

SHELL LUBRICANTS APPLICATION GUIDE



1a HYDRAULIC SYSTEM



3a DIFFERENTIAL AND FINAL DRIVE
3b DRIVESHAFT CROSS JOINTS AND SPLINES
3c POWER SHIFT TRANSMISSION



2a DIESEL ENGINE
2b TRANSFER BOX



4a ARTICULATION PIVOT
4b CHASSIS PIVOT PINS
4c BUCKET PINS



KEY OPERATIONAL CHALLENGES	SOLUTIONS	WEAR PROTECTION AND DEPOSIT CONTROL FOR LONG ENGINE LIFE	LONG OIL LIFE FOR FEWER CHANGES AND REDUCED PRODUCT CONSUMPTION	FOR CLEANLINESS, LOW EMISSIONS AND FUEL ECONOMY
ENGINES <ul style="list-style-type: none"> Bad road conditions: Dust and sand can cause abrasive wear that leads to reduced engine efficiency and higher fuel consumption When engines are overloaded, or operate in mountainous areas, they run hotter leading to oil oxidation and sludge formation that can cause blockages and equipment breakdowns 	SHELL RIMULA R5 LE 10W-40	✓ ✓ ✓ ✓ ✓	✓ ✓ ✓ ✓ ✓	✓ ✓ ✓ ✓ ✓
	SHELL RIMULA R4 L 15W-40	✓ ✓ ✓ ✓ ✓	✓ ✓ ✓ ✓ ✓	✓ ✓ ✓ ✓ ✓
	SHELL RIMULA R4 X 15W-40	✓ ✓ ✓ ✓ ✓	✓ ✓ ✓ ✓ ✓	✓ ✓ ✓ ✓ ✓
TRANSMISSIONS <ul style="list-style-type: none"> Lubricant must have low viscosity at low starting temperatures At high temperatures the lubricant must build a strong lubricating film to protect the heavily loaded bearings and gears Lots of heat produced so the lubricant must resist oxidation 	SHELL SPIRAX S4 CX 30 / 10W	✓ ✓ ✓ ✓ ✓	✓ ✓ ✓ ✓ ✓	✓ ✓ ✓ ✓ ✓
	SHELL TELLUS S2 VX	✓ ✓ ✓ ✓ ✓	✓ ✓ ✓ ✓ ✓	✓ ✓ ✓ ✓ ✓
	SHELL TELLUS S2 MX	✓ ✓ ✓ ✓ ✓	✓ ✓ ✓ ✓ ✓	✓ ✓ ✓ ✓ ✓
HYDRAULICS <ul style="list-style-type: none"> If air is not released quickly there is a decrease in pressure and overall efficiency. This can cause bubbles to explode, reducing the volume of the high-pressure lubricant When deposits are formed, efficiency and precision are affected Stick-slipping can occur if seals are unprotected 	SHELL SPIRAX S3 ALS 80W-90 (LIMITED SLIP)	✓ ✓ ✓ ✓ ✓	✓ ✓ ✓ ✓ ✓	✓ ✓ ✓ ✓ ✓
	SHELL SPIRAX S2 AX 80W-90	✓ ✓ ✓ ✓ ✓	✓ ✓ ✓ ✓ ✓	✓ ✓ ✓ ✓ ✓
	SHELL GADUS S3 V220C 2	✓ ✓ ✓ ✓ ✓	✓ ✓ ✓ ✓ ✓	✓ ✓ ✓ ✓ ✓
REAR AXLES <ul style="list-style-type: none"> Extend oil drain intervals and maximise component life Improve fuel economy Dirty environment High temperature due to limited cooling through air flow 	SHELL GADUS S2 V220 2	✓ ✓ ✓ ✓ ✓	✓ ✓ ✓ ✓ ✓	✓ ✓ ✓ ✓ ✓
	SHELL GADUS S3 V220C 2	✓ ✓ ✓ ✓ ✓	✓ ✓ ✓ ✓ ✓	✓ ✓ ✓ ✓ ✓
WHEEL BEARINGS <ul style="list-style-type: none"> Water resistance or washout resistance Rust inhibition to protect against corrosion Anti-wear and extreme-pressure additives 	SHELL GADUS S3 V220C 2	✓ ✓ ✓ ✓ ✓	✓ ✓ ✓ ✓ ✓	✓ ✓ ✓ ✓ ✓
	SHELL GADUS S2 V220 2	✓ ✓ ✓ ✓ ✓	✓ ✓ ✓ ✓ ✓	✓ ✓ ✓ ✓ ✓



