

# Guide to engine and transmission



## AVTOVAZ

- 1 **Togliatti, Russia (engine and transmission)** – 0.8-, 1.5-, 1.7-liter carburetor gasoline engines; 0.8-, 1.3-, 1.5-liter central-injection gasoline engines; 1.5-, 1.6-, 1.7-liter multipoint-injection gasoline engines (Lada); 4-, 5-speed manual transmissions (Lada)

## AVTOZAZ-MOTOR

- 1 **Melitopol, Ukraine (engine)** – 1.1-, 1.2-, 1.3-liter carburetor gasoline engines (ZAZ Slavuta, Tavria, Zastava Florida, Zastava Koral, Zastava Skala); 1.3-liter central-injection gasoline engines (ZAZ Slavuta and Tavria); 1.4-liter central-injection gasoline engines (Chevrolet and ZAZ Lanos and Chevrolet Aveo)

## BMW GROUP

- 1 **Hams Hall, UK (engine)** – 4-cylinder gasoline engines (1-, 3-series models, X3; Z4); 4-cylinder gasoline engines (Mini)
- 2 **Munich, Germany (engine)** – 6-cylinder gasoline engines (1-, 3-, 5-, 6-, 7-series models; X3; X5; Z4); 6-cylinder high-performance gasoline engines (Z4 M roadster, Z4 M coupe); 8-cylinder high-performance engine (new M3); 8-cylinder gasoline engines (5, 6, 7 series); 10-cylinder high-performance gasoline engines (M5, M6); 12-cylinder gasoline engines (7 series, Rolls-Royce Phantom); 8-cylinder diesel engines (7 series)
- 3 **Steyr, Austria (engine)** – 4-cylinder diesel engines (1-, 3-, 5-series models, X3); 6-cylinder diesel engines (3, 5, 7 series; X3; X5); 6-cylinder gasoline engines (1-, 3-, 5-, 6-, 7-series models; X3; X5; Z4)

## DAEWOO ROMANIA

- 1 **Craiova, Romania (engine and transmission)** – 1.5-, 1.6-liter gasoline engines; 5-speed manual transmissions (Daewoo Automobile Romania, AvtoZAZ)

## DAIMLERCHRYSLER

- 1 **Affalterbach, Germany (engine)** – 8-, 12-cylinder gasoline engines (AMG models)
- 2 **Berlin-Marienfelde, Germany (engine)** – 6-cylinder diesel engines (S-, E-, C-, CLK-, CLS-, ML-, R-, G-class models, Viano); 8-cylinder diesel engines (S-, E-, M-, GL-class models); 12-cylinder gasoline engines (S-, SL-, CL-class models, Maybach)
- 3 **Gaggenau, Germany (transmission)** – 6-speed manual transmissions (Mercedes A-, B-class models; light commercial vehicles; Chrysler models)
- 4 **Untertürkheim, Germany (engine, axles and transmission)** (includes production at nearby plants in Bad Cannstatt, Zuffenhausen, Mettingen, Hedelfingen, Simau and Brühl) – 4-cylinder gasoline engines (Mercedes SLK-, E-, C-, CLK-, A-, B-class models); 6-cylinder gasoline engines (Mercedes S-, SLK-, E-, C-, CLK-, CLS-, ML-, R-class models); 8-cylinder gasoline engines (Mercedes S-, SL-, E-, C-, CL-, CLK-, CLS-, G-, GL-M-, ML-, R-class models); 4-cylinder diesel engines (Mercedes A-, B-, C-, CLK-, E-class models, Viano); 5-, 7-speed automatic transmissions

(Mercedes cars and light commercial vehicles); 5-, 6-speed manual transmission (Mercedes cars and light commercial vehicles)

- 5 **Kölleda, Germany (engine)** – 3-, 4-cylinder gasoline engines (Mitsubishi Colt, Colt CZC); 3-cylinder diesel engines (Smart ForTwo, Mitsubishi Colt)

