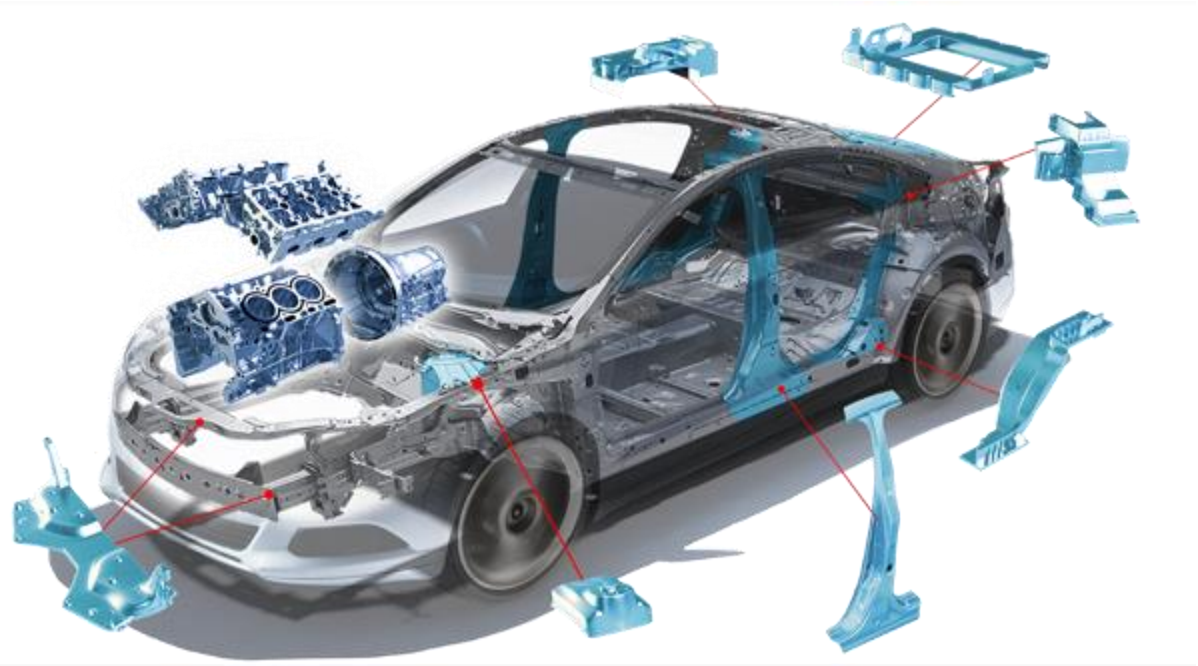


Auto component industry prospects

Auto component market: trends and opportunities

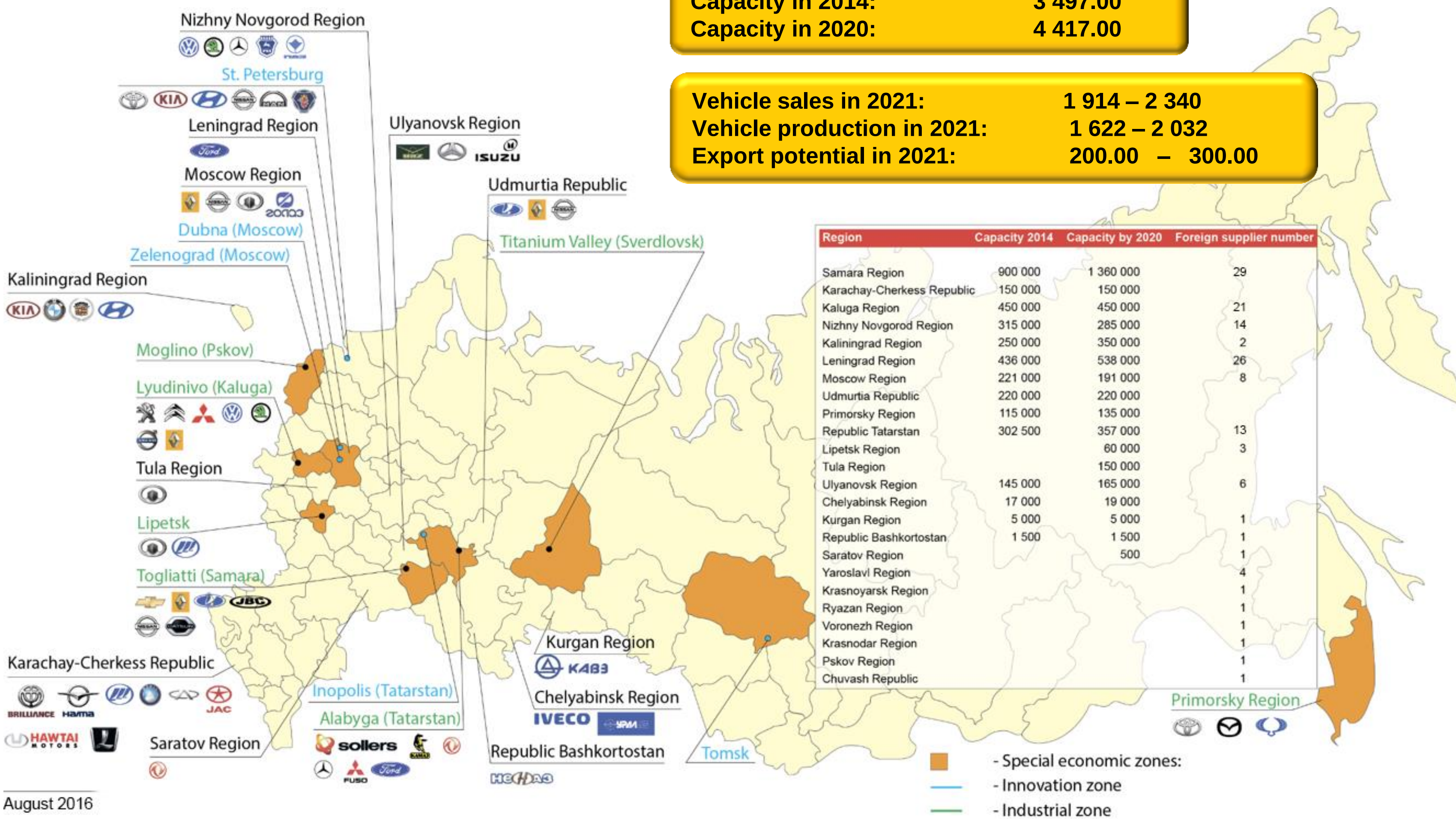
Appendix

Automotive clusters in Russia

Vehicle sales in 2013: 2 774.35
Vehicle production in 2013: 2 186.80

Capacity in 2014: 3 497.00
Capacity in 2020: 4 417.00

Vehicle sales in 2021: 1 914 – 2 340
Vehicle production in 2021: 1 622 – 2 032
Export potential in 2021: 200.00 – 300.00



Region	Capacity 2014	Capacity by 2020	Foreign supplier number
Samara Region	900 000	1 360 000	29
Karachay-Cherkess Republic	150 000	150 000	
Kaluga Region	450 000	450 000	21
Nizhny Novgorod Region	315 000	285 000	14
Kaliningrad Region	250 000	350 000	2
Leningrad Region	436 000	538 000	26
Moscow Region	221 000	191 000	8
Udmurtia Republic	220 000	220 000	
Primorsky Region	115 000	135 000	
Republic Tatarstan	302 500	357 000	13
Lipetsk Region		60 000	3
Tula Region		150 000	
Ulyanovsk Region	145 000	165 000	6
Chelyabinsk Region	17 000	19 000	
Kurgan Region	5 000	5 000	1
Republic Bashkortostan	1 500	1 500	1
Saratov Region		500	1
Yaroslavl Region			4
Krasnoyarsk Region			1
Ryazan Region			1
Voronezh Region			1
Krasnodar Region			1
Pskov Region			1
Chuvash Republic			1

August 2016

Source : Russian Automotive Market Research

OEM	Start of production	Capacity	Models	Localization level
Nissan (St. Petersburg)	2009	50 000 2015-100 000	Nisan Pathfinder Nissan X-Trail Nissan Qashqai – November 2015 Nissan Murano – June 2016	34%
Nissan (Togliatti)	End of 2012		Nissan Almera - 2012	
Nissan (Renault plant in Moscow)			Nissan Terrano - 2014	
Nissan (IzhAuto, Udmurtia Republic)	August 2014 2015		Nissan Sentra Nissan Tiida - 2015	
Datsun (Togliatti)	2014	Up to 100 000	Datsun on-DO Datsun mi-DO	
Renault (Moscow)	1999	190 000	Renault Logan Renault Sandero Renault Fluence – up to March, 2016 Renault Duster Renault Kaptur – April 2016	Renault Logan – 75% Renault Sandero – CKD Renault Fluence – CKD Renault Duster-CKD
Renault (Togliatti)	2014	B0 line – 350 000	Renault Logan Renault Sandero	Renault Logan – 75%
Hyundai-KIA (St. Petersburg)	2011	220 000	Hyundai Solaris Kia Rio Hyundai Creta Crossover – August, 2016	Hyundai Solaris – 47% Hyundai Creta Crossover: 2016 – 30%, 2017 – 50%
Hyundai-KIA (Kaliningrad)	1997	100 000	KIA Sorento, KIA Cee'd, KIA Mohave, KIA Soul, KIA Sportage, KIA Venga, KIA Quoris, KIA Optima, KIA Cerato, Hyundai i40, Hyundai Equus, Hyundai Elantra KIA Venga	KIA Sorento CKD – November 2013 KIA Cerato – November 2014
Volkswagen (Kaluga)	2007	270 000, including CKD: 225 000 SKD 45 000 vehicles	Volkswagen Polo Sedan Volkswagen Tiguan Skoda Rapid - 2014	Volkswagen Polo - 40% Volkswagen Tiguan - 22%
Volkswagen (Nizhniy Novgorod)	November 2011	132 000	Skoda Yeti - November 2011 - 20 000 Volkswagen Jetta – April 2013 - 40 000 Skoda Octavia – June 2013 - 50 000	Skoda Yeti – CKD 2012

Source : Russian Automotive Market Research

Localization

OEM	Start of production	Capacity	Models	Localization level
GM (Togliatti)	2002	100 000	Chevrolet Niva	95%
PSA Peugeot Citroen (PSMA RUS) (Kaluga)	2010	125 000 – for PSA and MMC, PSA – 85 000	Peugeot 408 Citroen C4 Sedan	Peugeot 408 CKD, localization level- 35% Citroen C4 - CKD, localization level- 35% Projected localization level-50%
Mitsubishi Motor Corporation (PSMA RUS) (Kaluga)	2010	125 000 – for PSA and MMC MMC – 40 000	Mitsubishi Outlander	Mitsubishi Outlander- CKD 2014– 20% End of 2015 – 30%
Ford (Leningrad region)	2002	125 000	Ford Focus Ford Mondeo	Ford Focus - 30%
Ford-Sollers (Tatarstan Republic)	Elabuga - 2012 Naberezhnye Chelny - 2014	85 000 115 000	Ford Transit Ford Explorer Ford Kuga Ford-S Max Ford Galaxy Ford Tourneo Custom - June 2013 Ford EcoSport – 2014 Ford Fiesta - June 2015	Ford Transit – CKD April 2015 Ford Explorer – CKD April 2013 Ford Kuga - CKD October 2013 40%-2014 45%-2015 50% - 2016 60%-2018
Toyota (St. Petersburg)	2007	50 000 Possible in 2016 – 100 000	Toyota Camry Toyota RAV 4 - 2016	CKD - 15% 2014 - 30%
Mazda (Far East)	October 2012	1 stage – 50 000 2 stage – 70 000	Mazda CX-5 Mazda 6 - April 2013	SKD
Great Wall (Lipetsk region)	March 2014		Great Wall H6	Planned welding and painting
Great Wall (Lipetsk region)	2016-2017		Haval	
Great Wall (Tula region)	2017	150 000	Haval H2 Haval H6 Coupe Haval H9	CKD Planned welding, painting, assembling Suppliers park
Brilliance (Derways, Karachay-Cherkessia Republic)	March 2014	2014 -3500-4000	Brilliance V5	
Chery (Derways, Karachay-Cherkessia Republic)	Autumn 2014	10 000-20 000	Chery A 19 Chery T21	
JAC (Derways, Karachay-Cherkessia Republic)	February 2014		JAC S5	
Dongfeng Tatarstan Republic	January 2015	120-170 000		CKD - 2017
Lifan (Lipetsk region)	Summer 2017	60 000		CKD
Hawtai (Partnership with KAMAZ, Tatarstan Republic)		50 000	Hawtai, 4 models: crossovers and sedans	Stamping, welding, painting, assembling Projected localization level – 60%
Foton Motors	September 2016		Foton Tunland – pick-up Foton Sauvana - SUV	

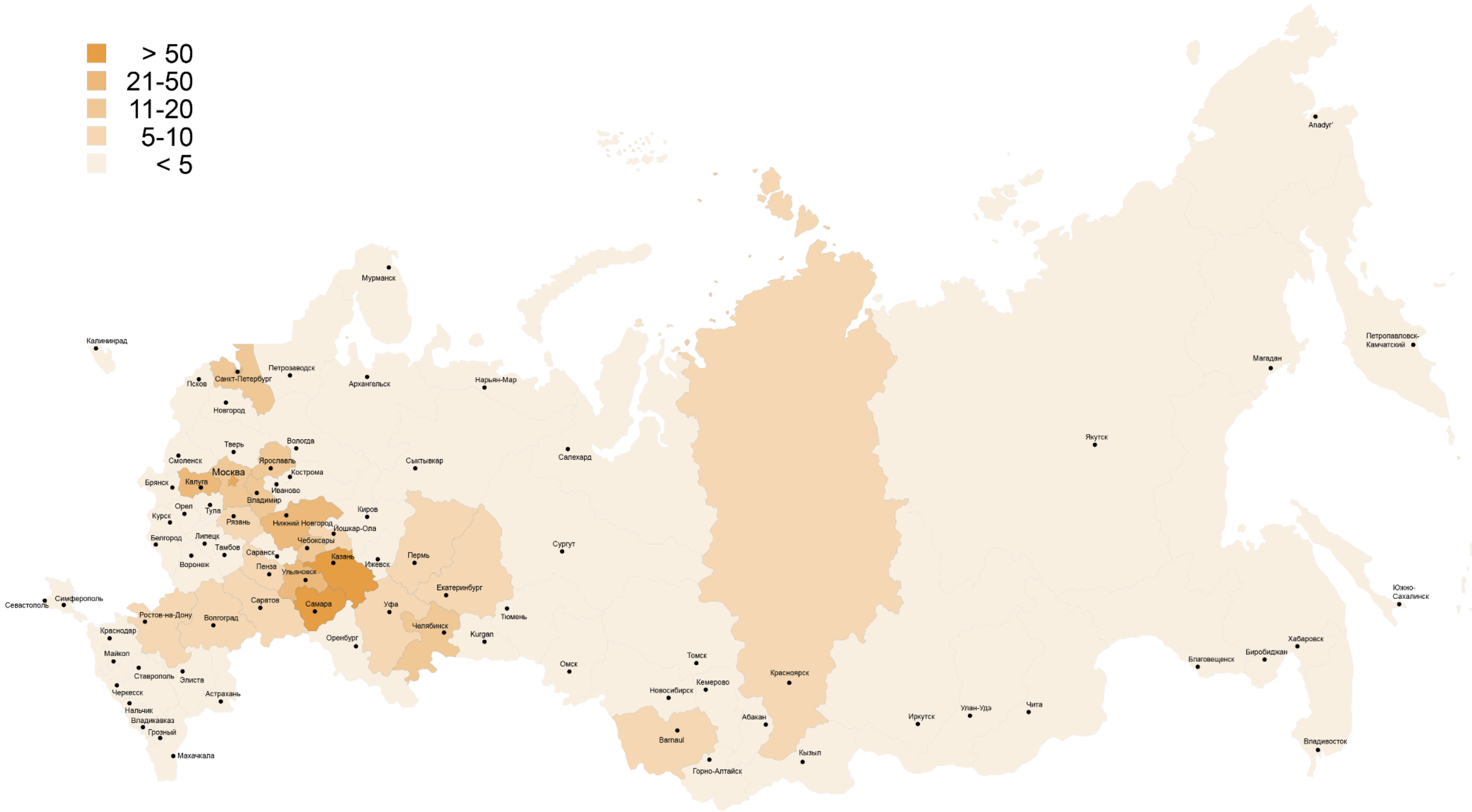
Source : Russian Automotive Market Research

