



Industrial Technology

## Assali per trattori, trasmissioni per macchine da raccolta e trasmissioni finali

## Tabella dei lubrificanti TE-ML 21

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### 1. Classi di lubrificanti benestariati

Gruppi di prodotto	Classi di lubrificanti <sup>(1)</sup>	
	Primo riempimento <sup>(2)</sup>	Riempimento di servizio <sup>(3)</sup>
<b>Assali</b> APL-300, APL-700 AS-2000, AS-3000	<a href="#">ZF PowerFluid Gear LS</a> 21C / 21N	<a href="#">ZF PowerFluid Gear LS</a> <a href="#">ZF PowerFluid Plus</a> 21C / 21E / 21F / 21G / 21N
TerraSteerAxle (TSA), TerraDriveAxle (TDA)	<a href="#">ZF PowerFluid Gear LS</a> <a href="#">ZF PowerFluid Plus</a> 21C / 21E / 21F / 21G / 21N	<a href="#">ZF PowerFluid Gear LS</a> <a href="#">ZF PowerFluid Plus</a> 21C / 21E / 21F / 21G / 21N
<b>Trasmissioni per macchine da raccolta</b> 2MD40 3MD30, 3MD35, 3MD40	21A	21A
<b>Semiassi ZF</b> (riduttori epicicloidali finali) per trasmissioni per trattori Ecom, Terramatic, Terrapower, T-7000 e S-Matic	<a href="#">ZF PowerFluid Gear LS</a> <a href="#">ZF PowerFluid Plus</a> 21A / 21C / 21G / 21N	<a href="#">ZF PowerFluid Gear LS</a> <a href="#">ZF PowerFluid Plus</a> 21A / 21C / 21G / 21N
<b>Trasmissioni finali per macchine da raccolta</b> S-800, S-950, S-1050, S-1250	21A	21A

La tabella dei lubrificanti TE-ML 21, **edizione 01.04.2024** sostituisce tutte le edizioni precedenti. La rispettiva tabella dei lubrificanti aggiornata può essere richiesta ad ogni punto di appoggio e servizio assistenza ZF oppure consultata sul sito Internet [www.aftermarket.zf.com/lubricants](http://www.aftermarket.zf.com/lubricants).

**ZF Friedrichshafen AG**  
D-88038 Friedrichshafen  
[www.zf.com/contact](http://www.zf.com/contact)

## 2. Intervalli di sostituzione dell'olio








### 2.1 Intervallo di prima sostituzione dell'olio

Classe dei lubrificanti	21A	ZF PowerFluid Gear LS 21C / 21F / 21N	ZF PowerFluid Plus 21E / 21G
<b>Gruppi di prodotto</b>	<b>Intervallo di prima sostituzione dell'olio</b>		
Assali APL, AS, TSA, TDA	-	1500 h <sup>(4)</sup>	1500 h <sup>(4)</sup>
Trasmissioni per macchine da raccolta	500 h	-	-
Semiassi ZF	500 h	500 h <sup>(4)</sup>	500 h <sup>(4)</sup>
Trasmissioni finali per macchine da raccolta	500 h	-	-

### 2.2 Intervalli di sostituzione dell'olio seguenti

Classe dei lubrificanti	21A	ZF PowerFluid Gear LS 21C / 21F / 21N	ZF PowerFluid Plus 21E / 21G
<b>Gruppi di prodotto</b>	<b>Intervalli di sostituzione dell'olio seguenti</b>		
Assali APL, AS, TSA, TDA	-	1500 h	3000 h
Trasmissioni per macchine da raccolta	1000 h	-	-
Semiassi ZF	1000 h	1000 h	1000 h
Trasmissioni finali per macchine da raccolta	1000 h	-	-

## 3. Oli idraulici

Gruppi di prodotto	Lubrificanti ammessi per riempimento servizio <sup>(1)</sup>	Utilizzo con temperatura esterna a partire da
Impianto idraulico freno, blocco differenziale idraulico (DHL) e sterzo	21L	- 40°C 
	Lubrificanti secondo JDM J20D	- 40°C 
	21E / 21F (solo Lubrificanti secondo JDM J20C), 21G	- 30°C 
	21K	- 30°C 
	21M (ISO VG 32)	- 40°C  + 20°C
	21M (ISO VG 46)	- 10°C 
	21M (ISO VG 68)	- 5°C 

## 4. Zone di ingrassaggio

Gruppi di prodotto	Grasso di lubrificazione
Tutti	Grasso universale saponificato a base di litio mescolabile con olio minerale della classe NLGI 2 (denominazione del grasso KP2K-30 secondo DIN 51825 oppure ISO-L-XCCHB2 secondo ISO 6743-9). Intervalli di lubrificazione secondo rispettivi prescrizioni di lubrificazione e manutenzione