## FIAT POWERTRAIN TECHNOLOGIES

- 1 **Foggia, Italy (engine)** – 4-cylinder 2.3-, 3.0-liter turbodiesel engines (Fiat Ducato, Iveco Daily light commercial vehicles)
- 2 **Mirafiori, Italy (transmission)** – C514 5- and 6-speed manual transmissions; 5-speed automated manual transmissions (Fiat, Lancia)
- 3 **Pratola Serra, Italy (engine)** – 4-, 5-cylinder 1.6-, 1.8-, 2.0-, 2.4-liter gasoline engines; 1.6- (from June 2008), 1.9-, 2.4-liter turbodiesel engines (Alfa Romeo 147, 159, 164, GT, Brera and Spider; Fiat Grande Punto, Bravo, Stilo Multiwagon, Multipla, Croma, Sedici, Doblo; Lancia Musa, Thesis; Suzuki SX4)
- 4 **Termoli, Italy (engine and transmission)** – 1.1-, 1.2-, 1.4- and turbo 1.4-liter FIRE gasoline engines (Fiat Seicento, 500, Panda, Grande Punto, Idea, Bravo, Stilo Multiwagon, Doblo; Lancia Ypsilon and Musa); C510 5-speed manual and AMT transmissions; C546 6- and C513 5-speed manual transmissions (Alfa Romeo, Fiat and Lancia)
- 5 **Verrone, Italy (transmission)** – C530 5-, 6-speed manual and AMT transmissions (Alfa Romeo, Fiat, Lancia)
- 6 **Bielsko-Biala, Poland (engine)** (Fiat 50%, GM 50%) – 1.3-liter common-rail turbodiesel engines (Fiat 500, Panda, Punto, Grande Punto, Idea, Linea, Doblo; Lancia Ypsilon and Musa; Opel/Vauxhall Agila, Corsa, Tigra TwinTop, Meriva; Suzuki Swift, Ignis)
- 7 **Bursa, Turkey (engine and transmission)** – 1.6-liter 138 gasoline engines; 5-speed manual transmissions (Fiat Albea, Linea, Doblo)

## FIAT GROUP

- 1 **Maranello, Italy (engine and transmission)** – (Ferrari, Maserati)

## FORD OF EUROPE/PREMIER AUTOMOTIVE GROUP

- 1 **Bridgend, UK (engine)** – 1.25-, 1.4-, 1.6-liter 4-cylinder Zetec gasoline engines (Ford Fiesta, Fusion, Focus, C-Max; Volvo S40/V50; Mazda 2); 3.5-, 4.2-, 4.4-liter V-8 gasoline engines (Jaguar S-Type, XJ, XK; Land Rover Discovery; Range Rover Sport); 3.2-liter 6-cylinder gasoline engines (Land Rover Freelander; Volvo S80, XC90)
- 2 **Dagenham, UK (engine)** – 1.4-, 1.6-, 1.8-, 2.0-, 2.2-, 2.4-liter 4-cylinder diesel engines (Ford Fiesta, Fusion, Focus, C-Max, Transit Connect, Fiesta Pickup, S-Max, Galaxy, Mondeo, Transit; Jaguar X-Type; Mazda2; LDV); 2.7-liter V-6 diesel engines (Jaguar S-Type, XJ); Land Rover Discovery, Range Rover Sport; Peugeot 407; Citroen C5, C6); 3.6-liter V-8 diesel engines (Land Rover Range Rover, Range Rover Sport)
- 3 **Cologne, Germany (engine)** – 4.0-liter V-6 gasoline engines (Ford Explorer, Ranger, Mustang; Mercury Mountaineer; Land Rover Discovery); 4.3-liter V-8 gasoline engines (Aston Martin);

6.0-liter V-12 gasoline engines (Aston Martin)