Localization

OEM	Start of production	Capacity	Models	Localization level	Autocomponents for localization
IVECO-AMT (Chelyabinsk region)	1994	1 000	TRAKKER	-	-
VOLVO TRUCKS (Kaluga region)	19, January, 2009	10 000 (by 2015)	Volvo FH-12 Volvo FM-12 Volvo FM-64 Volvo FM-42 Volvo FM-84 Volvo FMX	End of 2014 – 15% Projected level - 33%	Different types of bodies, tyres, springs, cabins, chassis components, automatic transmission Possible assembly of axles, gear boxes in 2020
RENAULT TRUCKS (Kaluga region)	19, January, 2009	5 000	Renault Route Renault Lander Renault Kerax	20-50%	Different types of bodies, tyres, cabins
SCANIA (St. Petersburg)	2010	5 000 Increase up to 7 500 in 2 shifts	Griffin P 380	28% Chassis assembly + body structure	Cable harnesses, fuel tanks, tyres, wheels, leaf and parabolic springs, frames, plastics and rubber, castings, forgings, machining, batteries, air surge tanks, torque rods, pressed parts, including surface treatment
MERCEDES-BENZ (Tatarstan Republic)	2010	2013 - 4 500 2018 -10 000	Mercedes-Benz Actros (Euro V) Mercedes-Benz Atego (Euro V) Mercedes-Benz Axor (Euro V) Mercedes-Benz Unimog (Euro V)	-	KAMAZ is the main Partner Cabins, engines, axles, tires, fuel filter separator
FUSO (Tatarstan Republic)	April, 2010	7 000	Mitsubishi Fuso Canter	-	KAMAZ is the main Partner Batteries, tires
MERCEDES-BENZ (Nizhny Novgorod region)	July 2013	25 000	Mercedes-Benz Sprinter	CKD	licensed production of the engine at YaMZ plant Body part stamping at GAZ plant
MAN (Leningrad region)	2013	6 000	MAN TGS MAN TGX	-	Different body types ZF Gearbox (KAMAZ JV -ZF KAMA)
ISUZU (Ulyanovsk region)	2006	5 000	Isuzu NLR85A Isuzu NMR85H Isuzu NPR75 Isuzu NQR90 Isuzu FSR90 Isuzu FVR34 Isuzu N1 Isuzu Forward 2017 – trucks, carrying capacity over 24 t	30-50%	CKD brginning April 2014 Different body types
BAW (Ulyanovsk region)	19, July, 2011	40 000/ 60 000 (by 2015)	BAW Tonik 33463 BAW Fenix 3346 BAW Fenix 33462 Baw Fenix with gas-petrol engine	Projected level - 70%	Exhaust system, radiators, sound insulation, shock absorbers, starters, alternator, wheels, tyres
HYUNDAI (Kaliningrad region)	September 2012	2015 – 10 000 2018 – 25 000	HD 78 from September 2012, **HD-170 , HD 120 from 2013** HD - 35	SKD, Since 2015 - CKD	
FUSO (Tatarstan Republic)	April, 2010	7 000	Mitsubishi Fuso Canter	-	KAMAZ is the main Partner Batteries, tires
Tata Daewoo (Kaliningrad region)	October 2014	2 000, Increase up to 15 000	Tata Daewoo Prima Tata Daewoo Novus MDT		Planned stamping, welding
Ford Otosan (Kaliningrad region)	2015		Ford 1846 T (tractor) cargo trucks 4X2,6X2, construction trucks 6X4, 8X4		CKD, frame production and body superstructure in Russia
Donfeng Motor (Saratov region)		500	City bus		
HOWO (Far East)	2016 – Start of construction work				

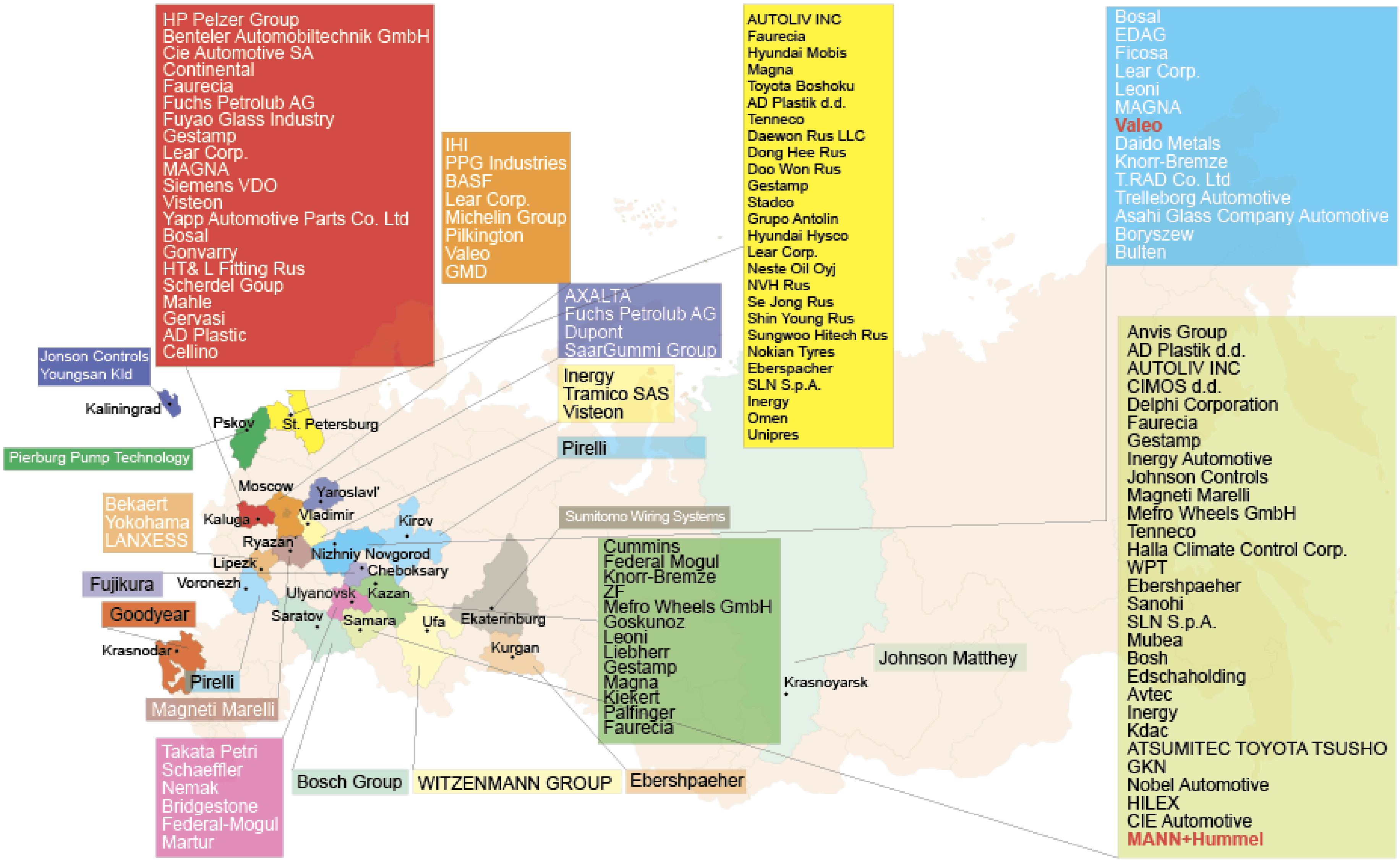
Source : Russian Automotive Market Research

Auto component manufacturers: density by region



Source : Russian Automotive Market Research

Foreign suppliers in Russia



August 2016

Source : Russian Automotive Market Research

Production of foreign suppliers in Russia

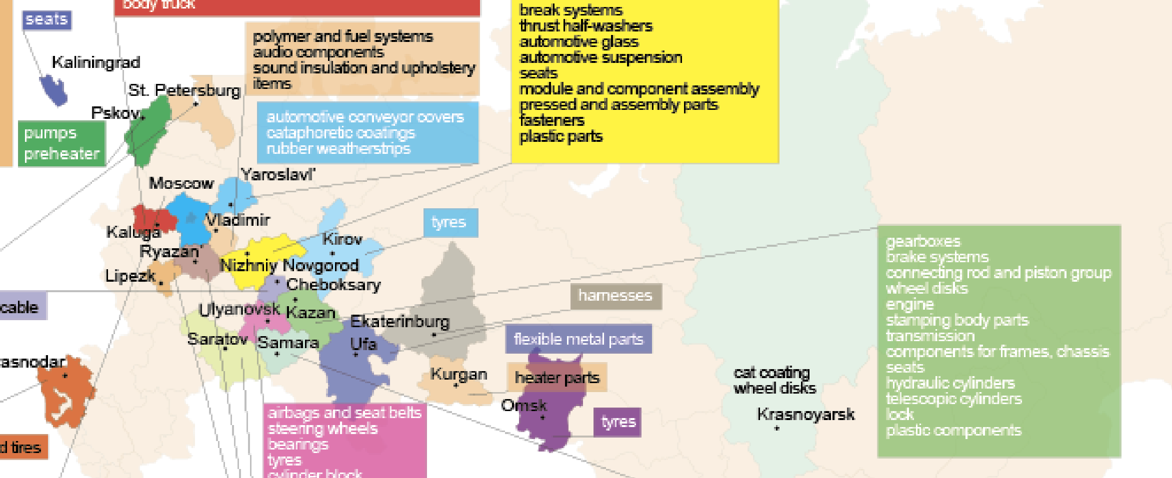
bumpers
door modules
door panels
interior items
exterior items
rear and front suspension
frames and hood reinforcement plates
dashboard frame
exhaust system components
wings
tops
body parts
sunroofs
body metal parts
pillar pads
door covering
top covering
interior covering
underbodies
dashboards
pedals
front and rear subframes
front engine mounts
front-end module
body sills
radiator grils
pre-assembled doors
welded structural parts
seats
body strength members
ventilation and air conditioning systems
chassis systems
sorting of cold rolled steel for press department
window lifts
fuel tanks
filters
central consoles and dashboards
bumpers
side airbags
door panels
child safety seats
console
dashboards
airbags
seat belts
steering wheels
electronics
exhaust systems
frames
fuel and brake pipes
brake pipes
bumpers
exhaust systems
wheels
tires
gasoline tank
components of transmissions
alluminium components

parts for trunk, engine and interior sound insulation
carpet mats
FEM
automotive glass
car electronics
bumpers
POL
engine parts
interior items
mirrors
dashboard frame
body parts
radiator grills
seats
suspension parts
door panels
fuel tanks
mufflers
modification and repair of molds
components of brake systems
components of fuel systems
air-conditions and power steering components
tyres
plastic components
filters
thermostats
turbochargers
body truck

polymer and fuel systems
audio components
sound insulation and upholstery items

automotive conveyor covers
cataphoretic coatings
rubber weatherstrips

bumpers
door modules
door handle
interior items
wire harness
mirrors
fuel tank caps
moldings
top trimming
dashboards
wing flaps
radiator grills
steering wheels
seats, upholstery
exhaust systems
central console
electric cables
antivibration components
antifriction alloys and bimetallic strip
bushes
main and rod bearings
sliding bearing
radiators
break systems
thrust half-washers
automotive glass
automotive suspension
seats
module and component assembly
pressed and assembly parts
fasteners
plastic parts



gearboxes
brake systems
connecting rod and piston group
wheel disks
engine
stamping body parts
transmission
components for frames, chassis
seats
hydraulic cylinders
telescopic cylinders
lock
plastic components

shock mounts
muffler suspension
rubber-metal antivibration components
engine mount systems
automotive filters
protecting covers
bumper assemblies
car fuel tanks
airbags
vehicle and engine parts and assemblies
interior items
child safety seats
wire harness
pedal assemblies
seat belts
steering wheels
parking brake levers
seats
exhaust systems
special pressed disks
weatherstrips
pressed parts
electronics
exhaust systems
climate control systems
metallic hoses
roller supports
bellows
tubing hangers
wires
canning
components of chassis, diesel systems
components of brake systems
components of fuel systems
pedal components
hinges
starters
generators
stamping body parts
suspension springs
engine
fuel systems
radiators
gearbox components
joint
cable
gearbox components
alluminium casting
air filters
washer
flexible cable
seat frame
spring

airbags and seat belts
steering wheels
bearings
tyres
cylinder block
cylinder head
tyres
plain bearings
seats

body parts
automotive paints
cat coating
coating
heating, ventilation and air conditioning systems
float glass
tyres
wire harness
plastic components

bead wire
steel wire cord
tyres
polymer-additives for caoutchouc

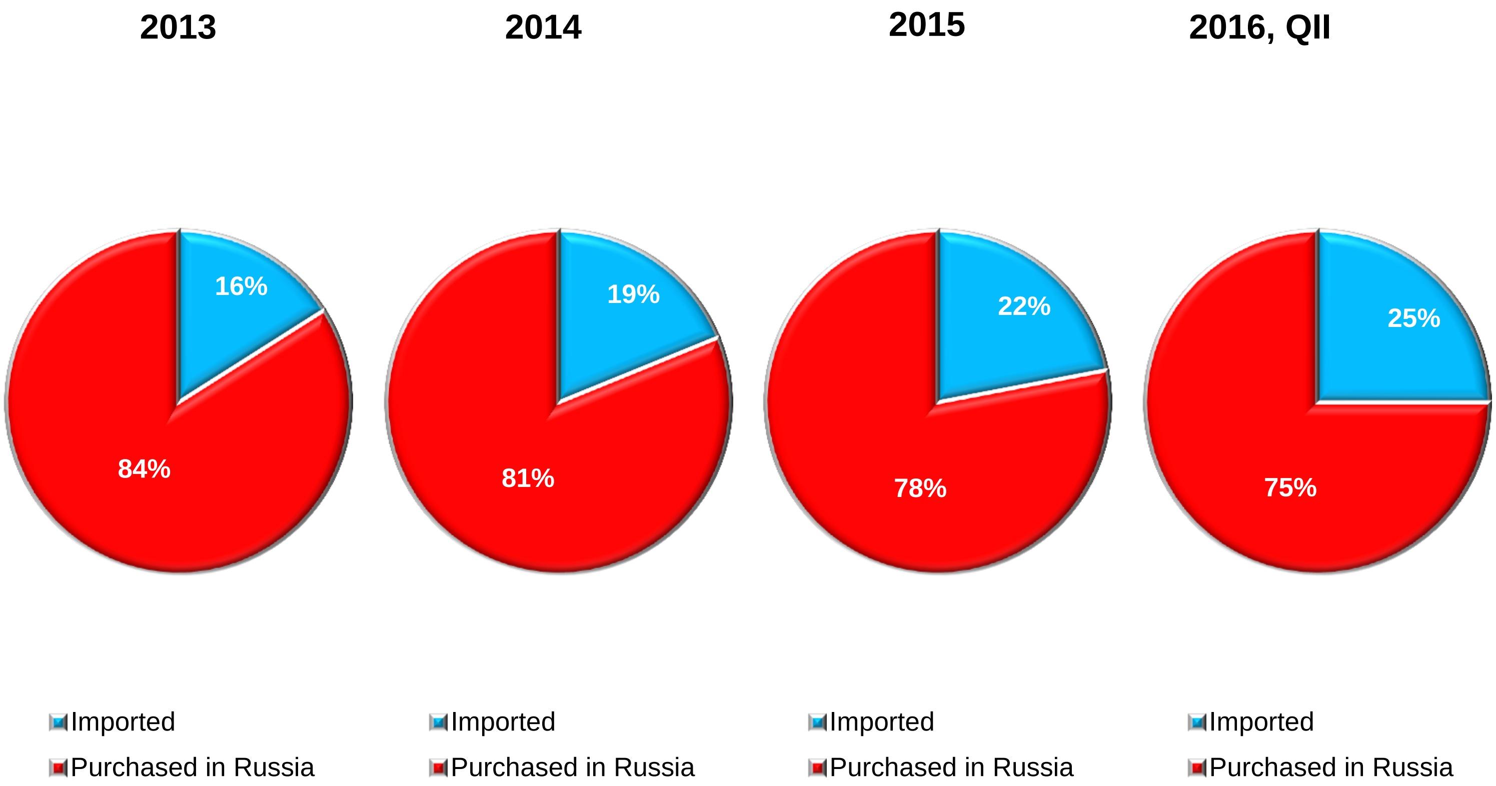
headlamp clusters
tail lights
pedals
fog lights
lighting equipment

control units
sensors
fuel pump assemblies
central injection assemblies
fuel pump assemblies
DNOX engine wire harness
in-line fuel injection pump
ignition plugs
fuel rail