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1a HYDRAULIC SYSTEM



3a TRANSMISSIONS: UTTO
3b TRANSMISSIONS: STOU
3c AXLES



4a BUSHES AND TRUCK PINS



2a DIESEL ENGINE – HIGH ASH
2b DIESEL ENGINE – LOW ASH



KEY OPERATIONAL CHALLENGES	SOLUTIONS	WEAR PROTECTION AND DEPOSIT CONTROL FOR LONG ENGINE LIFE	LONG OIL LIFE FOR FEWER CHANGES AND REDUCED PRODUCT CONSUMPTION	FOR CLEANLINESS, LOW EMISSIONS AND FUEL ECONOMY
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	SHELL RIMULA R4 L 15W-40	✓ ✓ ✓ ✓ ✓	✓ ✓ ✓ ✓ ✓	✓ ✓ ✓ ✓ ✓
	SHELL RIMULA R4 X 15W-40	✓ ✓ ✓ ✓ ✓	✓ ✓ ✓ ✓ ✓	✓ ✓ ✓ ✓ ✓
UNIVERSAL TRACTOR TRANSMISSION OIL (UTTO) <ul style="list-style-type: none"> Extend oil drain intervals and maximise component life Improve fuel economy as the transmission affects efficiency of machine Dirty environment Presence of water OEM warranty is important for new machines 	SHELL SPIRAX S4 TXM	✓ ✓ ✓ ✓ ✓	✓ ✓ ✓ ✓ ✓	✓ ✓ ✓ ✓ ✓
HYDRAULICS <ul style="list-style-type: none"> If air is not released quickly there is a decrease in pressure and overall efficiency. This can cause bubbles to explode, reducing the volume of the high-pressure lubricant When deposits are formed, efficiency and precision are affected Stick-slipping can occur if seals are unprotected 	SHELL TELLUS S2 VX	✓ ✓ ✓ ✓ ✓	✓ ✓ ✓ ✓ ✓	✓ ✓ ✓ ✓ ✓
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	SHELL SPIRAX S2 AX 80W-90	✓ ✓ ✓ ✓ ✓	✓ ✓ ✓ ✓ ✓	✓ ✓ ✓ ✓ ✓
WHEEL BEARINGS <ul style="list-style-type: none"> Water resistance or washout resistance Rust inhibition to protect against corrosion Anti-wear and extreme-pressure additives 	SHELL GADUS S3 V220C 2	✓ ✓ ✓ ✓ ✓	✓ ✓ ✓ ✓ ✓	✓ ✓ ✓ ✓ ✓
	SHELL GADUS S2 V220 2	✓ ✓ ✓ ✓ ✓	✓ ✓ ✓ ✓ ✓	✓ ✓ ✓ ✓ ✓



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1a DIESEL ENGINE



- 2a STEERING KING PINS
- 2b BRAKE CAMS
- 2c BRAKE SLACK ADJUSTERS
- 2d DRIVESHAFT CROSS JOINTS AND SPLINES
- 2e SUSPENSION SPRING PINS
- 2f HANGER PINS
- 2g SPRING PIVOT
- 2h WHEEL HUB BEARINGS