- 4 **Skovde, Sweden (engine)** – 2.0-, 2.4-liter 5-cylinder gasoline engines (Volvo S40, V50, S60, C70, V70, C 30, S80, XC90; Ford Focus, S-Max); 2.4-liter 5-cylinder diesel engines (Volvo S40, V50, S60, V70, S80, XC90); 2.0-liter 4-cylinder diesel engines (Volvo S40, V50, C 30, Focus, Focus C-Max, Focus Coupe Cabriolet)
- 5 **Inonu, Turkey (engine and transmission)** (Ford-Otosan Engines: Ford 41%, Koc Holding 41%, public 18%) – 7.3-liter 6-cylinder diesel engines (Ford Cargo); 3.2-liter 5-cylinder engines; 2.4-liter 4-cylinder diesel engines (Ford Transit); manual transmissions (Ford Transit)
- 6 **Valencia, Spain (engine)** – 1.8-liter 4-cylinder Duratec HE (Ford Focus, C-Max, Mondeo); 2.0-liter 4-cylinder Duratec HE (Ford Mondeo and S-Max)

## GAZ

- 1 **Nizhny Novgorod, Russia (engine and transmission)** – 5-speed manual transmissions (GAZ); 2.1-liter turbodiesel engine (GAZ light commercial vehicles)

## GM POWERTRAIN EUROPE

- 1 **Bochum, Germany (transmission)** – 5-speed manual and AMT transmissions (Opel/Vauxhall)
- 2 **Kaiserslautern, Germany (engine)** – 1.9-, 2.2-, 2.0-liter gasoline engines (Cadillac, Opel/Vauxhall, Saab, Fiat); 1.9-liter common-rail diesel engines (Cadillac, Opel/Vauxhall, Saab)
- 3 **Rüsselsheim, Germany (transmission)** – 6-speed manual transmissions (Cadillac, Opel/Vauxhall, Saab, Fiat)
- 4 **Gothenburg, Sweden (transmission)** – 5-speed manual transmissions (Cadillac, Saab)
- 5 **Soedertälje, Sweden (engine)** – 2.0-, 2.3-liter 4-cylinder gasoline engines (Saab)
- 6 **Bielsko-Biala, Poland (engine)** (Fiat 50%, GM 50%) – 1.3-liter common-rail diesel engines (Opel/Vauxhall, Fiat, Lancia, Suzuki)
- 7 **Tychy, Poland (engine)** – 1.7-liter diesel engines (Opel/Vauxhall, Fiat)
- 8 **Aspern, Austria (engine and transmission)** – 3-, 4-cylinder, 1.0-, 1.2-, 1.4-liter gasoline engines (Opel/Vauxhall, Fiat); 5-, 6-speed manual transmissions (Opel/Vauxhall, Fiat)
- 9 **Strasbourg, France (transmission)** – 6-speed automatic transmissions (BMW/GM); 6-speed manual transmissions
- 10 **Szentgotthard, Hungary (engine and transmission)** – 1.6-, 1.8-liter 4-cylinder gasoline ECOTEC engines (Opel/Vauxhall, Fiat); 5- and 6-speed automatic transmissions

## GETRAG Group

- 1 **Ludwigsburg, Germany (manual transmissions)**
- 2 **Neuenstein, Germany (manual, AMT, dual-clutch transmissions)**
- 3 **Rosenberg, Germany (manual transmissions)**
- 4 **Modugno, Italy (manual transmissions)**

# on plants in Europe



Sponsored by  
**ATKEARNEY**

## GETRAG FORD

- 1 Cologne, Germany (manual transmissions)
- 2 Bordeaux, France (manual, AMT transmission)
- 3 Halewood, Liverpool, UK (manual, AMT transmission)
- 4 Kechnec, Slovakia (dual-clutch transmissions)

## HONDA

- 1 Swindon, UK (engine) – 1.8-, 2.0-liter gasoline engines (Honda Civic, CR-V); 2.2-liter 4-cylinder diesel engines (Honda Civic, CR-V)

## HYUNDAI

- 1 Nosovice, Czech Republic (transmission) – (Starts 2008)