## 5. Spiegazione di note a piè di pagina ed osservazioni

### Note a piè di pagina

- (1) **Per prodotti commerciali validati vedi seguenti pagine.**
- (2) Primo riempimento: Per il primo riempimento e per i riempimenti durante la fase di rodaggio del cambio (percorrenza inferiore a 1.000 h) è prescritto l'utilizzo dei lubrificanti delle classi di lubrificanti elencate.
- (3) Riempimento di servizio: I lubrificanti delle classi di lubrificanti elencate vanno utilizzati per le sostituzioni di servizio secondo gli intervalli di sostituzione dell'olio riportati nel par. 2.2.
- (4) Il riempimento originale di fabbrica ZF deve rimanere nell'assale almeno per le prime 500 ore di funzionamento; si sconsigliano cambi d'olio prematuri.

### Osservazioni

Additivi di qualsiasi tipo che vengono aggiunti all'olio **posteriormente** fanno modificare l'olio in un modo da non prevedere e per questo non sono ammissibili. ZF non assume alcuna responsabilità di tutti i danni derivanti dall'uso di tali additivi.







**Produttore (21A)**

SHELL INTERNATIONAL PETROLEUM COMP. LTD, LONDON/GB  
 SHELL INTERNATIONAL PETROLEUM COMP. LTD, LONDON/GB  
 SHELL INTERNATIONAL PETROLEUM COMP. LTD, LONDON/GB  
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 SHELL INTERNATIONAL PETROLEUM COMP. LTD, LONDON/GB  
 SHELL INTERNATIONAL PETROLEUM COMP. LTD, LONDON/GB  
 SINGAPORE PETROLEUM COMPANY LIMITED, SINGAPORE/SG  
 SINOPEC LUBRICANT CO., LTD., BEIJING/CN  
 SINOPEC LUBRICANT CO., LTD., BEIJING/CN  
 SINOPEC LUBRICANT CO., LTD., BEIJING/CN  
 SRS SCHMIERSTOFF VERTRIEB GMBH, SALZBERGEN/DE  
 SRS SCHMIERSTOFF VERTRIEB GMBH, SALZBERGEN/DE  
 SRS SCHMIERSTOFF VERTRIEB GMBH, SALZBERGEN/DE  
 SRS SCHMIERSTOFF VERTRIEB GMBH, SALZBERGEN/DE  
 SRS SCHMIERSTOFF VERTRIEB GMBH, SALZBERGEN/DE  
 SRS SCHMIERSTOFF VERTRIEB GMBH, SALZBERGEN/DE  
 SRS SCHMIERSTOFF VERTRIEB GMBH, SALZBERGEN/DE  
 SRS SCHMIERSTOFF VERTRIEB GMBH, SALZBERGEN/DE  
 SRS SCHMIERSTOFF VERTRIEB GMBH, SALZBERGEN/DE  
 SRS SCHMIERSTOFF VERTRIEB GMBH, SALZBERGEN/DE  
 SRS SCHMIERSTOFF VERTRIEB GMBH, SALZBERGEN/DE  
 SWD LUBRICANTS GMBH & CO.KG, DUISBURG/DE  
 TEDEX S.A., WARSZAWA/PL  
 TEXSA DO BRASIL LTDA, UMUARAMA/PR/BR  
 TEXSA DO BRASIL LTDA, UMUARAMA/PR/BR  
 TEXSA DO BRASIL LTDA, UMUARAMA/PR/BR  
 TEXSA DO BRASIL LTDA, UMUARAMA/PR/BR  
 TOTALENERGIES LUBRIFIANTS, NANTERRE/FR  
 TOTALENERGIES LUBRIFIANTS, NANTERRE/FR  
 TOTALENERGIES LUBRIFIANTS, NANTERRE/FR  
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 TOTALENERGIES LUBRIFIANTS, NANTERRE/FR  
 TOTALENERGIES LUBRIFIANTS, NANTERRE/FR  
 UNIL OPAL, SAUMUR/FR  
 VALVOLINE EUROPE, DORDRECHT/NL  
 VALVOLINE EUROPE, DORDRECHT/NL  
 VALVOLINE EUROPE, DORDRECHT/NL  
 VALVOLINE EUROPE, DORDRECHT/NL  
 VALVOLINE GLOBAL PRODUCTS, LEXINGTON/US  
 VIBRA ENERGIA S.A., DUQUE DE CAXIAS/BR  
 VIBRA ENERGIA S.A., DUQUE DE CAXIAS/BR  
 VIBRA ENERGIA S.A., DUQUE DE CAXIAS/BR  
 WOLF OIL CORPORATION N.V., HEMIKSEM/BE  
 YACCO SAS, ST PIERRE LES ELBEUF/FR  
 ZELLER+GMELIN GMBH&CO.KG, EISLINGEN/DE  
 ZF FRIEDRICHSHAFEN AG, FRIEDRICHSHAFEN/DE