August 2016

Source : Russian Automotive Market Research

Purchasing of materials and components



Source : KAMAZ, analysis Russian Automotive Market Research

16% growth in costs per 1 vehicle set, 2015/2014:

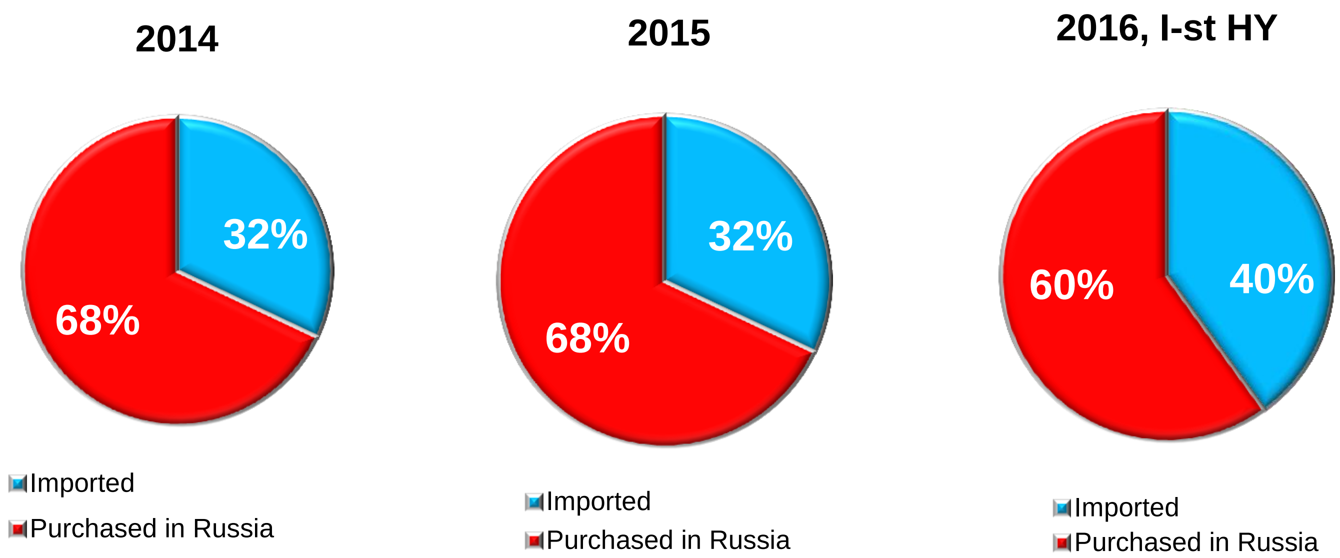
- Component price growth - 24%
- Material price growth – 43%
- Metal price growth – 2%

16% growth in costs per 1 vehicle set, 2016 QII / 2015 QII:

- Component price growth - 18%
- Material price decrease – 3%
- Metal price growth – 9%

Source : KAMAZ, analysis Russian Automotive Market Research

Purchasing of materials and components



Source : AVTOVAZ, analysis Russian Automotive Market Research

Inventory price indices, 2015

- Components - 1.1220
- Materials – 1.1480
- Metal – 1.1860
- **Total: 1.1270**

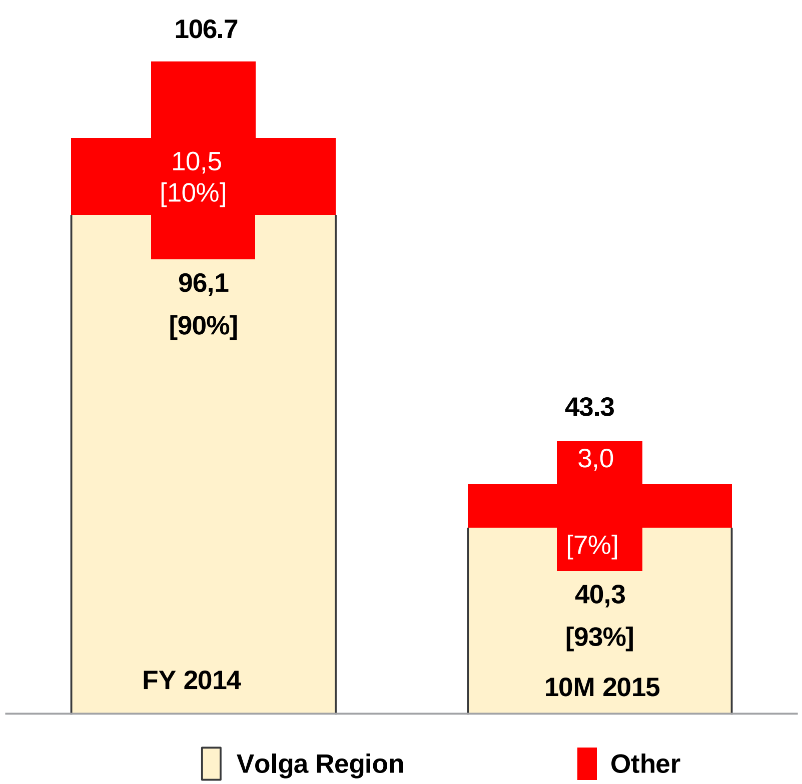
Inventory price indices, 2016 I-st HY

- Components - 1.0166
- Materials – 1.0190
- Metal – 0.9691
- **Total: 1.0120**

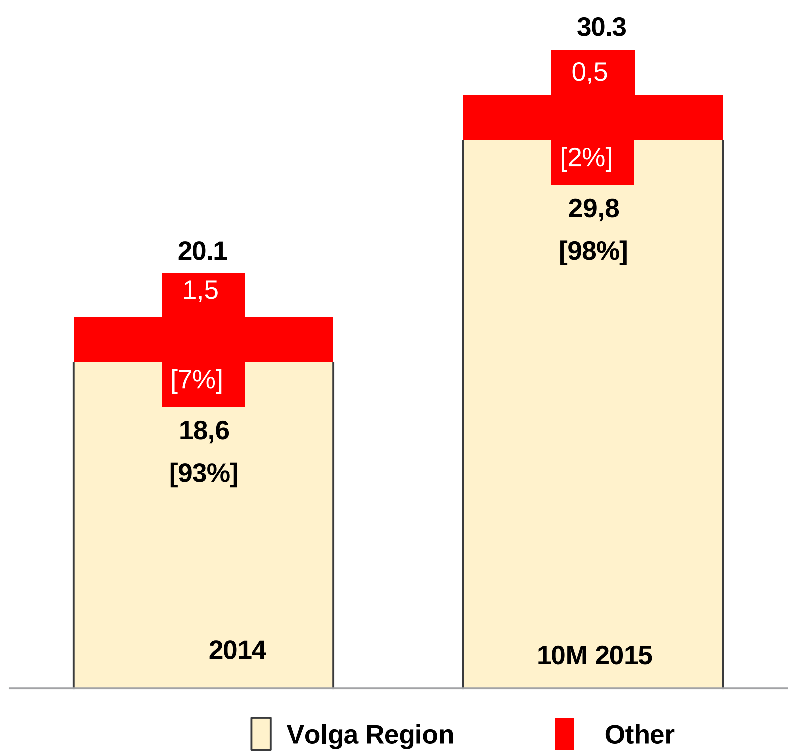
Source : AVTOVAZ, analysis Russian Automotive Market Research

AVTOVAZ-RENAULT-NISSAN: suppliers from the Volga region caused 93% of INCOMPLETE vehicles and 98% of IDLE TIME (10 months 0f 2015)

Incomplete vehicles [thousand units]



Idle time [thousand minutes]



Source : ARNPO

Foreign suppliers	Russian holdings	Russian independent suppliers
100% of foreign capital prevails	Cooperation with foreign companies	Poor cooperation with foreign companies, Limited resources
Supplies to OEM prevail. A few suppliers working in the aftermarket	Supplies to OEMs and to the aftermarket	Decline in supplies to OEMs Competition with South-East Asian suppliers in the aftermarket
2-3 key accounts	A big share of internal supplies	Decline in the market share
Supplies to the Russian market prevail	**Supplies to the Russian market prevail**	**Supplies to the Russian market prevail**
Problems with localization: raw and other materials, subcomponents	**Problems: raw and other materials, subcomponents**	**Problems: raw and other materials, subcomponents**

Source : Russian Automotive Market Research

Challenges

- To cut production costs
- To develop supplier panel
- To develop operations base
- To develop R&D
- To develop logistics
- **To identify the place of Russia in the global automotive industry**

Source : Russian Automotive Market Research

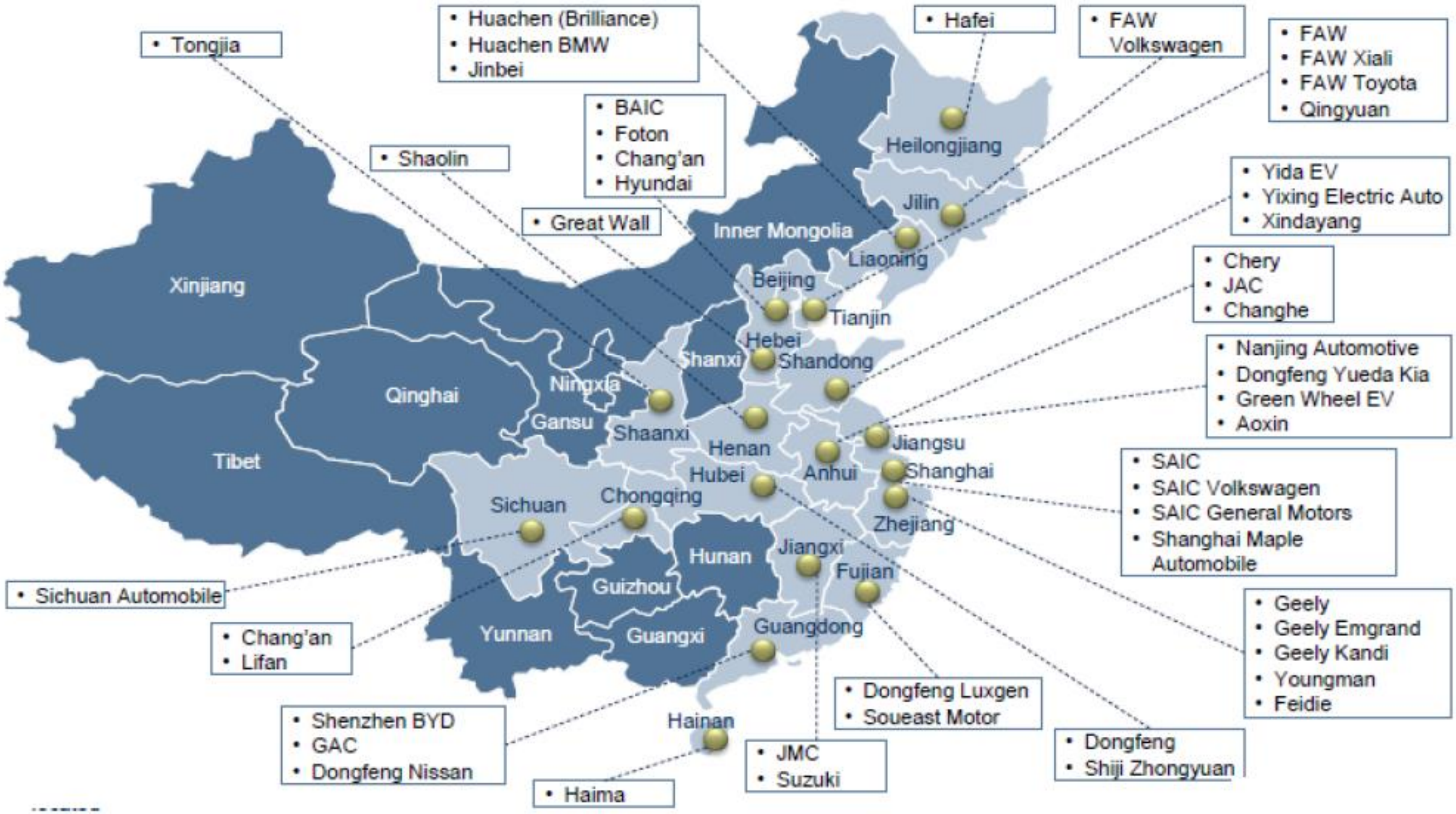
«Supplier of technologies/ major exporter/supplier of components»?

- Worldwide overcapacity
- Production relocation to countries with low costs/high market potential
- Competition in R&D

Source : Russian Automotive Market Research

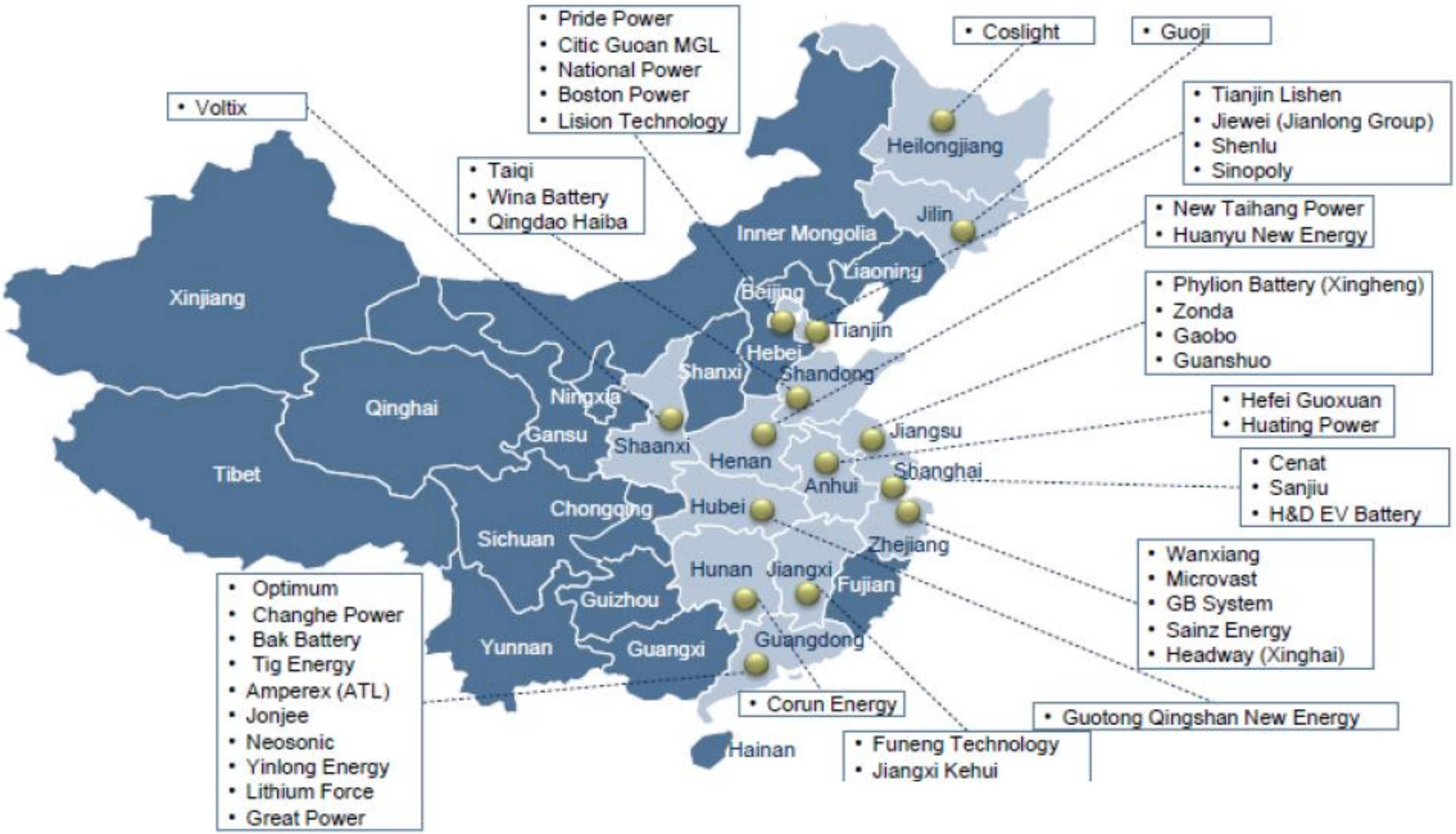
Competition in R&D (1)

Electric vehicle manufacturers in China (including hybrid)



Source : Frost & Sullivan

Battery manufacturers in China



Source : Frost & Sullivan

- Russia – the Free Trade Zone center
  Lower production cost
- Qualified staff available – not always important
- Raw materials available – not always important
- Supplier chain available – not always important

