range from AX3 to Ultra.



RCE TECHNOLOGY DELIVERS CONTROL

Friction is a vital force for bikers. Most motorbikes, unlike cars, have a wet clutch, so oil performance in the clutch assembly is vital for smooth acceleration and efficient power transfer. The most crucial and hardest working components of a motorcycle clutch are the clutch plates. Having the correct amount of friction between the plates leads to smooth acceleration, giving the biker a feeling of control over the bike. If there is too little friction, the clutch plate may slip and reduce or even prevent acceleration. If there is too much friction, the clutch plates may stick and cause shudder. Shell Advance oils deliver optimised friction control, which helps them to meet the JASO MA and JASO MA2 standards.



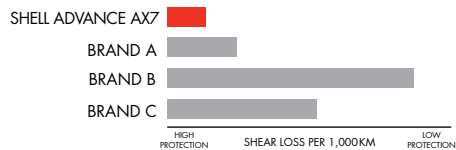
Having optimum friction between the clutch plates gives the biker a feeling of control over the bike.

RCE TECHNOLOGY DELIVERS A MORE **ENJOYABLE** RIDE

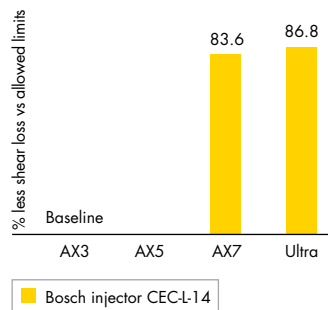
Unlike car drivers, who are well insulated from engine noise, bikers sit almost directly on the engine. This makes noise and vibration important factors in the riding experience.

Shell Advance AX7 and Shell Advance Ultra motorcycle oils contain viscosity improvers that make them highly shear stable, which helps to dampen vibration and reduce engine noise.

As you choose higher tiers in Shell Advance range, the shear stability parameters improve significantly.




In this field trial, Shell Advance AX7 had better shear stability than premium oils from three competitors. Shell Advance Ultra retained its properties and was less damaged by the engine's moving parts.



Shell Advance AX7 and Shell Advance Ultra both offer outstanding shear stability performance.

CHOOSE THE RIGHT OIL FOR YOUR BIKE

Choosing the right oil is a crucial decision. The Shell Advance range puts you in control by offering a selection of products that can deliver stepped improvements in oil performance **R**eliability, **C**ontrol and **E**njoyment. Each oil is designed for a specific type of bike, but also offers superior performance for bikes of lower capacity.

		COMPARED TO	 AX3	 AX5	 AX7	 ULTRA	BENEFIT
RELIABILITY OF OIL PERFORMANCE	START-UP PROTECTION ¹	AX3	N/A	UP TO 7.3% MORE	UP TO 23.9% MORE	UP TO 28% MORE	Optimised oil flow and engine protection as soon as you start the bike
	OXIDATION CONTROL ²	STANDARD INDUSTRY TEST LIMITS	3.6% BETTER	33.% BETTER	79.9% BETTER	82% BETTER ³	Reduces oil degradation to keep oil younger for longer
	PISTON DEPOSIT CONTROL ⁴		27.5% BETTER	33.8% BETTER	52.8% BETTER	78% BETTER ²	Helps keep piston rings moving freely
	SLUDGE CONTROL ⁴		9% BETTER	11.2% BETTER	12.8% BETTER	27.4% BETTER	Reduces the deposits that accumulate on engine surfaces
	VALVE TRAIN PROTECTION ⁵		UP TO 3%	UP TO 30%	UP TO 40%	UP TO 48%	Protects your engine components from wear
CONTROL VIA SMOOTHER GEAR SHIFTS	OPTIMISED FRICTION CONTROL	JASO CLUTCH FRICTION TESTS	MEETS JASO MA ⁶	MEETS JASO MA	MEETS JASO MA2	MEETS JASO MA2	Improves clutch performance and gear changes
ENJOYABLE RIDE	VIBRATION REDUCTION ⁷	AX3	N/A	SAME	83.6% BETTER	86.8% BETTER	Provides greater comfort and enjoyment