## ISUZU

- 1 Polska, Poland (engine) (GM 60%, Isuzu 40%) – 1.7-liter 4-cylinder direct-injection diesel engines; (Opel/Vauxhall Astra, Corsa, Meriva)

## KIA

- 1 Zilina, Slovakia (engine) – 1.4-, 1.6-liter gasoline engines; 1.6-, 2.0-liter diesel engines

## LOMBARDINI (becomes part of Kohler Co. in summer)

- 1 Reggio Emilia, Italy (engine) – 1- 2-, 3-, 4-cylinder liquid-cooled diesel engines; 1-cylinder air-cooled gasoline engines; 2-cylinder liquid-cooled gasoline engines

## NISSAN

- 1 Barcelona, Spain (engine) – 2.5-liter turbodiesel engines (Navara, Pathfinder)
- 2 Sunderland, UK (engine) – 1.2-liter (Micra), 1.4-liter (Micra, Micra C+C, Note)

## PORSCHE

- 1 Zuffenhausen, Germany (engine) – V-8 (Cayenne), Flat 6 (Boxster, Cayman, 911)

## PSA/PEUGEOT-CITROEN

- 1 Douvrin, France (engine) (Francaise de Mecanique – PSA 50%, Renault 50%) – 1.1-, 1.4-, 1.6-liter 4-cylinder gasoline and CNG engines (PSA); 3.0-liter V-6 gasoline engines (PSA, Renault, Fiat, Lancia); 1.4-, 1.6-liter 4-cylinder gasoline engines (PSA, BMW); 1.4-liter 4-cylinder HDI diesel engines (PSA, Ford)
- 2 Metz, France (transmission) – Manual transmissions, (PSA, Fiat)
- 3 Tremery, France (engine) – 1.9-liter diesel engines (PSA); 1.8-, 2.0-liter 4-cylinder gasoline engines (PSA); 1.6-, 2.0-, 2.2-liter HDI diesel engines (PSA, Ford)
- 4 Valenciennes France (transmission) – Automatic, manual and automated manual transmissions (PSA)

## RENAULT

- 1 Cleon, France (engine and transmission) – 2.0-liter 16-valve and turbo, 1.9-liter gasoline engines; 2.0-, 2.2-, 2.5-liter dCi diesel engines; 5-, 6-speed manual and automated manual transmissions
- 2 Douvrin, France (transmission) (Francaise de Mecanique – Renault 50%, PSA 50%) – 1.0-, 1.2-liter turbo gasoline engines (Renault, Nissan, Dacia)
- 3 Ruitz, France (transmission) (Societe de Transmissions Automatiques – Renault 80%, PSA 20%) – automatic transmissions
- 4 Seville, Spain (transmission) – 5-, 6-speed manual transmissions
- 5 Valladolid, Spain (engine) – 1.6-liter 16-valve gasoline engines; 1.5-liter 4-cylinder diesel engines
- 6 Cacia, Portugal (transmission) – 5-, 6-speed manual transmissions (Renault)
- 7 Bursa, Turkey (engine and transmission) – 1.4-liter 8-valve gasoline engines (Renault Clio, Kangoo, Megane); 1.4-liter 16-valve gasoline engines; 1.6-liter 16-valve; 5-speed manual and automated manual transmissions
- 8 Pitesti, Romania (engine and transmission) – 1.4-, 1.6-liter gasoline engines; 1.5-liter diesel engines; 5-speed manual transmissions (Dacia)

## TD DVIATELLI (formerly VOLZHSKIYE MOTORS)

- 1 Ulyanovsk, Russia (engine) – 2.4-liter carburetor gasoline engines (UAZ); 2.9-liter carburetor gasoline engines (UAZ light commercial vehicles); 2.9-liter multipoint-injection gasoline engines (UAZ light commercial vehicles and GAZ Gazelle)