Source : Russian Automotive Market Research

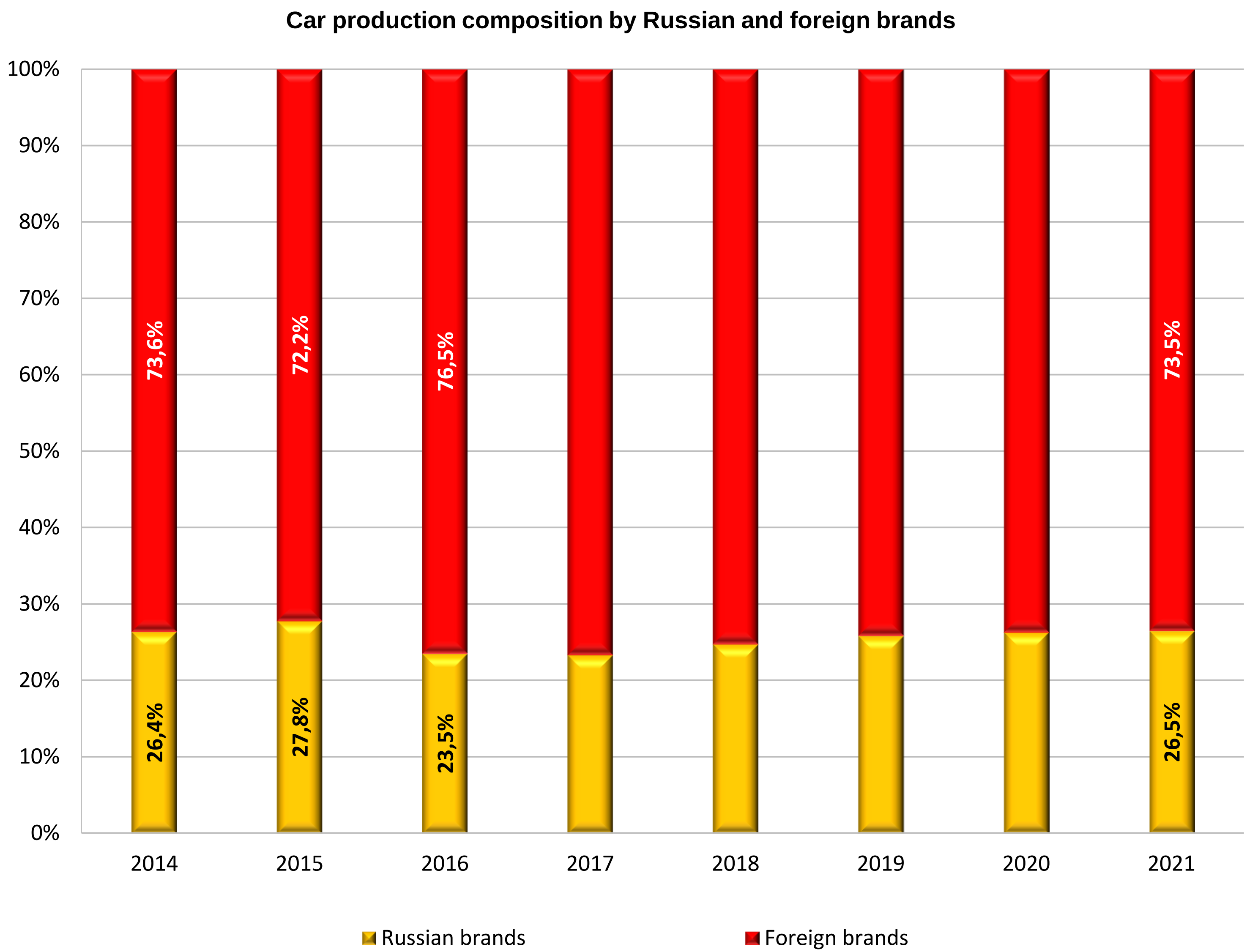
Russia on the domestic market:

- Keeping production of local and localized automotive brands
- Dominance of local and localized component and spare parts manufacturers
- Further development of localization

Russia on foreign markets:

- Niche player
- Finding a niche

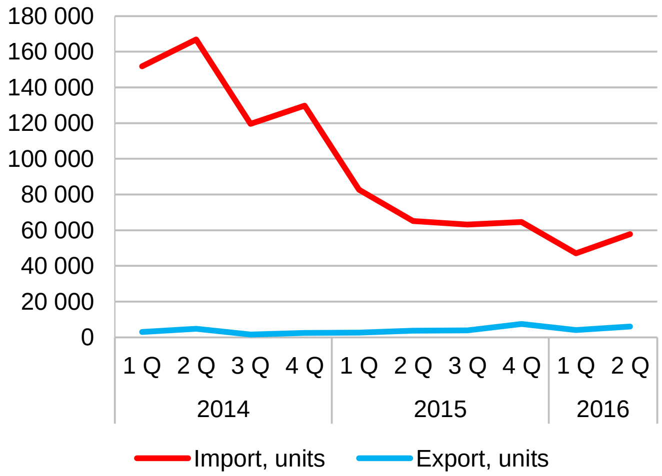
Source : Russian Automotive Market Research



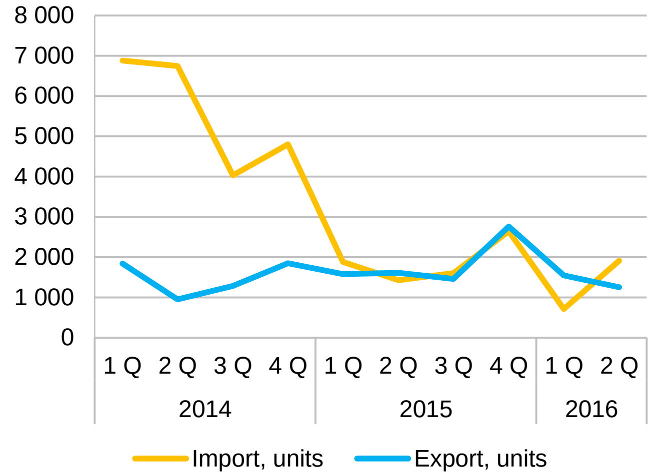
Source : Russian Automotive Market Research

New vehicle import and export, 2014-2016 (January-June), units

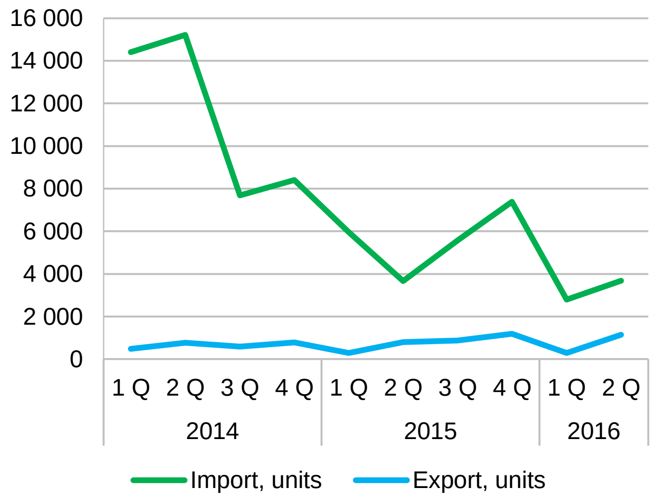
Cars



Trucks



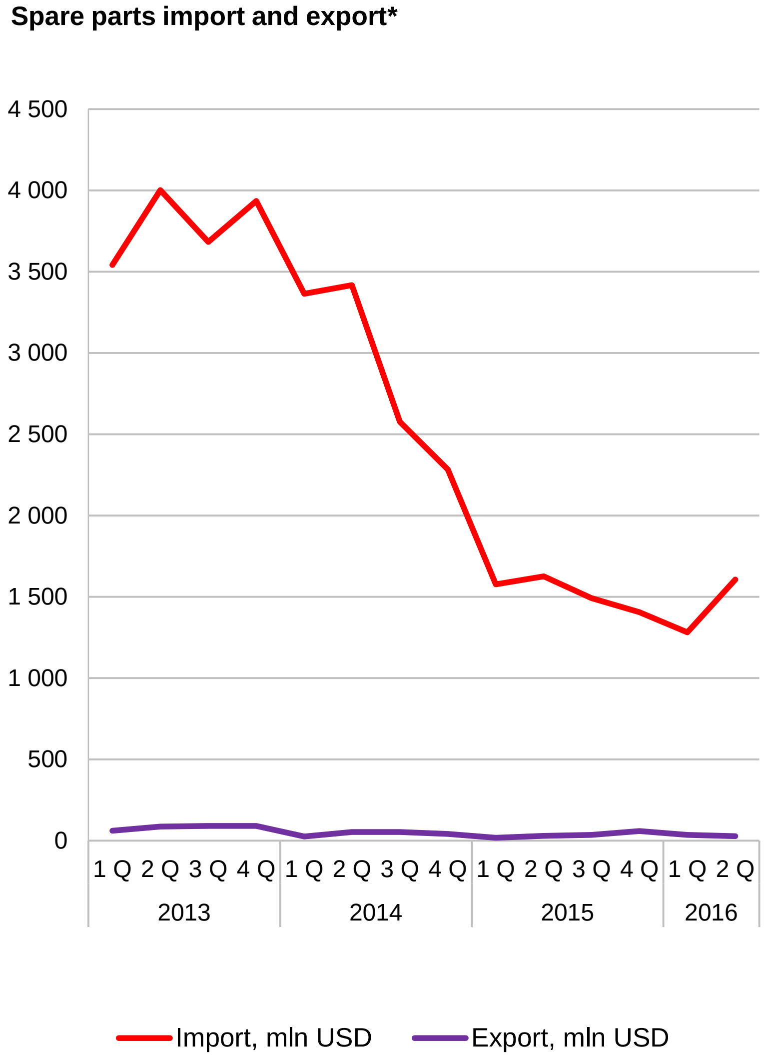
LCV



Buses

Source : Russian Automotive Market Research

Spare parts import and export



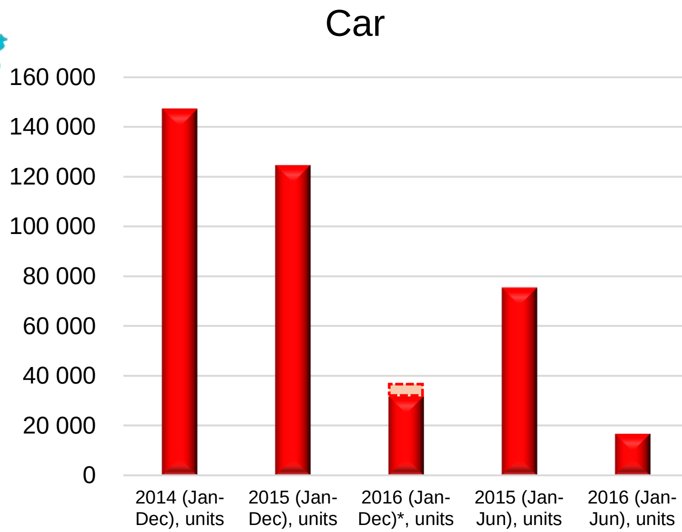
* Hereinafter: 87 HS code

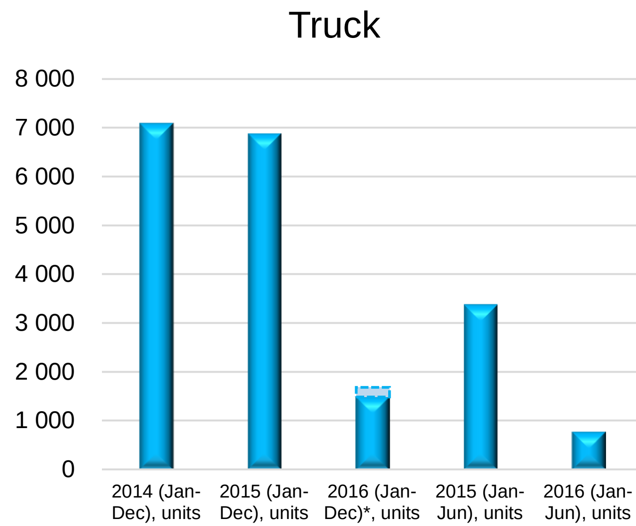
Source : Russian Automotive Market Research

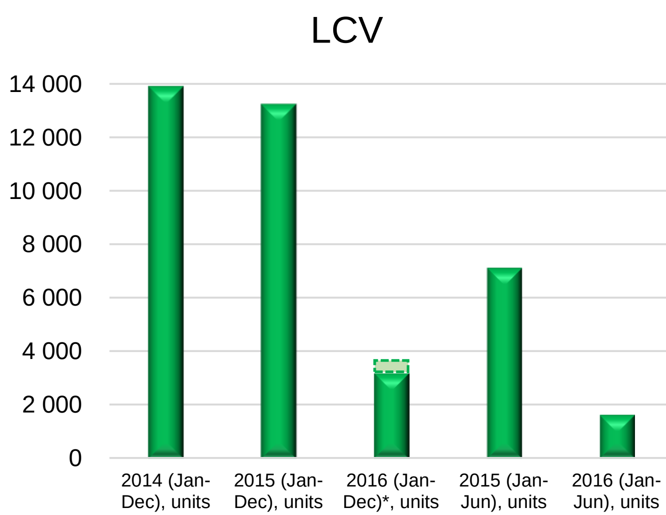
- Limited potential of export markets
- Competition with local and global brands
- Dependence of some export markets on petroleum prices
- Political instability in some export markets
- Strong impact of foreign relations between Russia and export markets
- Customs barriers
- Costs related to participation in local events
- Certification/ homologation costs
- Logistics costs
- Distribution development costs

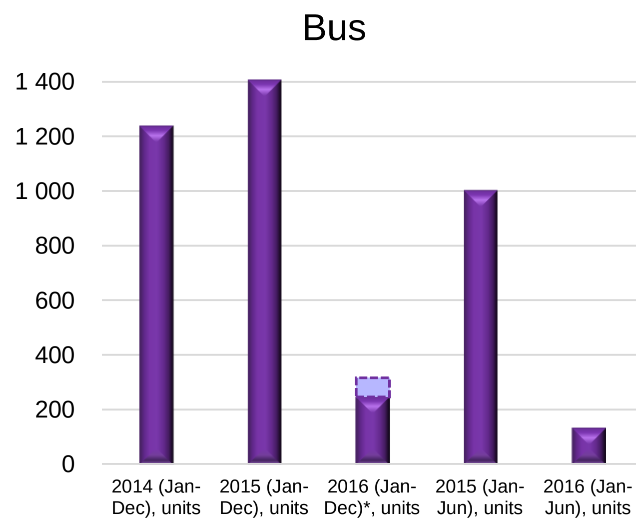
Source : Russian Automotive Market Research