**Denominazione prodotto (21A)**

SHELL SPIRAX S3 AX 80W-90  
 SHELL SPIRAX S3 AD 80W-90  
 SHELL SPIRAX S6 AXME 75W-90  
 SHELL SPIRAX S3 AM 80W-90  
 SHELL SPIRAX HD 80W-90  
 SHELL SPIRAX HD 80W-90  
 SHELL SPIRAX HD 80W-90  
 SHELL SPIRAX S 75W-140  
 SHELL SPIRAX S4 AX (80W-90)  
 SHELL SPIRAX S4 AX (80W-90)  
 SHELL SPIRAX S4 AX (80W-90)  
 SHELL SPIRAX S6 ADME 75W-90  
 SHELL SPIRAX S6 AXME 75W-140  
 SHELL SPIRAX S3 AX 80W-90  
 SHELL SPIRAX S3 AX 85W-140  
 SHELL SPIRAX S4 AX (80W-90)  
 SHELL SPIRAX S3 AX 85W-140  
 SHELL SPIRAX S3 AX 85W-140  
 SHELL SPIRAX S3 AX 85W-140  
 SHELL SPIRAX S3 AX 85W-140  
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 SHELL SPIRAX S3 AX 80W-90  
 SHELL SPIRAX S3 AX 80W-90  
 SHELL SPIRAX S3 AX 80W-90  
 GEARLUBE HG M2 SAE 80W-90  
 SINOPEC GREATWALL VT 75W/90  
 SINOPEC GREATWALL MULTIPURPOSE GEAR OIL 80W-90  
 SINOPEC MULTIPURPOSE-II GEAR OIL 80W-90  
 SRS WIOLIN HYPOID-GETRIEBEÖL 80W-90  
 SRS WIOLIN HYPOID-GETRIEBEÖL 85W-140  
 SRS WIOLIN HYPOID-GETRIEBEÖL 90  
 SRS GETRIEBEFLUID SML 80W-90  
 SRS GETRIEBEFLUID SXL 75W-90  
 SRS WIOLIN HL 5 SAE 80W-90  
 SRS WIOLIN HL 5 SAE 85W-90  
 SRS WIOLIN HGAV 80W-90  
 SRS WIOLIN HL 5 85W-140  
 SWD RHEINOL SYNKROL 5 - SAE 85W140  
 TEDEX SUPER GEAR OIL (TDL) SAE 80W-90  
 TEXSA GEAR MULTI GL-5 85W140  
 TEXSA GEAR MULTI GL-5 90  
 TEXSA GEAR MULTI GL-5 80W90  
 MONTANA DYNAMIC TRACTOGEAR 5 80W90  
 ELF TRANSELF TYPE B 90  
 TRAXIUM DUAL 8 FE 80W-90  
 TRAXIUM AXLE 7 85W-140  
 TRAXIUM DUAL 9 FE 75W-90  
 DYNATRANS HD 80W-90  
 TRAXIUM AXLE 7 85W-90  
 TRAXIUM AXLE 7 85W-90  
 TRANSELF TYPE B 85W-140  
 TRAXIUM AXLE 7 80W-90  
 TRAXIUM AXLE 7 80W-90  
 TRANSELF TYPE B 80W-90  
 TRAXIUM AXLE 9 80W-90  
 TRAXIUM AXLE 9 80W-90  
 TRANSELF TYPE B 80W-90  
 DYNATRANS HD 80W 90  
 TRAXIUM AXLE 8 FE 80W-140  
 DYNATRANS HD 85W-140  
 TRANSELF SYN FE 75W-90  
 GEAR ZF 80W90  
 VALVOLINE HEAVY DUTY TDL PRO 75W-90  
 VALVOLINE HEAVY DUTY AXLE OIL PRO 80W-90 LD  
 VALVOLINE HEAVY DUTY AXLE OIL PRO 75W-140  
 NESTE PRO AXLE TDL 75W-90  
 KUBOTA 80W-90 GEAR LUBRICANT HD  
 LUBRAX TRM 5 SAE 85W-140  
 LUBRAX TRM 5 SAE 90  
 LUBRAX TRM 5 SAE 85W-140  
 WOLF OFFICIALTECH 75W90 GL 5  
 BVX 1000 75W-90  
 DIVINOL MULTI-AXLE 80W90  
 ZF ECOFLUID X SAE 80W-90

**Numero di approvazione ZF**

ZF001233  
 ZF001237  
 ZF001262  
 ZF001292  
 ZF001352  
 ZF001353  
 ZF001354  
 ZF001380  
 ZF001619  
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 ZF001621  
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 ZF003631  
 ZF008218  
 ZF001474  
 ZF006105  
 ZF007142  
 ZF003525  
 ZF009462  
 ZF001684  
 ZF001266