¹ CCS test: viscosity at start-up, 20°C, mPa.s
Sequence IIIF/G engine test: oxidative thickening: % KV 100 increase
Sequence IIIF/G engine test: ratings on weighted piston deposits

⁴ Sequence VG engine test: ratings on sludge and varnish
⁵ Sequence IVA engine test: Valve train wear in µm
⁶ Bosch Injector CEC-L-14: shear stability





⁷ Not applicable For AX3 SAE 40
Results from API Seq IIIF test, which is twice as severe as Seq IIIF

Each of the RCE technology factors improves if you choose a higher tier Shell Advance product.

Every product in the Shell Advance range is designed for a particular type of bike and riding style, so choosing the right oil could not be simpler. By answering three questions, you can be sure you will find the oil you need:

- **What kind of bike do you ride?**
- **How old is your bike?**
- **What is your riding style?**

The table below is a simple guide to help you choose the right product for your bike and riding style.

STEP 1		STEP 2		STEP 3		STEP 4	
DESCRIBE THE BIKE YOU RIDE		SELECT THE AGE OF YOUR BIKE		THINK ABOUT THE WAY YOU RIDE		SELECT THE RIGHT SHELL ADVANCE PRODUCT	
	HIGH-PERFORMANCE BIKE, LARGE ENGINE	< 3 YEARS OLD	IN ALL CONDITIONS		ULTRA		
			FREQUENT STOPS, SHORT TRIPS		ULTRA		
		> 3 YEARS OLD	CONSTANT SPEED, LONGER TRIPS		AX7		
	STANDARD MOTORBIKE, MID-SIZE ENGINE	< 3 YEARS OLD	FREQUENT STOPS, SHORT TRIPS		ULTRA		
			CONSTANT SPEED, LONGER TRIPS		AX7		
		> 3 YEARS OLD	FREQUENT STOPS, SHORT TRIPS		AX7		
		< 3 YEARS OLD	CONSTANT SPEED, LONGER TRIPS		AX5		
		> 3 YEARS OLD					
	FOUR-STROKE MOPED/UNDERBONE, WITH SMALL, HARD-WORKING ENGINE	< 3 YEARS OLD	FREQUENT STOPS, SHORT TRIPS		AX7		
			CONSTANT SPEED, LONGER TRIPS		AX5		
		> 3 YEARS OLD	FREQUENT STOPS, SHORT TRIPS		AX5		
				CONSTANT SPEED, LONGER TRIPS		AX3	

Choosing the right oil for your bike is easy with Shell Advance.