New vehicle market in Kazakhstan









* Forecast

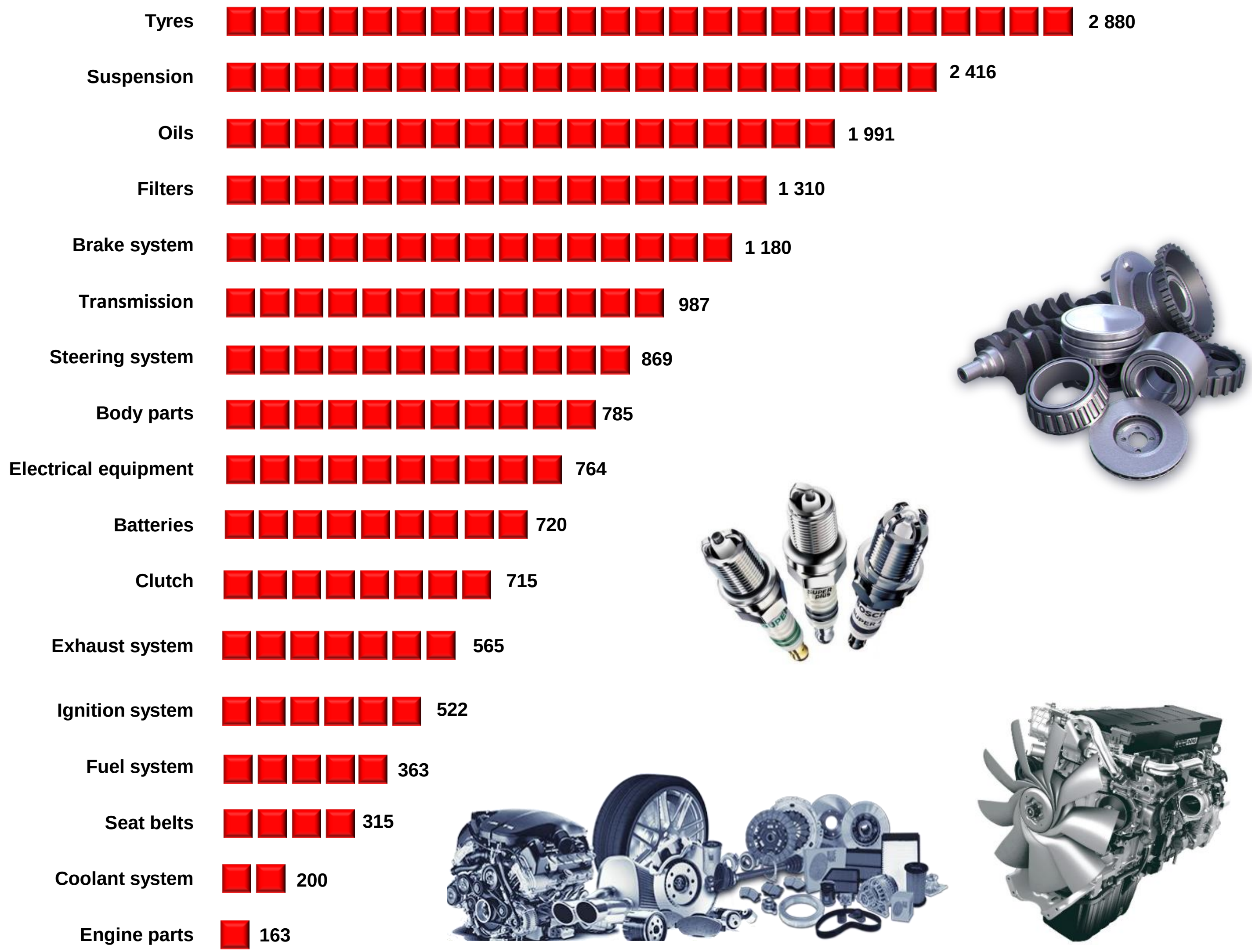
Source : Russian Automotive Market Research

Major trends:

- Limited production volume
- Growth in the spare parts market
- Fierce competition in the spare parts market: Russia vs South-East Asia
- Fierce competition between component manufacturers
- Some manufacturers are quitting the automotive industry
- Component manufacturers diversify their business
- Demand for components for gas engines and infrastructure
- Import substitution strategy

Source : Russian Automotive Market Research

Car spare parts market capacity in Russia in 2015, mln USD



Source : Russian Automotive Market Research

Key advantages of production in Russia:

- Russian market potential
- Currency risk mitigation
- Participation in public procurement
- Enhanced export opportunities

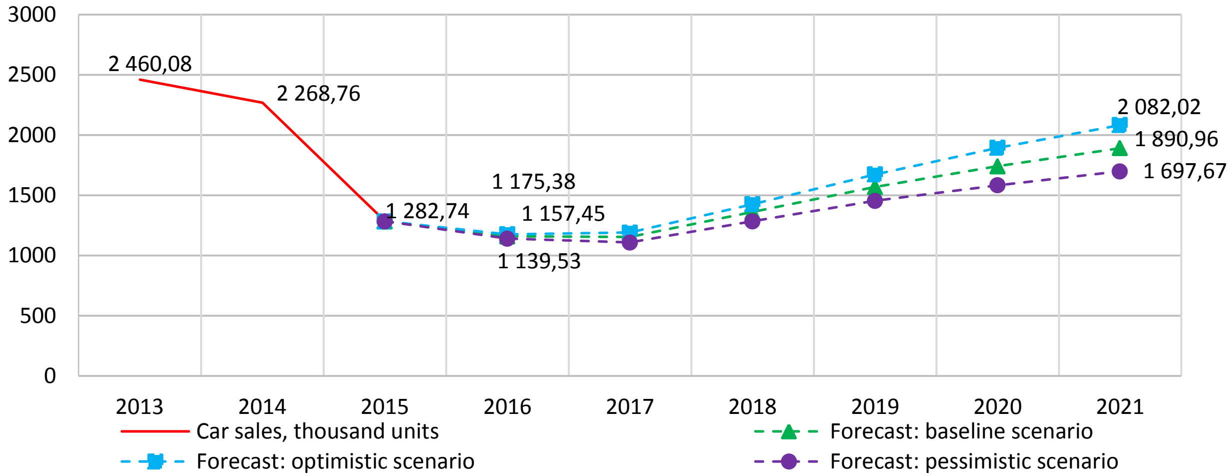
Source : Russian Automotive Market Research

Appendix

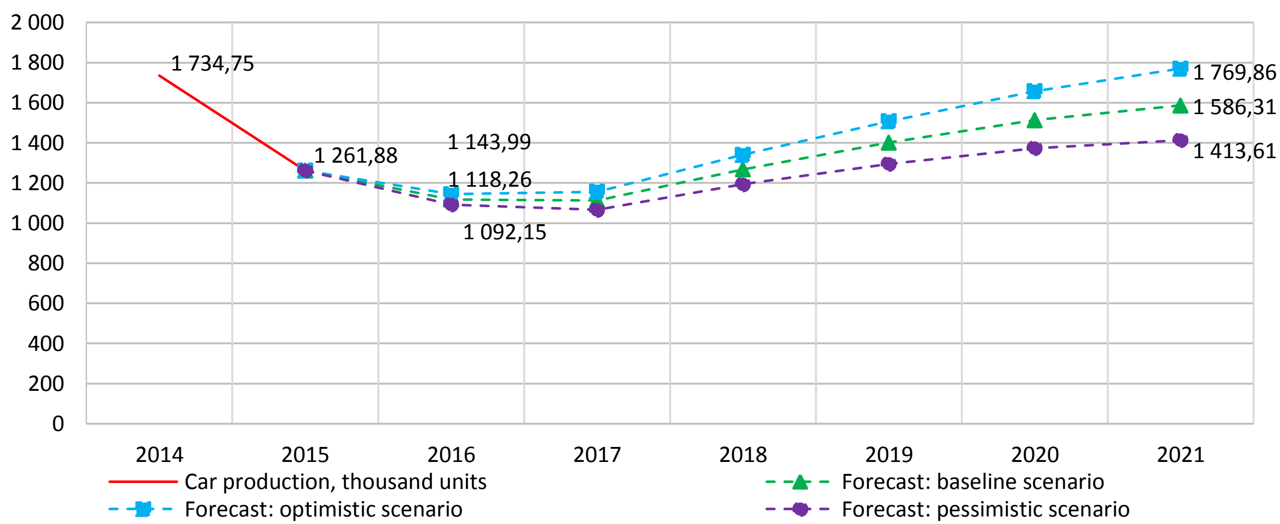
Forecast until 2021

Forecast until 2021

New car sales: 1 697.76 – 2 082.02 thousand units by 2021

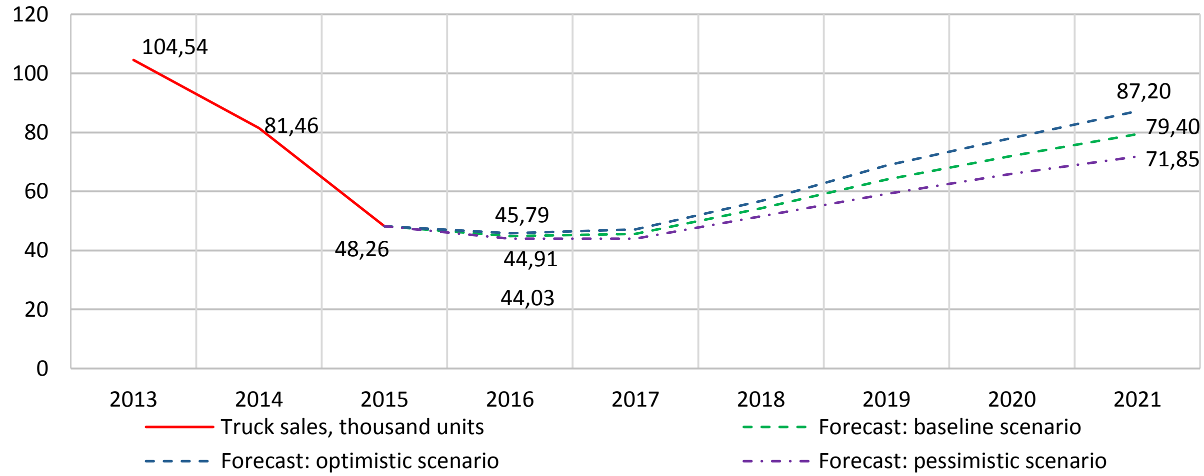


Car production: 1 413.61 – 1 769.86 thousand units by 2021

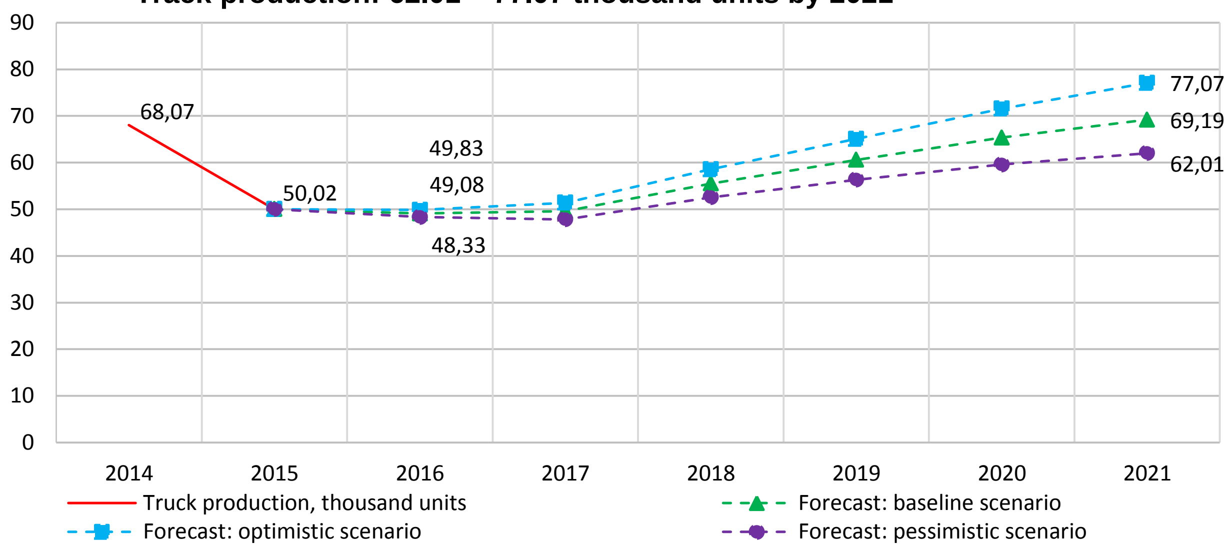


Source : Russian Automotive Market Research

New track sales: 71.85 – 87.20 thousand units by 2021

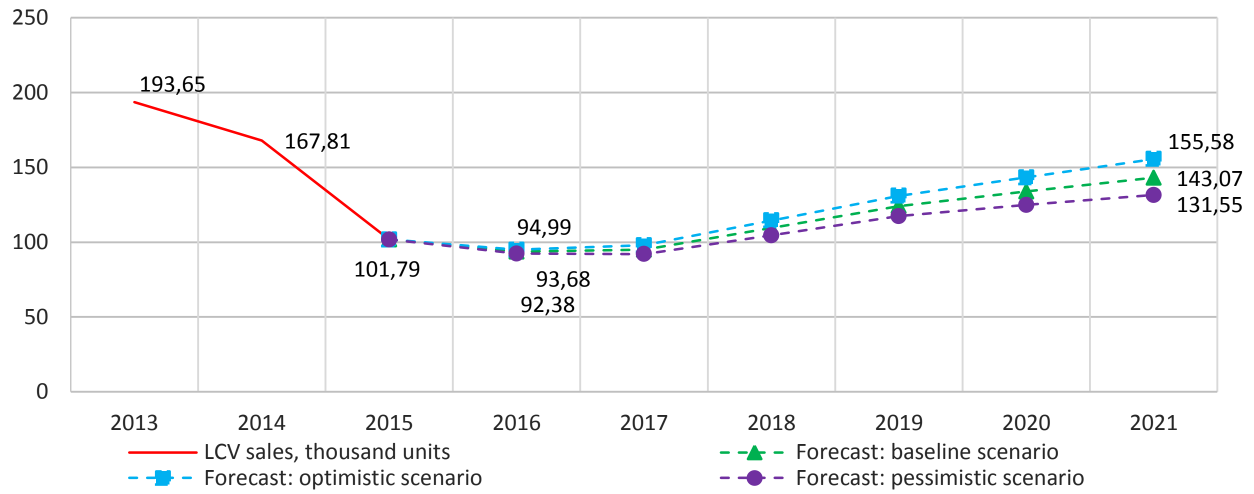


Track production: 62.01 – 77.07 thousand units by 2021

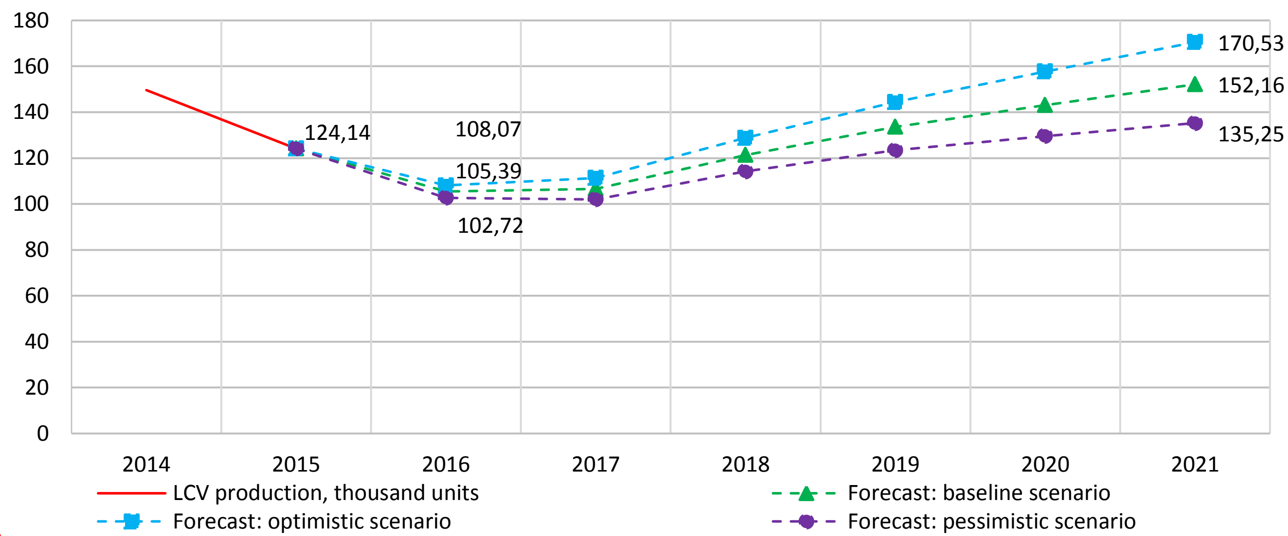


Source : Russian Automotive Market Research

New LCV sales: 131.55 – 155.58 thousand units by 2021



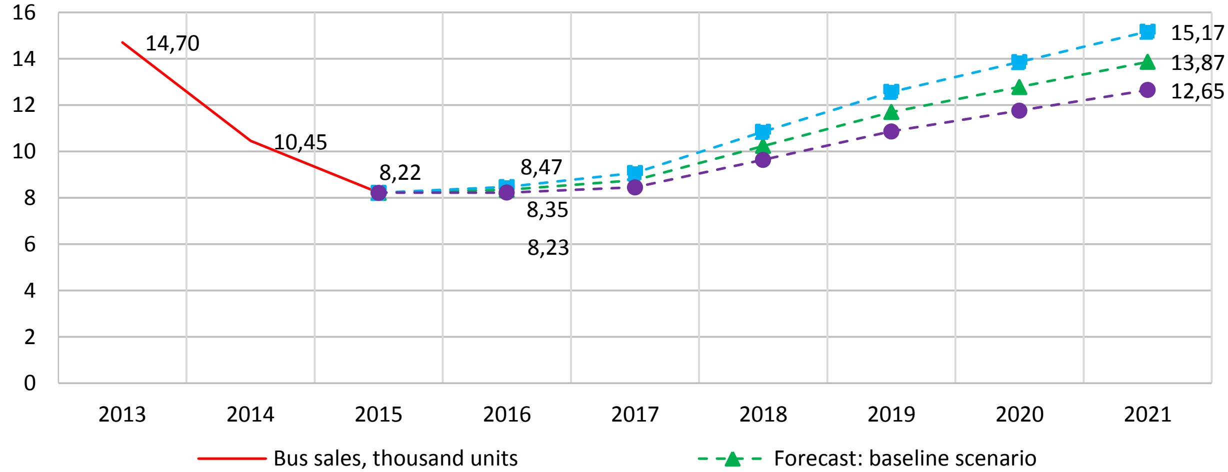
LCV production: 135.25 – 170.53 thousand units by 2021