**Classe dei lubrificanti 21C**

Olio per cambi con additivi "limited slip"

Classi di viscosità: SAE 75W-90 / 75W-110 / 75W-140 / 80W-90 / 85W-90 / 90

**Produttore (21C)**

ADDINOL LUBE OIL GMBH, LEUNA/DE  
 ADDINOL LUBE OIL GMBH, LEUNA/DE  
 AGCO GMBH, MARKTOBERDORF/DE  
 AGCO GMBH, MARKTOBERDORF/DE  
 AVIA AG, MÜNCHEN/DE  
 AVISTA OIL DEUTSCHLAND GMBH, UETZE/DE  
 BAYWA AG MÜNCHEN, MÜNCHEN/DE  
 BELGIN MADENI YAGLAR TIC. VE SAN. A.S., KOCAELI/TR  
 BLASER SWISSLUBE AG, HASLE-RÜEGSAU/CH  
 CASTROL LTD, LONDON/GB  
 CASTROL LTD, LONDON/GB  
 CEPESA COMERCIAL PETRÓLEO S.A.U., MADRID/ES  
 CHAMPION CHEMICALS N.V., HEMIKSEM/BE  
 CHEVRON LUBRICANTS, SAN RAMON, CA/US  
 CHEVRON LUBRICANTS, SAN RAMON, CA/US  
 CHEVRON LUBRICANTS, SAN RAMON, CA/US  
 CLASS KGAA MBH, HARSEWINKEL/DE  
 EXXONMOBIL CORPORATION, HOUSTON, TX/US  
 EXXONMOBIL CORPORATION, HOUSTON, TX/US  
 FINKE MINERALÖLWERK GMBH, 27374 VISSELHÖVEDE/DE  
 FUCHS PETROLUB SE, MANNHEIM/DE  
 GEORG OEST MINERALÖLWERK GMBH & CO.KG, FREUDENSTADT/DE  
 GS CALTEX CORPORATION, SEOUL/KR  
 GULF OIL INTERNATIONAL, MUMBAI/IN  
 HINDUSTAN PETROLEUM CORPORATION LTD., MUMBAI/IN  
 HITACHI CONSTRUCTION MACHINERY EUROPE NV, AMSTERDAM/NL  
 HUILES BERLIET S.A., SAINT-PRIEST/FR  
 INA MAZIVA LTD., ZAGREB/HR  
 JOHN DEERE, MOLINE, ILLINOIS/US  
 KUWAIT PETROLEUM INTERNATIONAL LUBRICANT, ANTWERP/NL  
 LIEBHERR HYDRAULIKBAGGER GMBH, KIRCHDORF/DE  
 LIQUI MOLY GMBH, ULM/DE  
 MEGUIN GMBH & CO. KG, SAARLOUIS/DE  
 MOL-LUB KFT, ALMASFUZITO/HU  
 MORRIS LUBRICANTS, SHREWSBURY/GB  
 MOTOREX AG, LANGENTHAL/CH  
 MOTOREX AG, LANGENTHAL/CH  
 NILS SPA, BURGSTALL/IT  
 NORTHLAND PRODUCTS COMPANY, WATERLOO, IOWA/US  
 OILFINO MINERALÖL GMBH, PRISDORF/DE  
 ORLEN OIL SP. Z O.O., KRAKOW/PL  
 ORLEN OIL SP. Z O.O., KRAKOW/PL  
 ORLEN OIL SP. Z O.O., KRAKOW/PL  
 ORLEN S.A., GDANSK/PL  
 OY TEBOIL AB, HELSINKI/FI  
 PAKELO MOTOR OIL S.P.A. A S.U., SAN BONIFACIO (VR)/IT  
 PETROGAL S.A., LISBOA/PT  
 PETROL OFISI A.S., ISTANBUL/TR  
 PETRONAS LUBRICANTS INTERNATIONAL SDN BH, KUALA LUMPUR/MY  
 PETRONAS LUBRICANTS INTERNATIONAL SDN BH, KUALA LUMPUR/MY  
 PETRONAS LUBRICANTS INTERNATIONAL SDN BH, KUALA LUMPUR/MY  
 PETRONAS LUBRICANTS INTERNATIONAL SDN BH, KUALA LUMPUR/MY  
 PETRONAS LUBRICANTS INTERNATIONAL SDN BH, KUALA LUMPUR/MY  
 PHI OIL GMBH, ST. GEORGEN/AT  
 REPSOL LUBRICANTES Y ESPECIALIDADES, S.A, MADRID/ES  
 REPSOL LUBRICANTES Y ESPECIALIDADES, S.A, MADRID/ES  
 ROLF LUBRICANTS GMBH, LEVERKUSEN/DE  
 SASOL ENERGY, JOHANNESBURG/ZA  
 SAVITA OIL TECHNOLOGIES LIMITED, MUMBAI/IN  
 SENNEBOGEN MASCHINENFABRIK GMBH, STEINACH/DE  
 SHELL INTERNATIONAL PETROLEUM COMP. LTD, LONDON/GB  
 SHELL INTERNATIONAL PETROLEUM COMP. LTD, LONDON/GB  
 SINOPEC LUBRICANT CO., LTD., BEIJING/CN  
 SK ENMOVE CO.,LTD., SEOUL/KR  
 SRS SCHMIERSTOFF VERTRIEB GMBH, SALZBERGEN/DE  
 TOTAENERGIES LUBRIFIANTS, NANTERRE/FR  
 TOTAENERGIES LUBRIFIANTS, NANTERRE/FR  
 TOTAENERGIES LUBRIFIANTS, NANTERRE/FR  
 TOTAENERGIES LUBRIFIANTS, NANTERRE/FR  
 UNIL OPAL, SAUMUR/FR  
 VALVOLINE EUROPE, DORDRECHT/NL  
 VALVOLINE EUROPE, DORDRECHT/NL  
 WOLF OIL CORPORATION N.V., HEMIKSEM/BE  
 ZF FRIEDRICHSHAFEN AG, FRIEDRICHSHAFEN/DE