- 3a GEARBOX AND MANUAL TRANSMISSION
- 3b AUTOMATIC TRANSMISSION
- 3c STEERING SYSTEM AND LINKS
- 3d REAR AXLE



KEY OPERATIONAL CHALLENGES	SOLUTIONS	WEAR PROTECTION AND DEPOSIT CONTROL FOR LONG ENGINE LIFE	LONG OIL LIFE FOR FEWER CHANGES AND REDUCED PRODUCT CONSUMPTION	FOR CLEANLINESS, LOW EMISSIONS AND FUEL ECONOMY
ENGINES Your business success depends on your ability to: <ul style="list-style-type: none"> ■ Extend oil drain intervals ■ Maximise engine life ■ Improve fuel economy ■ Extend diesel particulate filter replacement intervals ■ Control exhaust emissions 	SHELL RIMULA ULTRA 5W-30	✓ ✓ ✓ ✓ ✓	✓ ✓ ✓ ✓ ✓	✓ ✓ ✓ ✓ ✓
	SHELL RIMULA R6 LM 10W-40	✓ ✓ ✓ ✓ ✓	✓ ✓ ✓ ✓ ✓	✓ ✓ ✓ ✓ ✓
	SHELL RIMULA R4 L 15W-40	✓ ✓ ✓ ✓ ✓	✓ ✓ ✓ ✓ ✓	✓ ✓ ✓ ✓ ✓
AUTOMATIC TRANSMISSIONS <ul style="list-style-type: none"> ■ Extend oil drain intervals ■ Maximise engine life ■ Improve fuel economy ■ OEM approvals for extended warranty and extended drain conditions for ZF, Allison and Voith 	SHELL SPIRAX S6 ATF ZM (ZF TRANSMISSIONS)	✓ ✓ ✓ ✓ ✓	✓ ✓ ✓ ✓ ✓	✓ ✓ ✓ ✓ ✓
	SHELL SPIRAX S6 ATF A295 (ALLISON TRANSMISSIONS)	✓ ✓ ✓ ✓ ✓	✓ ✓ ✓ ✓ ✓	✓ ✓ ✓ ✓ ✓
	SHELL SPIRAX S4 ATF HDX	✓ ✓ ✓ ✓ ✓	✓ ✓ ✓ ✓ ✓	✓ ✓ ✓ ✓ ✓
REAR AXLES <ul style="list-style-type: none"> ■ Extend oil drain intervals ■ Maximise engine life ■ Improve fuel economy 	SHELL SPIRAX S6 AXME 75W-90	✓ ✓ ✓ ✓ ✓	✓ ✓ ✓ ✓ ✓	✓ ✓ ✓ ✓ ✓
	SHELL SPIRAX S3 AX 80W-90	✓ ✓ ✓ ✓ ✓	✓ ✓ ✓ ✓ ✓	✓ ✓ ✓ ✓ ✓
WHEEL BEARINGS <ul style="list-style-type: none"> ■ Water resistance or washout resistance ■ Rust inhibition to protect against corrosion ■ Anti-wear and extreme-pressure additives 	SHELL GADUS S3 V220C 2	✓ ✓ ✓ ✓ ✓	✓ ✓ ✓ ✓ ✓	✓ ✓ ✓ ✓ ✓
	SHELL GADUS S2 V220 2	✓ ✓ ✓ ✓ ✓	✓ ✓ ✓ ✓ ✓	✓ ✓ ✓ ✓ ✓



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1a DIESEL ENGINE



3a GEARBOX AND MANUAL TRANSMISSION

3b STEERING SYSTEM AND LINKS

3c REAR AXLE



2a STEERING KING PINS

2b DRIVESHAFT CROSS JOINTS AND SPLINES

2c SUSPENSION SPRING PINS

2d FIFTH WHEEL TURNTABLE

2e WHEEL HUB BEARINGS

2f BRAKE SLACK ADJUSTERS

2g SPRING PIVOT

2h HANGER PINS

2i BRAKE CAMS



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	SHELL RIMULA R6 LM 10W-40	✓ ✓ ✓ ✓ ✓	✓ ✓ ✓ ✓ ✓	✓ ✓ ✓ ✓ ✓
	SHELL RIMULA R4 L 15W-40	✓ ✓ ✓ ✓ ✓	✓ ✓ ✓ ✓ ✓	✓ ✓ ✓ ✓ ✓
GEARBOX AND MANUAL TRANSMISSIONS <ul style="list-style-type: none"> ■ Extend oil drain intervals ■ Maximise engine life ■ Improve fuel economy 	SHELL SPIRAX S6 GXME 75W-80	✓ ✓ ✓ ✓ ✓	✓ ✓ ✓ ✓ ✓	✓ ✓ ✓ ✓ ✓
	SHELL SPIRAX S4 AX 80W-90	✓ ✓ ✓ ✓ ✓	✓ ✓ ✓ ✓ ✓	✓ ✓ ✓ ✓ ✓
REAR AXLES <ul style="list-style-type: none"> ■ Extend oil drain intervals ■ Maximise engine life ■ Improve fuel economy 	SHELL SPIRAX S6 AXME 75W-90	✓ ✓ ✓ ✓ ✓	✓ ✓ ✓ ✓ ✓	✓ ✓ ✓ ✓ ✓
	SHELL SPIRAX S2 AX 80W-90 / 85W-140	✓ ✓ ✓ ✓ ✓	✓ ✓ ✓ ✓ ✓	✓ ✓ ✓ ✓ ✓
5TH WHEEL TURNTABLE <ul style="list-style-type: none"> ■ Water resistance or washout resistance ■ Rust inhibition ■ Anti-wear and extreme-pressure additives Note: The top plate requires exceptional adhesiveness and very high content of solid lubricants	SHELL GADUS S3 V460D 2	✓ ✓ ✓ ✓ ✓	✓ ✓ ✓ ✓ ✓	✓ ✓ ✓ ✓ ✓
	SHELL GADUS S2 V220AD 2	✓ ✓ ✓ ✓ ✓	✓ ✓ ✓ ✓ ✓	✓ ✓ ✓ ✓ ✓
WHEEL BEARINGS <ul style="list-style-type: none"> ■ Water resistance or washout resistance ■ Rust inhibition to protect against corrosion ■ Anti-wear and extreme-pressure additives 	SHELL GADUS S3 V220C 2	✓ ✓ ✓ ✓ ✓	✓ ✓ ✓ ✓ ✓	✓ ✓ ✓ ✓ ✓
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