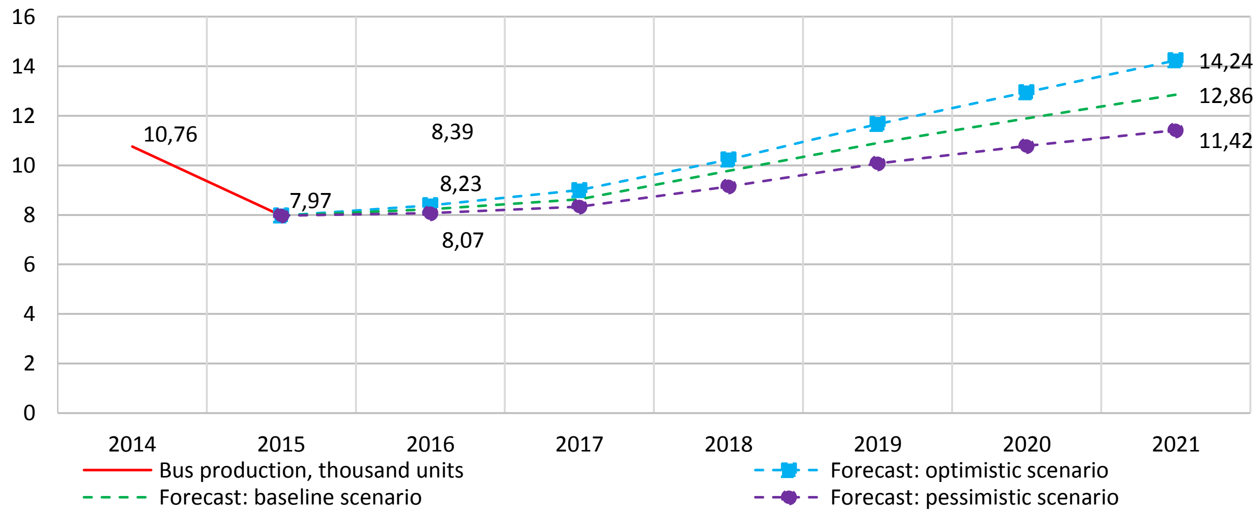
Source : Russian Automotive Market Research

Forecast until 2021

New bus sales: 12.65 – 15.17 thousand units by 2021



Bus production: 11.42 – 14.24 thousand units by 2021

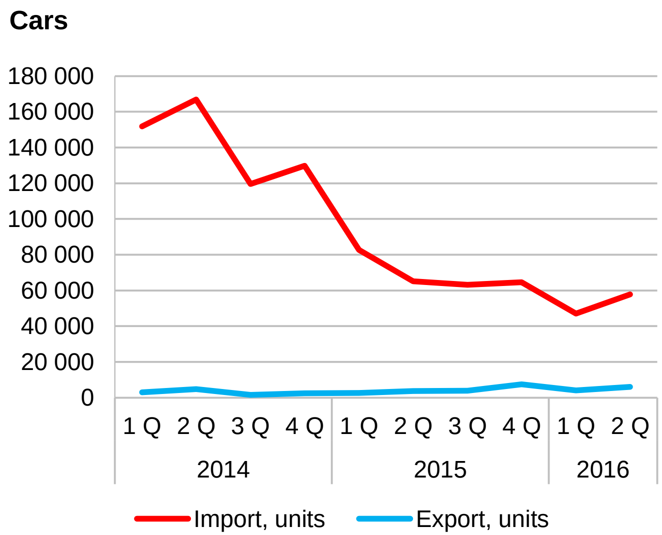


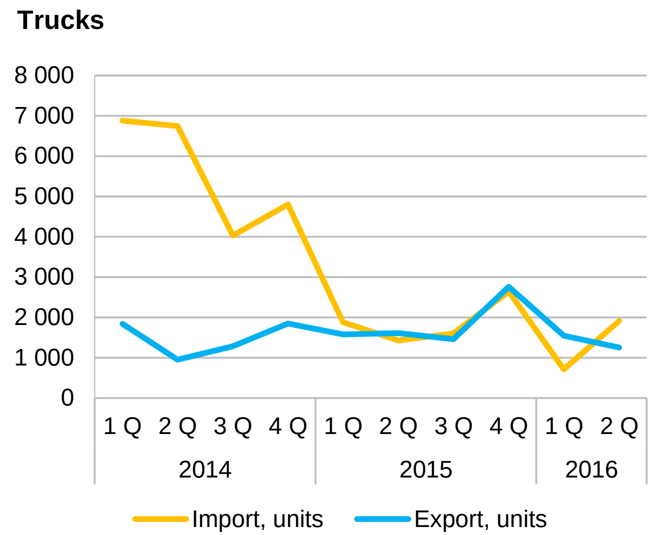
Source : Russian Automotive Market Research

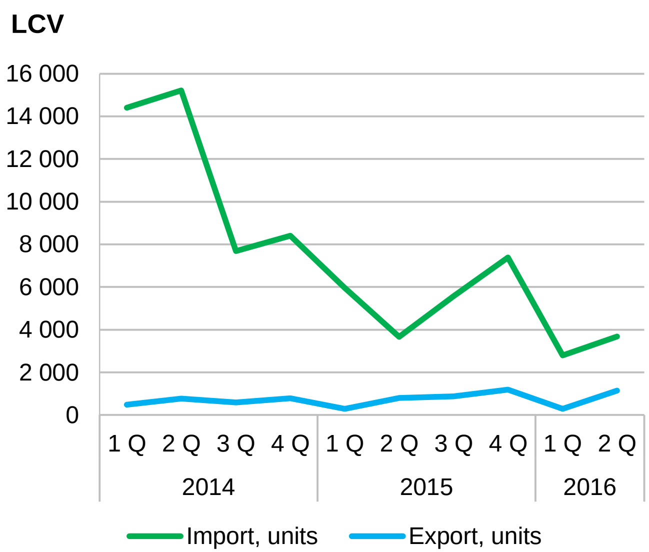
Appendix

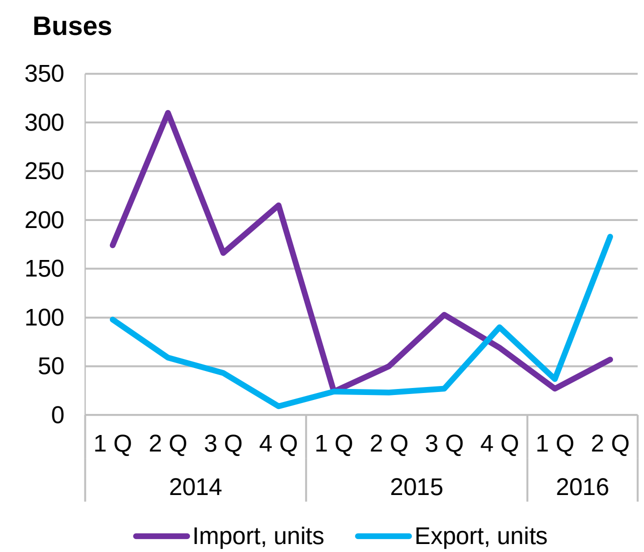
Import-export

New vehicle import and export, 2014-2016 (January-June), units





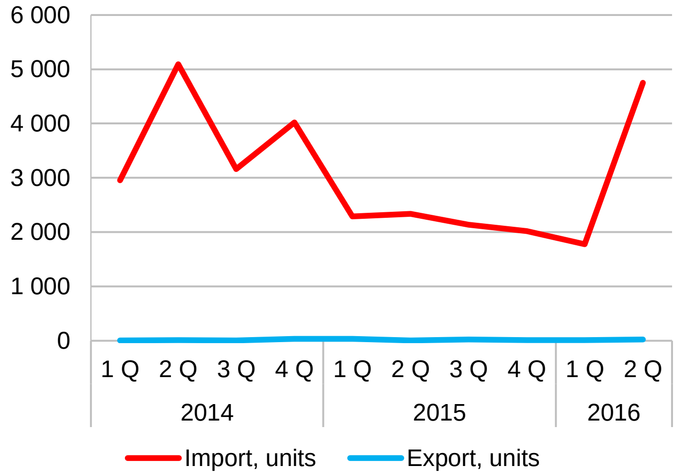




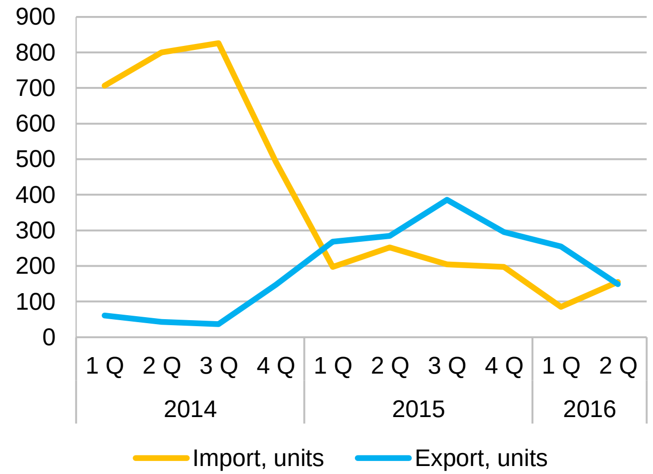
Source : Russian Automotive Market Research

Used vehicle import and export, 2014-2016 (January-June), units

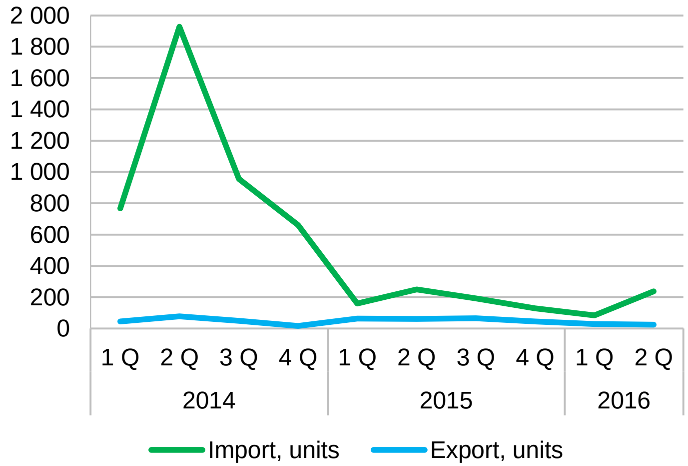
Cars



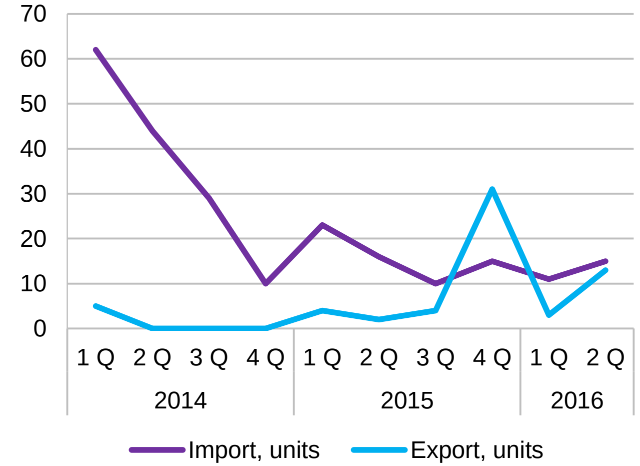
Trucks



LCV

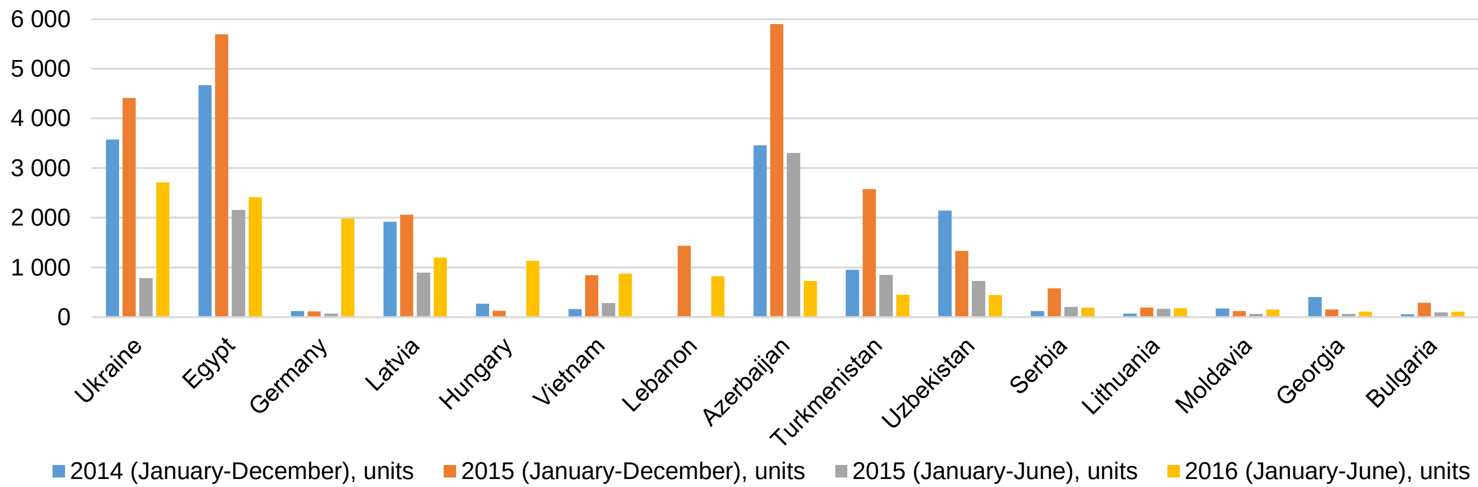


Buses

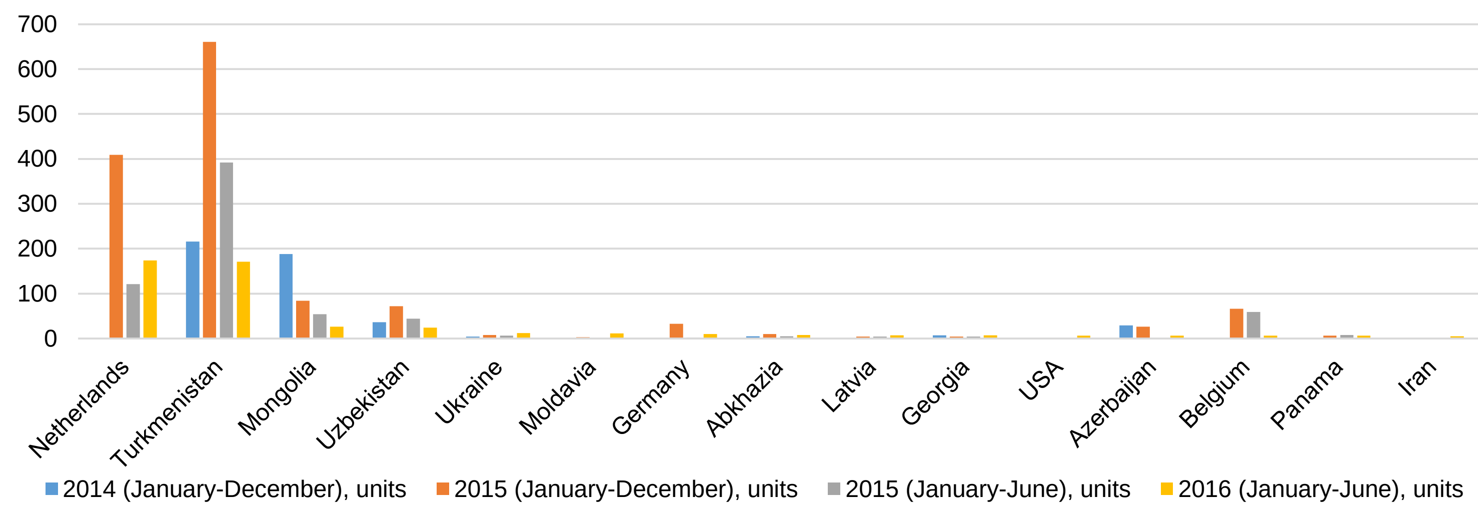


Source : Russian Automotive Market Research

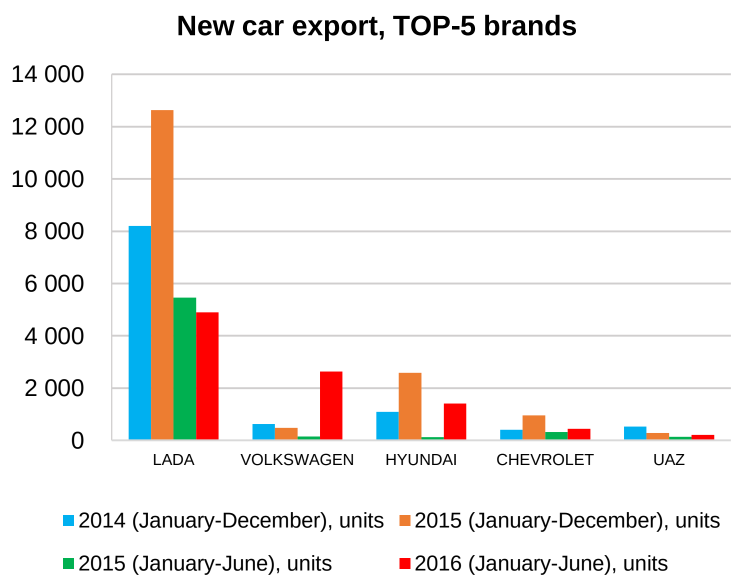
New vehicle export, TOP-15 recipient countries, 2014-2016 (January-June), units