**Denominazione prodotto (21C)**

ADDINOL GETRIEBEÖL GH 85W-90 LS  
 ADDINOL GETRIEBEÖL GH 80W-90 LS  
 VALTRA AXLE LS 85W-90  
 FENDT SUPER TRANS LS 85W-90  
 AVIA HYPOID 90 LS  
 AVISTA PEER EVO GL5 LS SAE 90  
 TECTROL MULTIGEAR LS 90  
 BELGEAR LS 85W90  
 EVOLCA BGX 85W90  
 CASTROL TRANSMAX LIMITED SLIP LL 75W-140  
 CASTROL TRANSMAX LIMITED SLIP Z 85W-90  
 CEPESA AURIGA LS PLUS 80W-90  
 CHAMPION OEM SPECIFIC 80W90 LS GL 5  
 GEAR OIL ZF SAE 80W-90  
 GEARTEX LS 80W-90  
 GEARTEX LS 85W-90  
 CLAAS AGRISHIFT BLS 90  
 MOBILUBE LS 85W-90  
 MOBILUBE LS 85W-90  
 AVIATICON HYPOID LS 90  
 FUCHS TITAN GEAR LS SAE 90  
 OEST GETRIEBEÖL HYPOID LS 90  
 DOOSAN LS GEAR OIL 80W90  
 GULF GEAR LS 90  
 HP GEAR OIL ZFL 80W 90 LS  
 HITACHI GENUINE AXLE OIL ZX-W LS 80W-90  
 EP 90 GL  
 INA HIPENOL GTL LS 90  
 JOHN DEERE GL-5 GEAR LUBRICANT W/LS ADD 80W-90  
 Q8 T 45 LS SAE 90  
 LIEBHERR GEAR BASIC 90 LS  
 LIQUI MOLY HYPOID-GETRIEBEÖL PLUS GL 5 LS 85W-90  
 MEGOL HYPOID-GETRIEBEÖL AXLE LS SAE 85W-90  
 MOL HYKOMOL LS 85W90  
 TERRAIN LS 80W-90  
 MOTOREX YORK LS UNIVERSAL SAE 90  
 YORK 699 LS SAE 90  
 ALGOL HYPOID LS 90  
 POSI-GRIP JDZF 80W90  
 OILFINO VARIUS G 400LS 85W-90  
 PLATINUM GEAR LS 80W-90  
 PLATINUM AGRO LS 80W-90  
 ORLEN OIL GEAR LS 80W-90  
 LOTOS TITANIS LS GL-5 80W-90  
 TEBOIL HYPOID LS 80W-90  
 UNIVERSAL GEAR EP LS SAE 85W/90  
 GALP TRANSOIL HP LS 90  
 MAXIGEAR EP-X 85W-90LS  
 AMBRA AXF 80W-90 (SAE 80W-90)  
 AKCELA AXLEPOWER (SAE 80W-90)  
 TUTELA TRANSMISSION W90/LS (SAE 80W-90)  
 ARBOR TTF (SAE 80W-90)  
 PETRONAS AXLE 300 LS 80W-90  
 SUPERGEAR BRONZE 85W90 LS  
 REPSOL CARTAGO EP AUTOBLOCANTE SAE 80W90  
 REPSOL NAVIGATOR LSD 80W-90  
 ROLF TRANSMISSION M5 A-LS 80W-90  
 SASOL DIFFERENTIAL OIL LIMITED SLIP 80W-90  
 SAVSOL AUTOGEAR 90 LIMITED SLIP GL-5  
 SENLUBE GEAR HYPOID LS  
 SHELL SPIRAX S3 ALS 80W-90  
 SHELL SPIRAX S3 ALS 85W- 90  
 SINOPEC GREATWALL ZLS GL-5 85W/90  
 SK ZIC G-5 LSD 80W-90  
 SRS WIOLIN RSH  
 ELF TRACTELF BLS 80W-90  
 DYNATRANS DA 80W-90  
 DYNATRANS LS 80W-90  
 CLASS AGRISHIFT BLS 80W-90  
 GEAR AB-EP 85W90  
 VALVOLINE HEAVY DUTY AXLE OIL PRO 80W-90 LS  
 NESTE AXLE LS 80W-90  
 WOLF OFFICIALTECH 80W90 LS GL 5  
 ZF POWERFLUID GEAR LS