## TOYOTA

- 1 Jelcz-Laskowice, Poland (engine) – 2.2-liter diesel engines (Auris, Avensis, Corolla Verso), 2.0-liter diesel engines (Auris, Avensis)
- 2 Walbrzych, Poland (engine and transmission) – 1.0-liter gasoline engines (Citroen C1, Peugeot 107, Toyota Aygo, Yaris); manual transmissions for engines from 1.0- to 1.8-liter; multimode transmission for Citroen C1, Peugeot 107, Toyota Aygo
- 3 Valenciennes, France (engine) – 1.0-, 1.3-liter VVT-i gasoline engines; 1.4-liter D-4D diesel engines (Toyota Yaris)
- 4 Deeside, UK (engine) – 1.4-, 1.6-, 1.8-liter VVT-i gasoline engines; plus machined parts for global export and local assembly

## VM MOTORI

- 1 Cento, Italy (engine) (VM Motori/Roger Penske Group 51%, DaimlerChrysler 49%) – 2.5-, 2.8-liter 4-cylinder diesel engines (Chrysler Voyager, Jeep Cherokee, Jeep Wrangler, Dodge Nitro; Jiangling Landwind, London Taxi LTI TX4; LDV Maxus and BMC light commercial vehicles)

## VOLKSWAGEN

- 1 Chemnitz, Germany (engine) – 1.9-, 2.0-liter 4-cylinder diesel engines; 1.4-, 1.6-liter 4-cylinder gasoline engines (VW)
- 2 Kassel, Germany (transmission) – 4-speed automatic transmissions; 5-, 6-speed manual transmissions; 6-speed dual-clutch and continuously variable transmissions
- 3 Salzgitter, Germany (engine) – 3-, 4-, 5-, 10-cylinder diesel engines; 4-, 6-, 12-, 16-cylinder gasoline engines (VW)
- 4 Bratislava, Slovakia (transmission) – 5-, 6-speed manual transmissions (Skoda)
- 5 Gyor, Hungary (engine) – 4-, 6-, 8-, 10-cylinder gasoline and diesel engines (Audi)
- 6 Mlada Boleslav, Czech Republic (engine and transmission) – 1.2-liter 3-cylinder gasoline engines; 1.4-liter 4-cylinder gasoline engines; MQ200 manual transmissions (Skoda)
- 7 Polkowice, Poland (engine) – 1.9-liter 4-cylinder diesel engines (VW)
- 8 Prat, Spain (transmission) – 5-, 6-speed manual transmissions (Seat)
- 9 Sant'Agata Bolognese, Italy (engine) – 10-, 12-cylinder gasoline engines (Lamborghini)
- 10 Crewe, UK (engine) – 6.8-liter 8-cylinder gasoline engines, 6.0-liter 12-cylinder (Bentley)

## ZAVOLZHE MOTOR WORKS

- 1 Zavolzhe, Russia (engine) (SeverstalAvto 100%) – 2.3-, 2.4-, 2.9-, 4.3, 4.7-liter carburetor gasoline engines (GAZ mid-sized passenger cars, light trucks, off-road vehicles, medium trucks, medium cross-country vehicles; PAZ buses, UAZ cross-country vehicles); 2.3-, 2.5-, 2.7-liter multipoint injection gasoline engines (GAZ light trucks, minibuses, Volga mid-sized passenger cars, UAZ Patriot, Hunter off-road vehicles); 2.2-liter diesel engines (mid-sized passenger cars, light trucks, minibuses and off-road vehicles with total weights up to 3.5 tons); 2.5-liter turbocharged gasoline engines (mid-sized passenger cars, off-road vehicles);

## ZF FRIEDRICHSHAFEN

- 1 Brandenburg, Germany (transmission) – manual, automated manual transmissions (BMW, Land Rover, Porsche, VW)
- 2 Saarbrücken, Germany (transmission) – automatic transmissions (Alpina, Aston Martin, Audi, Bentley, BMW, Fiat group, Jaguar, Land Rover, Maserati, Porsche, PSA, Rolls-Royce, VW)

Sources: Automotive News Europe, CSM Worldwide