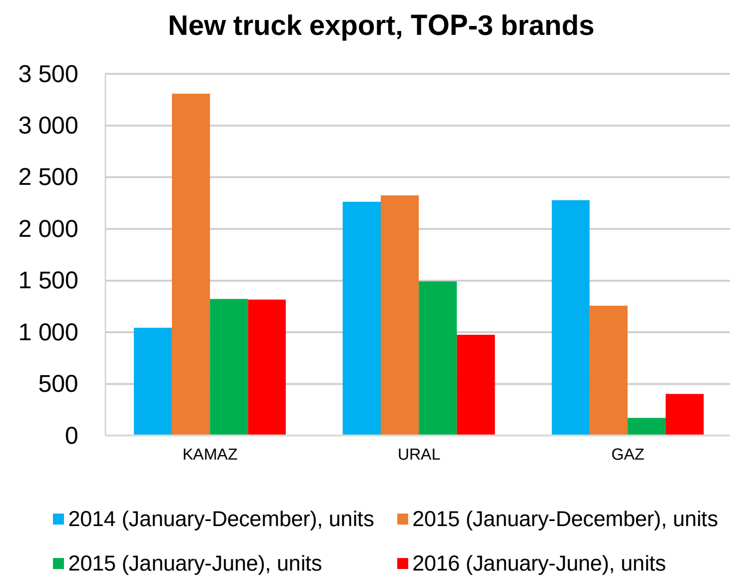


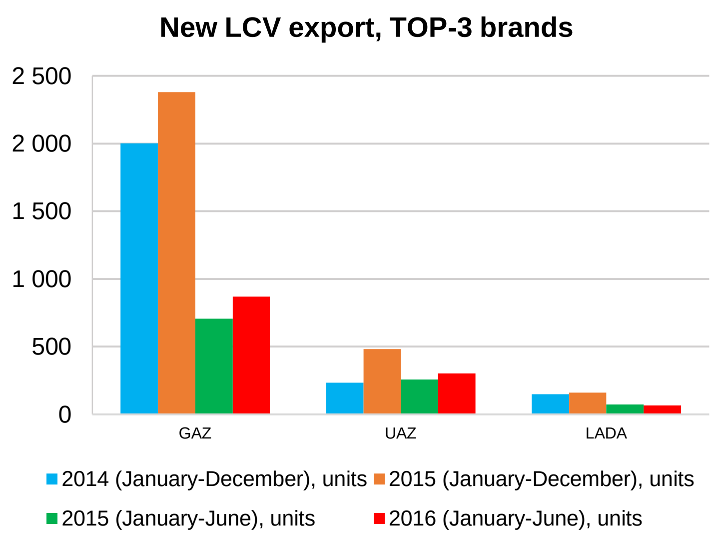
Used vehicle export, TOP-15 recipient countries, 2014-2016 (January-June), units

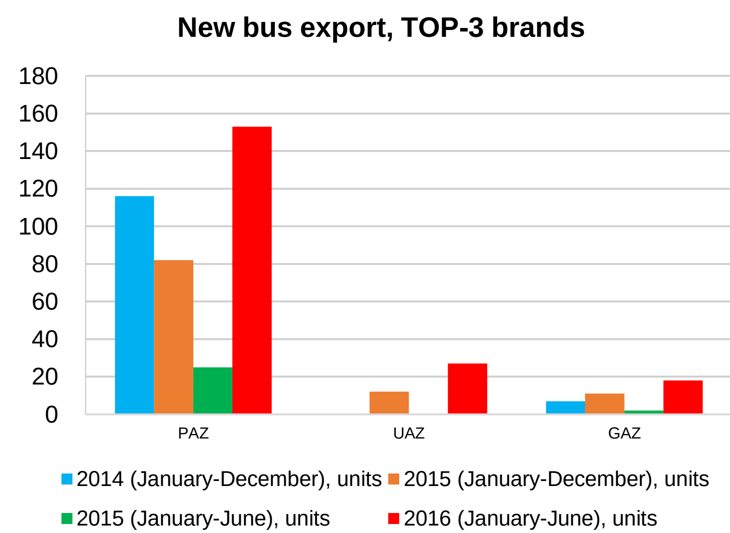


Source : Russian Automotive Market Research





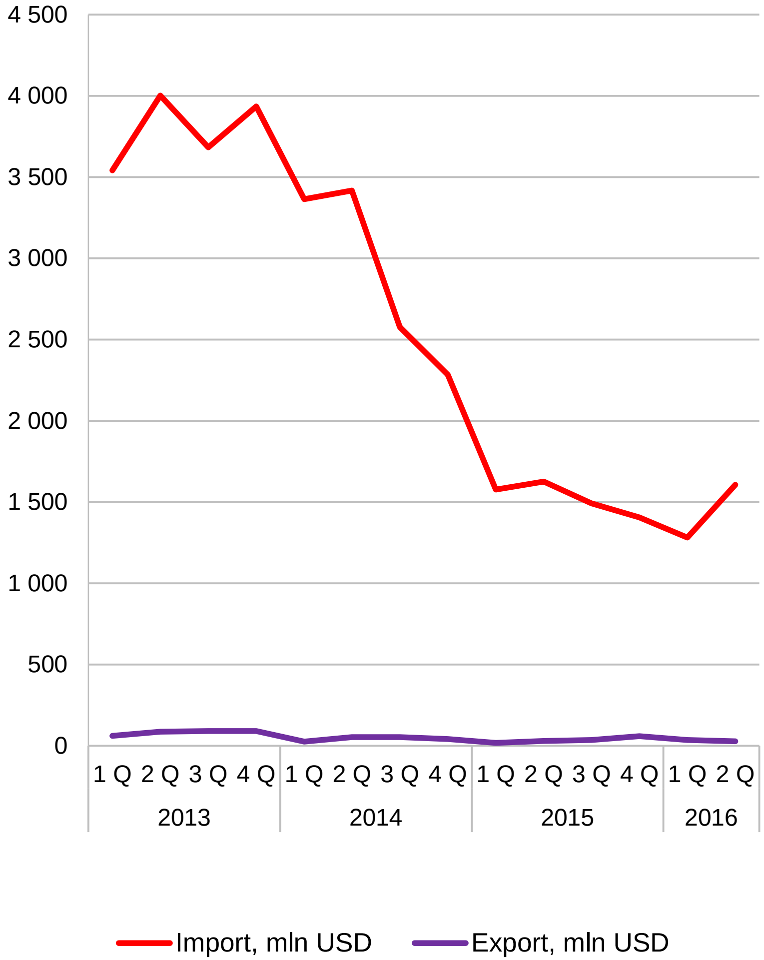




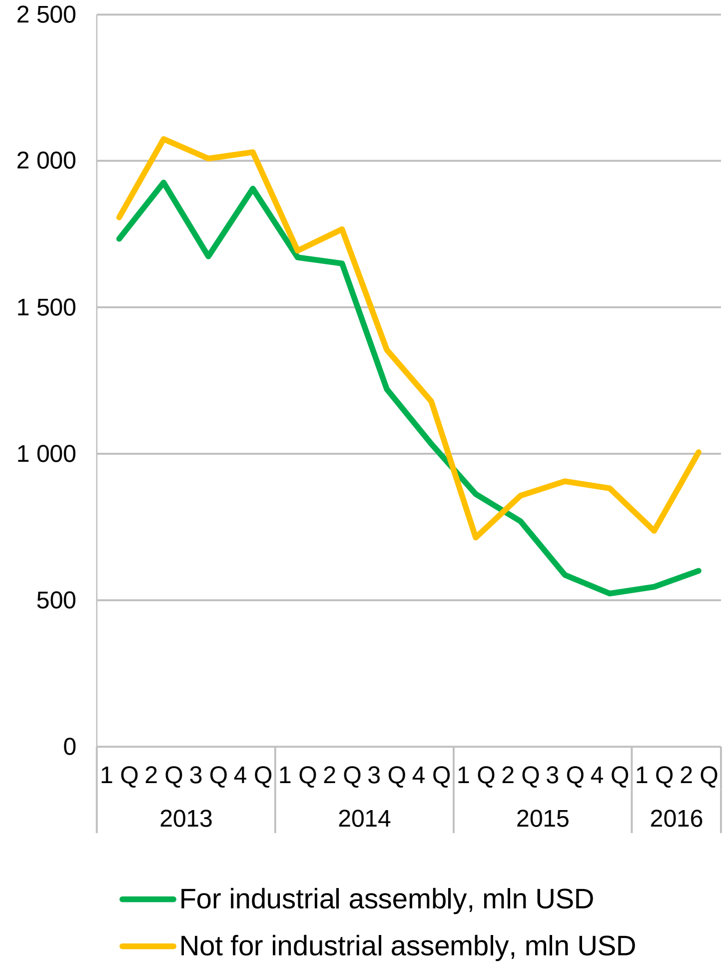
Source : Russian Automotive Market Research

Spare parts import and export

Spare parts import and export*



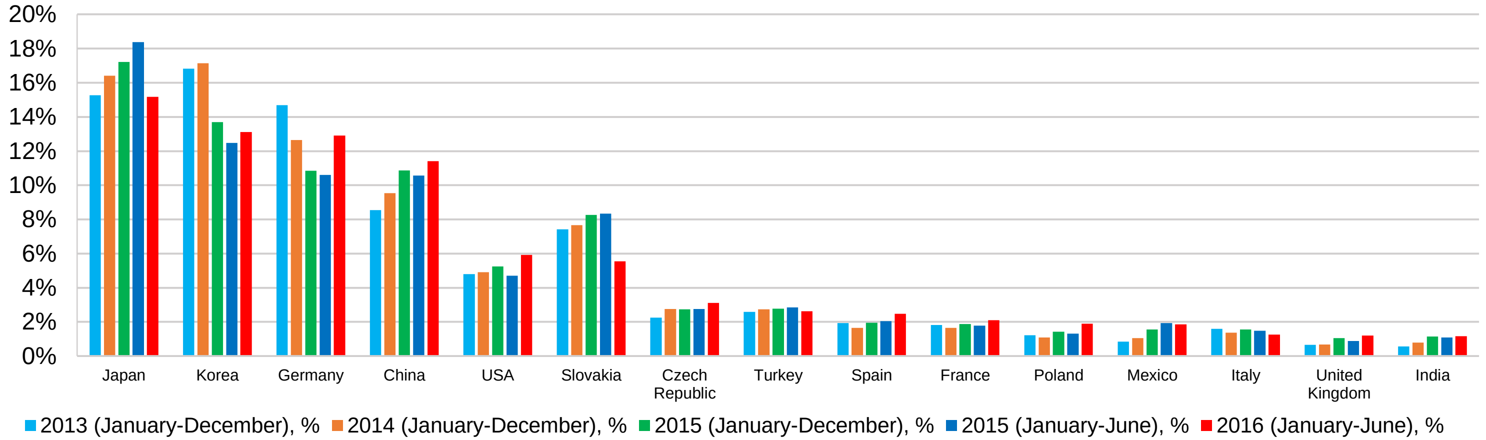
Import of spare parts for and not for industrial assembly



* Hereinafter: 87 HS code

Source : Russian Automotive Market Research

Spare parts import, TOP-15 countries of origin, 2013-2016 (January-June)



Country	2013 (January-December), mln USD	2014 (January-December), mln USD	Change, %	2015 (January-December), mln USD	Change, %	2015 (January-June), mln USD	2016 (January-June), mln USD	Change, %
Japan	2 315,2	1 899,3	-18,0	1 049,9	-44,7	588,7	438,3	-25,5
Korea	2 551,3	1 983,8	-22,2	835,8	-57,9	399,8	378,6	-5,3
Germany	2 226,8	1 464,2	-34,2	661,9	-54,8	340,0	372,7	9,6
China	1 295,8	1 104,4	-14,8	663,5	-39,9	338,8	329,8	-2,7
USA	727,0	569,0	-21,7	319,7	-43,8	150,6	171,2	13,7
Slovakia	1 123,7	886,2	-21,1	504,4	-43,1	266,9	160,2	-40,0
Czech Republic	342,3	318,3	-7,0	167,4	-47,4	88,1	89,8	1,9
Turkey	392,5	316,7	-19,3	169,4	-46,5	91,1	76,0	-16,6
Spain	292,3	191,8	-34,4	119,5	-37,7	65,8	71,4	8,5
France	274,5	191,3	-30,3	114,8	-40,0	57,1	60,9	6,7
Poland	185,9	125,8	-32,3	87,2	-30,7	42,1	54,7	29,9
Mexico	128,8	121,9	-5,4	94,9	-22,1	62,2	53,5	-14,0
Italy	241,2	158,0	-34,5	95,6	-39,5	47,6	36,5	-23,3
United Kingdom	100,7	77,4	-23,1	64,4	-16,8	28,3	34,6	22,3
India	85,6	92,2	7,7	70,4	-23,6	34,7	33,7	-2,9
Other	**2 874,7**	**2 069,2**	**-28,0**	**1 082,3**	**-47,7**	**602,0**	**526,4**	**-12,6**
Total	**15 158,3**	**11 569,5**	**-23,7**	**6 101,1**	**-47,3**	**3 203,8**	**2 888,3**	**-9,8**

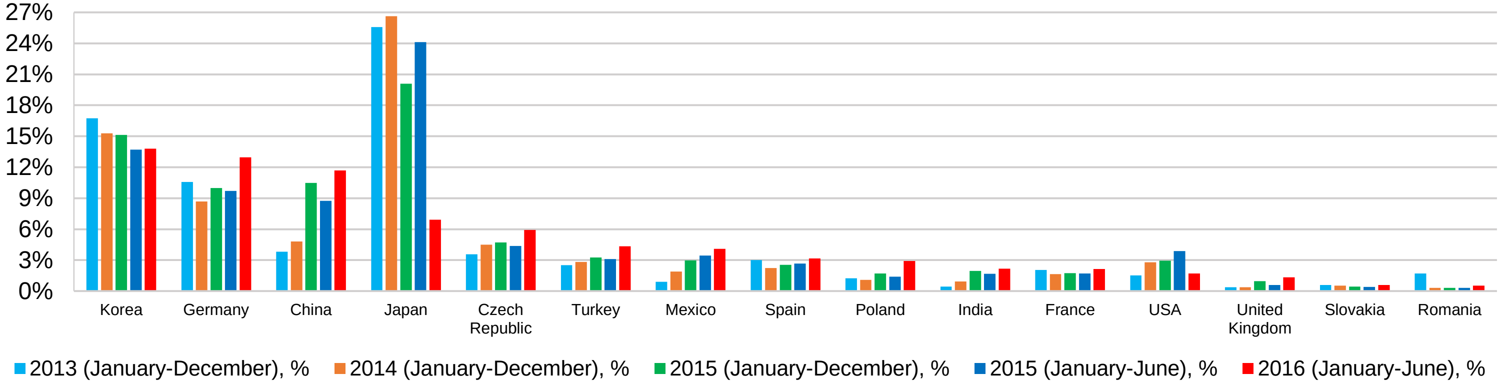
Source : Russian Automotive Market Research