**Numero di approvazione ZF**

ZF000629  
 ZF000703  
 ZF003466  
 ZF003467  
 ZF003689  
 ZF004776  
 ZF001167  
 ZF002257  
 ZF004736  
 ZF002141  
 ZF002178  
 ZF001050  
 ZF003555  
 ZF000787  
 ZF000809  
 ZF000810  
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 ZF000031  
 ZF011090  
 ZF002301  
 ZF000651  
 ZF001479  
 ZF001341  
 ZF000891  
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 ZF003705  
 ZF008267  
 ZF000424  
 ZF001312  
 ZF002109  
 ZF000845  
 ZF001367  
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 ZF001114  
 ZF001637  
 ZF008206  
 ZF008260  
 ZF003447  
 ZF000049  
 ZF000740  
 ZF000603  
 ZF001272  
 ZF011287  
 ZF000924  
 ZF003352  
 ZF000027  
 ZF003410  
 ZF001480  
 ZF000546  
 ZF000781  
 ZF000901  
 ZF001373  
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 ZF001004  
 ZF000981  
 ZF008276  
 ZF003625  
 ZF000700  
 ZF001898  
 ZF008345  
 ZF001303  
 ZF004813  
 ZF000127  
 ZF003340  
 ZF000442  
 ZF006120  
 ZF006121  
 ZF006122  
 ZF008173  
 ZF000526  
 ZF001996  
 ZF004847  
 ZF003552  
 ZF008414