THE SHELL ADVANCE RANGE

FOUR-STROKE ENGINES

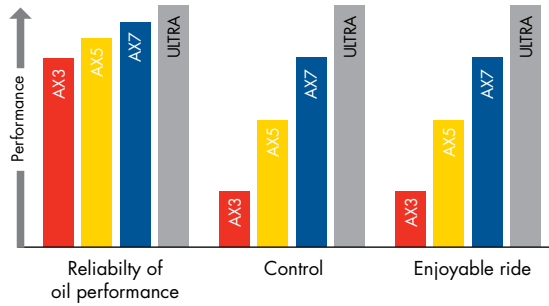
The Shell Advance range

Four-stroke engines, including scooters and cold-start formulations

	Shell Advance AX3	Shell Advance AX5	Shell Advance AX7	Shell Advance Ultra
Designed for	Underbones and mopeds with small, hot-running engines	Standard motorbikes with mid-sized engines used for stop-start commuter journeys	High-performance motorbikes with demanding engines	Shell's ultimate protection and performance for all modern motorbikes
Enhances the performance of		Underbones and mopeds with small, hot-running engines	Standard motorbikes with mid-sized engines used for stop-start commuter journeys	
Oil type				
Fully synthetic				
Semi-synthetic				
Premium mineral				
Standard mineral				
Benefits				
Reduces vibration				
Smooths clutch engagement				
Stays in grade longer				
Protects against valve train wear				
Removes engine deposits				
Viscosities and specifications	<p>Viscosity grades: SAE J 300 15W-40, 20W-40, 20W-50 and SAE 40</p> <p>All formulations meet: API SG and JASO MA*</p> <p><small>*except AX3 SAE 40, which is API SG only</small></p>	<p>Viscosity grades: SAE J 300 10W-30, 10W-40, 15W-40, 15W-50, 20W-40 and 20W-50</p> <p>All formulations meet: API SL and JASO MA</p>	<p>Viscosity grades: SAE J 300 10W-30, 10W-40 and 15W-50</p> <p>All formulations meet: API SL and JASO MA2</p>	<p>Viscosity grades: SAE J 300 10W-40 and 15W-50</p> <p>Both formulations meet: API SM and JASO MA2</p>

The Shell Advance portfolio provides increasing benefits through the product range and increasing oil performance reliability, control and ride enjoyment as you go up the product tiers.

SHELL ADVANCE PORTFOLIO PERFORMANCE GRID



The performance levels of RCE technology increase up the product tiers.





SCOOTERS

Shell Advance has a range specially designed for modern four-stroke scooter engines with automatic transmissions. It is not suitable for motorcycles with wet clutches.



SHELL ADVANCE 4T ULTRA SCOOTER

SYNTHETIC FOUR-STROKE SCOOTER ENGINE OIL

Shell Advance 4T Ultra Scooter for Shell's ultimate protection and performance for all modern scooters. Fully synthetic premium formulation. With RCE technology. Helps a scooter to perform to peak potential, making it responsive.

Viscosity grade: SAE J 300 5W-40. Formulation meets: API SM, JASO MB



SHELL ADVANCE 4T AX7 SCOOTER

SYNTHETIC TECHNOLOGY FOUR-STROKE SCOOTER ENGINE OIL

Shell Advance 4T AX7 Scooter is for four-stroke scooters with engines under high stress owing to daily commutes in start-stop traffic. Semi-synthetic formulation. With RCE technology. Helps a scooter to perform to peak potential, making it responsive.

Viscosity grade: SAE J 300 10W-40. Formulation meets: API SL, JASO MB

COLD START

Shell Advance also has a special oil formulation for cold conditions.



SHELL ADVANCE 4T AX3 COLD START

MINERAL FOUR-STROKE MOTORCYCLE ENGINE OIL

Shell Advance AX3 engine oil for underbones and mopeds in cold climates with small, hot-running engines. Specially formulated to help offer reliable start-up in cold climates. With RCE technology. Helps a bike to perform to peak potential, making it responsive.

Viscosity grades: SAE J 300 10W-30 and SAE J 300 SW-30.
Formulation meets: API SG, JASO MA

TWO-STROKE ENGINES

The Shell Advance portfolio includes products for two-stroke engines that have been developed to help riders get the most from their bikes. All the products in the two-stroke range meet or exceed international specifications (JASO, ISO, API).



SHELL ADVANCE ULTRA 2

Fully synthetic oil for all modern two-stroke bikes, scooters and snow scooters (oil injection or premix). With Dynamic Performance Additive (DPA) technology to help keep your engine clean and protected. Helps control carbon deposits in the exhaust system. Ultra-low smoke. For Shell's ultimate performance.

Meets JASO FD, API TC, ISO-L-EGD



SHELL ADVANCE VSX 2

Synthetic technology oil for modern two-stroke bikes, scooters and snow scooters (oil injection or premix). With DPA technology to help keep your engine clean and protected. Excellent piston scuffing protection. Low smoke. Available in two formulations.

One meets JASO FC, ISO-L-EGC, API TC; the other meets JASO FD, ISO-L-EGD, API TC



SHELL ADVANCE SX 2

Shell Advance SX2 is a two-stroke mineral oil suitable for all bikes (oil injection or premix) and all riding conditions. With DPA technology to help keep your engine clean and protected. Available in two formulations: pre-diluted and solvent-free.

Meets JASO FB, ISO-L-EGD