**Classe dei lubrificanti 21E**

Olio universale per assali e cambi

**Produttore (21E)**

CNH INDUSTRIAL AMERICA LLC, RACINE, WI/US  
VIBRA ENERGIA S.A., DUQUE DE CAXIAS/BR

**Denominazione prodotto (21E)**

PREMIUM TRANSAXLE OIL 80W-140  
LUBRAX UNITRACTOR 10W-30

**Numero di  
approvazione ZF**

ZF005941  
ZF010660



**Produttore (21F)**

PETRONAS LUBRICANTS INTERNATIONAL SDN BH, KUALA LUMPUR/MY  
 PETRONAS LUBRICANTS INTERNATIONAL SDN BH, KUALA LUMPUR/MY  
 PETRONAS LUBRICANTS INTERNATIONAL SDN BH, KUALA LUMPUR/MY  
 PETRONAS LUBRICANTS INTERNATIONAL SDN BH, KUALA LUMPUR/MY  
 PETRONAS LUBRICANTS INTERNATIONAL SDN BH, KUALA LUMPUR/MY  
 PETRONAS LUBRICANTS INTERNATIONAL SDN BH, KUALA LUMPUR/MY  
 PETRONAS LUBRICANTS INTERNATIONAL SDN BH, KUALA LUMPUR/MY  
 PETRONAS LUBRICANTS INTERNATIONAL SDN BH, KUALA LUMPUR/MY  
 PHI OIL GMBH, ST. GEORGEN/AT  
 RAVENSBERGER SCHMIERSTOFFVERTRIEB GMBH, WERTHER/DE  
 RAVENSBERGER SCHMIERSTOFFVERTRIEB GMBH, WERTHER/DE  
 REPSOL LUBRICANTES Y ESPECIALIDADES, S.A, MADRID/ES  
 SAME DEUTZ FAHR, TREVIGLIO/IT  
 SAME DEUTZ FAHR, TREVIGLIO/IT  
 SASOL ENERGY, JOHANNESBURG/ZA  
 SASOL ENERGY, JOHANNESBURG/ZA  
 SAVITA OIL TECHNOLOGIES LIMITED, MUMBAI/IN  
 SENNEBOGEN MASCHINENFABRIK GMBH, STEINACH/DE  
 SHELL INTERNATIONAL PETROLEUM COMP. LTD, LONDON/GB  
 SHELL INTERNATIONAL PETROLEUM COMP. LTD, LONDON/GB  
 SHELL INTERNATIONAL PETROLEUM COMP. LTD, LONDON/GB  
 SHELL INTERNATIONAL PETROLEUM COMP. LTD, LONDON/GB  
 SHELL INTERNATIONAL PETROLEUM COMP. LTD, LONDON/GB  
 SHELL INTERNATIONAL PETROLEUM COMP. LTD, LONDON/GB  
 SHELL INTERNATIONAL PETROLEUM COMP. LTD, LONDON/GB  
 SHELL INTERNATIONAL PETROLEUM COMP. LTD, LONDON/GB  
 SHELL INTERNATIONAL PETROLEUM COMP. LTD, LONDON/GB  
 SINENG PETROCHEMICAL CO.,LTD., LIUZHOU, GUANGXI/CN  
 SINOPEC LUBRICANT CO., LTD., BEIJING/CN  
 SINOPEC LUBRICANT CO., LTD., BEIJING/CN  
 SK ENMOVE CO.,LTD., SEOUL/KR  
 SRS SCHMIERSTOFF VERTRIEB GMBH, SALZBERGEN/DE  
 TOTALENERGIES LUBRIFIANTS, NANTERRE/FR  
 TOTALENERGIES LUBRIFIANTS, NANTERRE/FR  
 TOTALENERGIES LUBRIFIANTS, NANTERRE/FR  
 TOTALENERGIES LUBRIFIANTS, NANTERRE/FR  
 TOTALENERGIES LUBRIFIANTS, NANTERRE/FR  
 TOTALENERGIES LUBRIFIANTS, NANTERRE/FR  
 UNIL OPAL, SAUMUR/FR  
 UNIL OPAL, SAUMUR/FR  
 VALVOLINE EUROPE, DORDRECHT/NL  
 VALVOLINE EUROPE, DORDRECHT/NL  
 VIBRA ENERGIA S.A., DUQUE DE CAXIAS/BR  
 WOLF OIL CORPORATION N.V., HEMIKSEM/BE

**Denominazione prodotto (21F)**

AKCELA TRANSAXLE FLUID 20W-40 (SAE 20W-40)  
 AMBRA MULTI G (SAE 10W-30)  
 PETRONAS AKCELA NEXPLORE (SAE 10W-30)  
 PETRONAS TUTELA TRANSAXLE FLUID 20W-40  
 PETRONAS TUTELA TRANSAXLE FLUID 80W140  
 PETRONAS TUTELA TRANSAXLE FLUID 80W  
 PETRONAS TUTELA TRANSAXLE FLUID 80W  
 PETRONAS TUTELA TRANSAXLE FLUID 20W-40  
 GEAR OIL UTTO SILVER 10W-30  
 RAVENOL GETRIEBEOEL UTTO  
 RAVENOL UTTO SYNTHETIC  
 REPSOL ORION UTTO  
 SDF UTTO  
 DF UTTO  
 UNIVERSAL TRANSMISSION OIL 68  
 SASOL UNIVERSAL TRANSMISSION OIL RS 68  
 SAVSOL 315 HAT  
 SENLUBE GEAR LONGLIFE  
 SHELL SPIRAX S4 TXM  
 SHELL SPIRAX S4 TXM  
 SHELL SPIRAX S4 TXM  
 SHELL SPIRAX S6 TXME  
 SHELL SPIRAX S4 TXM  
 SHELL SPIRAX S4 TXM  
 SHELL SPIRAX S4 TXM  
 SHELL SPIRAX S4 TXM  
 SHELL SPIRAX S4 TXM-I  
 SEANON DEDICATED TRANSMISSION OIL 10W-30  
 SINOPEC GREATWALL UTTO  
 SINOPEC UTTO  
 SK ZIC GL-4 ZF 80W  
 SRS HYDROFLUID A  
 TOTAL DYNATRANS MPV  
 ELF TRACTELF BF 16  
 TOTAL DYNATRANS LS 20W-40  
 TOTAL DYNATRANS MPWB  
 TOTAL DYNATRANS MPX  
 TRACTELF NG  
 UNIL OPAL FLUID MVZ  
 FLUID G2 VARIO  
 UNITRAC 80W  
 NESTE GEAR UTTO  
 LUBRAX UNITRAC SAE 10W-30  
 WOLF TRACTOFLUID 170 BM

**Numero di  
approvazione ZF**

ZF002152  
 ZF003443  
 ZF004830  
 ZF009459  
 ZF009460  
 ZF010000  
 ZF010231  
 ZF010264  
 ZF000958  
 ZF001718  
 ZF008204  
 ZF003445  
 ZF002229  
 ZF002230  
 ZF000707  
 ZF001828  
 ZF001131  
 ZF008341  
 ZF000357  
 ZF000358  
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 ZF001295  
 ZF001613  
 ZF003325  
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 ZF003380  
 ZF004867  
 ZF000540  
 ZF001317  
 ZF001346  
 ZF001539  
 ZF002222  
 ZF008262  
 ZF003565  
 ZF009470  
 ZF002041  
 ZF003473  
 ZF001366  
 ZF005951

**Classe dei lubrificanti 21G**

Olio universale premium per assali e cambi

**Produttore (21G)**

SINOPEC LUBRICANT CO., LTD., BEIJING/CN  
ZF FRIEDRICHSHAFEN AG, FRIEDRICHSHAFEN/DE  
ZF FRIEDRICHSHAFEN AG, FRIEDRICHSHAFEN/DE

**Denominazione prodotto (21G)**

SINOPEC GREATWALL HD DRIVE AXLE OIL  
ZF POWERFLUID C-PLUS  
ZF POWERFLUID PLUS

**Numero di  
approvazione ZF**

ZF002162  
ZF002087  
ZF005995

**Classe dei lubrificanti 21K**

Olio motore

Classe di viscosità: SAE 10W, 10W-30, 10W-40

secondo specifica API CD/CE/CF-4/CF/CG-4/CH-4/CI-4/CI-4 Plus/CJ-4

o SF/SG/SH/SJ/SL/SM

o ACEA, categorie A, B, E

**Avvertenza:**

Sono ammessi tutti i prodotti commerciali che soddisfano le specifiche citate. Nessun elenco di prodotti disponibile.

**Classe dei lubrificanti 21L**

Automatic Transmission Fluids (ATF) olio base a base di olio minerale secondo la precedente specifica Dexron IID, IIIF, IIIG o IIIH di General Motors.

**Avvertenza:**

Sono ammessi tutti i prodotti commerciali che soddisfano le specifiche citate. Nessun elenco di prodotti disponibile.

**Classe dei lubrificanti 21M**

Olio idraulico a base di olio minerale HLP a norma DIN 51524-2 o olio idraulico a base di olio minerale HVLP a norma DIN 51524-3.

Classi di viscosità: ISO VG 32 / 46 / 68

**Avvertenza:** Sono ammessi tutti i prodotti commerciali che soddisfano le specifiche sopra citate. Nessun elenco di prodotti disponibile.

**Inoltre,** possono essere utilizzati i seguenti prodotti commerciali:

**Produttore (21M)**

PANOLIN DISTRIBUTION AG, MADETSWIL/CH  
PANOLIN DISTRIBUTION AG, MADETSWIL/CH  
PANOLIN DISTRIBUTION AG, MADETSWIL/CH

**Denominazione prodotto (21M)**

PANOLIN HLP SYNTH 46  
PANOLIN HLP SYNTH 68  
PANOLIN HLP SYNTH 32

**Numero di  
approvazione ZF**

ZF000592  
ZF002019  
ZF008238

**Classe dei lubrificanti 21N**

Olio per cambi con additivi "limited slip"

Classi di viscosità: SAE 75W-90 / 75W-110 / 75W-140 / 80W-90 / 85W-90 / 90

**Produttore (21N)**

BAYWA AG MÜNCHEN, MÜNCHEN/DE  
 EXXONMOBIL CORPORATION, HOUSTON, TX/US  
 EXXONMOBIL CORPORATION, HOUSTON, TX/US  
 FUCHS PETROLUB SE, MANNHEIM/DE  
 KROON-OIL B.V., ALMELO/NL  
 PAKELO MOTOR OIL S.P.A. A S.U., SAN BONIFACIO (VR)/IT  
 ROCK OIL, WARRINGTON/GB  
 SRS SCHMIERSTOFF VERTRIEB GMBH, SALZBERGEN/DE  
 TOTALENERGIES LUBRIFIANTS, NANTERRE/FR  
 ZELLER+GMELIN GMBH&CO.KG, EISLINGEN/DE

**Denominazione prodotto (21N)**

TECTROL MULTIGEAR LS 90 LV  
 MOBIL DELVAC MODERN AXLE OIL 80W-90 LIMITED SLIP  
 MOBIL DELVAC MODERN AXLE OIL 80W-90 LIMITED SLIP  
 TITAN SUPERGEAR LS SAE 80W-90  
 GEARLUBE LS 80W-90  
 UNIVERSAL GEAR EP LS SAE 80W-90  
 SD LS 80W-90  
 SRS VIOLIN RSH PLUS 80W-90  
 DYNATRANS DAX 80W-90  
 DIVINOL MULTI-AXLE LS 80W90

**Numero di approvazione ZF**

ZF009443  
 ZF009436  
 ZF010924  
 ZF008289  
 ZF009458  
 ZF010992  
 ZF010297  
 ZF009472  
 ZF009422  
 ZF010462