Component and spare parts import, 2013-2016 (January-June)

Группы компонентов	2013 (January-December), mln USD	2014 (January-December), mln USD	Change, %	2015 (January-December), mln USD	Change, %	2015 (January-June), mln USD	2016 (January-June), mln USD	Change, %
Body parts and accessories (including cabs), other than bumpers and seat belts	2 502,4	1 998,9	-20,1	1 087,9	-45,6	589,5	496,7	-15,7
Bodies (including cabs)	4 031,9	2 697,9	-33,1	1 070,2	-60,3	625,3	447,9	-28,4
Transmission and its parts	1 699,0	1 334,0	-21,5	773,7	-42,0	393,7	386,2	-1,9
Suspension and its parts	1 175,5	915,1	-22,2	522,0	-43,0	252,3	271,8	7,7
Brakes and their parts	807,6	697,2	-13,7	496,5	-28,8	243,8	256,2	5,1
Wheels and their parts	1 241,2	959,3	-22,7	498,0	-48,1	253,4	226,0	-10,8
Steering wheels and their parts	570,3	470,8	-17,4	308,7	-34,4	160,2	149,4	-6,7
Drive axles and dead axles and their parts	715,1	554,1	-22,5	237,2	-57,2	117,1	117,4	0,3
Bumpers and their parts	364,1	289,6	-20,5	149,4	-48,4	80,6	63,7	-21,0
Clutch and its parts	195,7	166,5	-14,9	116,6	-30,0	53,1	56,2	5,8
Mufflers and their parts	275,3	218,7	-20,6	105,9	-51,6	55,1	51,0	-7,4
Radiators and their parts	247,6	184,9	-25,3	107,2	-42,0	57,7	45,8	-20,6
Air bags and their parts	156,1	127,6	-18,3	62,1	-51,3	35,9	33,9	-5,6
Seat belts	79,8	59,3	-25,7	37,8	-36,3	20,4	16,8	-17,6
Other parts and accessories	1 096,7	895,6	-18,3	527,9	-41,1	265,7	269,3	1,4
Total	**15 158,3**	**11 569,5**	**-23,7**	**6 101,1**	**-47,3**	**3 203,8**	**2 888,3**	**-9,8**

Source : Russian Automotive Market Research

Component and spare parts import for industrial assembly, TOP-15 countries of origin, 2013-2016 (January-June)



Country	2013 (January-December), mln USD	2014 (January-December), mln USD	Change, %	2015 (January-December), mln USD	Change, %	2015 (January-June), mln USD	2016 (January-June), mln USD	Change, %
Korea	1 212,2	852,3	-29,7	414,9	-51,3	223,8	158,0	-29,4
Germany	765,4	484,3	-36,7	274,2	-43,4	158,6	148,7	-6,2
China	275,4	269,0	-2,3	287,6	6,9	143,0	134,0	-6,3
Japan	1 852,1	1 485,1	-19,8	550,9	-62,9	393,7	79,4	-79,8
Czech Republic	257,6	250,1	-2,9	129,1	-48,4	71,5	68,1	-4,8
Turkey	182,0	157,9	-13,2	89,2	-43,5	50,7	49,9	-1,6
Mexico	65,0	106,5	63,8	82,0	-23,0	56,1	46,8	-16,6
Spain	218,1	124,3	-43,0	69,5	-44,1	43,6	36,2	-17,0
Poland	91,1	60,4	-33,7	47,3	-21,7	22,9	33,5	46,3
India	31,0	52,1	68,1	53,5	2,7	27,6	24,8	-10,1
France	148,3	91,5	-38,3	47,7	-47,9	28,1	24,6	-12,5
USA	110,6	155,8	40,9	80,8	-48,1	63,3	19,5	-69,2
United Kingdom	26,8	20,5	-23,5	26,8	30,7	9,6	15,3	59,4
Slovakia	43,1	30,5	-29,2	11,7	-61,6	6,7	6,9	3,0
Romania	124,9	17,6	-85,9	8,9	-49,4	5,0	6,2	24,0
Other	**1 835,1**	**1 416,9**	**-22,8**	**567,3**	**-60,0**	**328,5**	**294,2**	**-10,4**
Total	**7 238,7**	**5 574,8**	**-23,0**	**2 741,4**	**-50,8**	**1 632,7**	**1 146,1**	**-29,8**

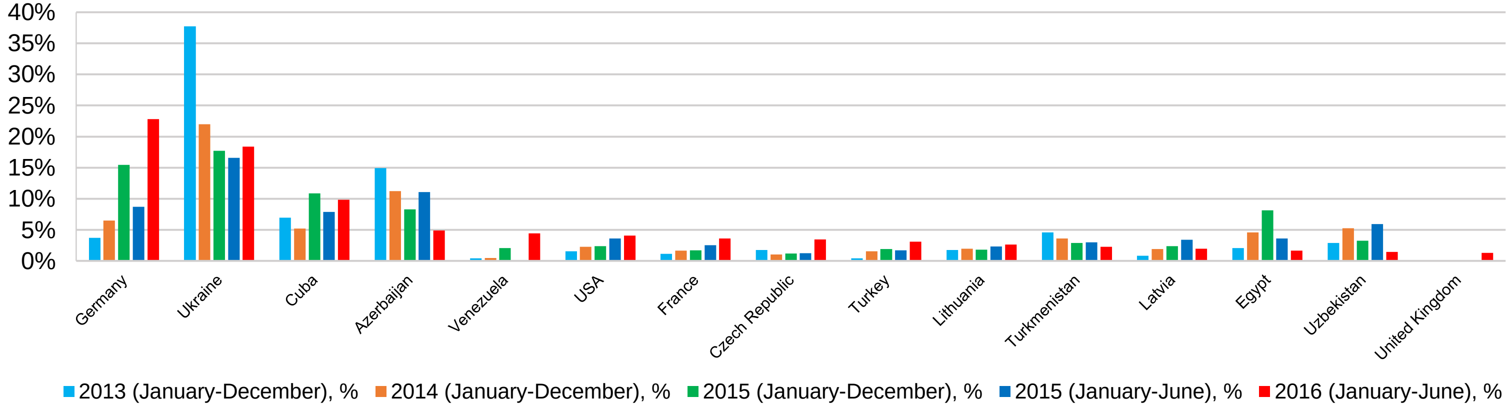
Source : Russian Automotive Market Research

Component and spare parts import for industrial assembly, 2013-2016 (January-June)

Components	2013 (January-December), mln USD	2014 (January-December), mln USD	Change, %	2015 (January-December), mln USD	Change, %	2015 (January-June), mln USD	2016 (January-June), mln USD	Change, %
Body parts and accessories (including cabs), other than bumpers and seat belts	1 589,1	1 214,5	-23,6	669,7	-44,9	385,8	291,0	-24,6
Transmission and its parts	1 053,3	825,6	-21,6	538,1	-34,8	285,0	249,3	-12,5
Steering wheels and their parts	354,3	281,3	-20,6	189,8	-32,5	104,9	94,6	-9,8
Suspension and its parts	395,4	290,9	-26,4	150,2	-48,4	79,0	89,4	13,2
Wheels and their parts	397,1	316,6	-20,3	201,9	-36,2	115,6	87,9	-24,0
Brakes and their parts	321,7	251,2	-21,9	177,4	-29,4	98,4	86,0	-12,6
Drive axles and dead axles and their parts	243,3	199,1	-18,2	76,0	-61,8	43,1	26,4	-38,7
Mufflers and their parts	128,2	103,6	-19,2	52,0	-49,8	30,4	22,4	-26,3
Air bags and their parts	100,7	79,4	-21,2	45,4	-42,8	28,2	21,8	-22,7
Bumpers and their parts	71,5	67,1	-6,2	34,3	-48,9	21,2	14,3	-32,5
Seat belts	54,5	40,9	-25,0	26,7	-34,7	14,7	11,6	-21,1
Clutch and its parts	36,0	26,8	-25,6	18,1	-32,5	9,4	10,0	6,4
Radiators and their parts	82,5	64,2	-22,2	29,9	-53,4	20,8	6,6	-68,3
Bodies (including cabs)	1 743,4	1 308,2	-25,0	222,9	-83,0	222,9	0,0	-100,0
Other parts and accessories	667,7	505,4	-24,3	309,0	-38,9	173,3	134,8	-22,2
Total	**7 238,7**	**5 574,8**	**-23,0**	**2 741,4**	**-50,8**	**1 632,7**	**1 146,1**	**-29,8**

Source : Russian Automotive Market Research

Component and spare parts export, TOP-15 recipient countries, 2013-2016 (January-June)



Country	2013 (January-December), mln USD	2014 (January-December), mln USD	Change, %	2015 (January-December), mln USD	Change, %	2015 (January-June), mln USD	2016 (January-June), mln USD	Change, %
Germany	12,3	11,3	-8,1	21,8	92,9	4,1	13,9	239,0
Ukraine	123,8	38,1	-69,2	25,0	-34,4	7,8	11,2	43,6
Cuba	22,9	9,0	-60,7	15,3	70,0	3,7	6,0	62,2
Azerbaijan	49,1	19,5	-60,3	11,7	-40,0	5,2	3,0	-42,3
Venezuela	1,5	0,8	-46,7	2,9	262,5	0,0	2,7	-
USA	5,1	4,0	-21,6	3,4	-15,0	1,7	2,5	47,1
France	3,8	2,9	-23,7	2,4	-17,2	1,2	2,2	83,3
Czech Republic	5,8	1,8	-69,0	1,7	-5,6	0,6	2,1	250,0
Turkey	1,4	2,7	92,9	2,7	0,0	0,8	1,9	137,5
Lithuania	5,8	3,4	-41,4	2,6	-23,5	1,1	1,6	45,5
Turkmenistan	15,1	6,3	-58,3	4,1	-34,9	1,4	1,4	0,0
Latvia	2,8	3,3	17,9	3,4	3,0	1,6	1,2	-25,0
Egypt	6,8	8,0	17,6	11,5	43,8	1,7	1,0	-41,2
Uzbekistan	9,5	9,1	-4,2	4,6	-49,5	2,8	0,9	-67,9
United Kingdom	0,4	0,2	-50,0	0,1	-50,0	0,0	0,8	-
Other	**62,3**	**53,0**	**-14,9**	**27,8**	**-47,5**	**13,3**	**8,5**	**-36,1**
Total	**328,4**	**173,4**	**-47,2**	**141,0**	**-18,7**	**47,0**	**60,9**	**29,6**

Source : Russian Automotive Market Research

Component and spare parts export, 2013-2016 (January-June)

Components	2013 (January-December), mln USD	2014 (January-December), mln USD	Change, %	2015 (January-December), mln USD	Change, %	2015 (January-June), mln USD	2016 (January-June), mln USD	Change, %
Body parts and accessories (including cabs), other than bumpers and seat belts	53,0	23,0	-56,6	16,1	-30,0	6,9	9,4	36,8
Wheels and their parts	31,2	31,4	0,6	16,0	-48,9	8,9	9,0	1,7
Bodies (including cabs)	9,2	4,3	-53,3	21,6	401,3	4,0	8,6	114,1
Radiators and their parts	17,5	10,7	-38,9	8,1	-24,0	3,1	4,8	52,1
Brakes and their parts	30,5	14,0	-54,1	10,9	-21,8	4,3	4,2	-2,6
Suspension and its parts	31,0	14,4	-53,5	11,6	-19,4	3,8	4,1	8,8
Drive axles and dead axles and their parts	30,5	13,0	-57,4	7,5	-42,5	2,5	3,5	39,4
Clutch and its parts	19,6	9,8	-50,0	8,9	-9,4	2,9	3,4	17,5
Transmission and its parts	21,0	10,0	-52,4	10,3	2,6	2,1	1,7	-16,6
Mufflers and their parts	7,7	4,3	-44,2	2,6	-39,4	0,9	1,4	60,3
Steering wheels and their parts	15,0	4,5	-70,0	3,5	-22,3	0,8	1,1	45,9
Bumpers and their parts	6,1	3,4	-44,3	1,8	-46,5	0,7	0,7	-12,0
Air bags and their parts	0,005	0,020	300,0	0,019	-5,0	0,007	0,017	155,5
Seat belts	0,020	0,028	40,0	0,036	29,2	0,012	0,013	3,9
Other parts and accessories	56,1	30,6	-45,5	22,1	-27,9	6,2	8,9	44,7
Total	**328,4**	**173,4**	**-47,2**	**141,0**	**-18,7**	**47,0**	**60,9**	**29,4**

Source : Russian Automotive Market Research

Appendix

Engine production

AVTOVAZ

Production capacity

Name	Capacity
8-valve ICE	380 000
16-valve ICE	280 000
Classical ICE	170 000
K4 ICE	300 000
JH/JR Gearbox	300 000

Production

Name	2013, units	2014, units	Forecast for 2015
8-valve ICE	226 125	178 262	247 775
16-valve ICE	154 389	100 777	138 812
Classical ICE	141 972	105 534	104 606
К4М ICE	-	23 268	101 863
H4M ICE	-	-	14 000
JH/JR Gearbox	-	65 658	161 394

Source : AVTOVAZ, analysis Russian Automotive Market Research

AVTOVAZ – new projects

Region: Samara region

Petrol engine: 1.8 liters, 122 h.p., 16-valve

Production capacity: 60 000 per annum

SOP: March 2016

Application: Lada XRAY, Lada Largus, Lada Vesta, Chevrolet Niva (new generation)

Region: Samara region

Petrol engine: 1.39 liters, 149.6 h.p., 16-valve turbo

SOP: 2018

Source : AVTOVAZ, analysis Russian Automotive Market Research

ZMZ

Region: Nizhny Novgorod

Petrol engine: 4 - and 8-cylinder, Euro 0 – Euro 4

Diesel engine: 4-cylinder, Euro 2, Euro 4

Application: UAZ, GAZ, PAZ

Coming:

- petrol 4-cylinder ZMZ-40906.10, Euro 5 for UAZ vehicles,

- bi-fuel (gas-petrol) 8-cylinder ZMZ-5245.10 Euro 5 for PAZ buses,

- gas 4-cylinder ZMZ-409061.10, Euro 5 for LCV

Source : ZMZ, analysis Russian Automotive Market Research

UMZ (GAZ Group)

Region: Ulyanovsk region

Petrol engine: UMZ-4216, EvoTech 2.7, 4-cylinder, Euro 0, Euro 3, Euro 4

Gas-petrol engine: UMZ-4216, EvoTech, 4-cylinder, Euro 4, Euro 5

Application: GAZelle, Sobol

Nizhegorodskie Motory (GAZ Group)

Region: Nizhny Novgorod region

Diesel engine: 4-, 6-cylinder, Euro 1 - Euro 4

Application: GAZ

Source : GAZ Group, analysis Russian Automotive Market Research

Avtodiesel (GAZ Group)

Region: Yaroslavl region

Diesel engine:

Family: medium in-line 4- and 6-cylinder YaMZ-530 136-350 h.p., Euro 4, Euro 5

Family: heavy in-line 6-cylinder YaMZ-650 311-412 h.p., Euro 4, Euro 5 (under Renault Trucks licence)

Family: 6-, 8-, 12-cylinder, 150-5800 h.p., Euro 0 – Euro 4 V-engines

Gas engine:

- YaMZ-530 CNG, YaMZ-534 CNG, YaMZ-536 CNG, Euro 5

Application: trucks, buses, special purpose trucks

Contract engine:

- Daimler OM 646, 2.2 liters, 88-150 h.p., Euro 5

- SOP– 2013

Application: Mercedes-Benz Sprinter

Source : GAZ Group, analysis Russian Automotive Market Research

KAMAZ

Region: Tatarstan
Diesel engine: 8-cylinder, 11.76 liters, 200-500 h.p., Euro 0, Евро 1, Euro 3, Euro 4 V-engines
Gas engine: 8-cylinder, 11.76 liters, 200-400 h.p., Euro 4 V-engines
Application: Trucks, KAMAZ special purpose trucks

Cummins KAMA

Region: Tatarstan
SOP: 2009
Diesel engine: 4.5 liters, 140-210 h.p. and 6.7 liters, 205-300 h.p., Euro 4, Euro 3
Capacity: 40 000
Application: Trucks, KAMAZ special purpose trucks
Operations: crankshaft, cylinder block heads casting
Localization: cylinder heads, crankshaft, flywheel, harness, air compressor
Suppliers: JV «Federal Mogul-Naberezhnye Chelny» («piston-finger» set), JV «ZF Kama» (9-speed gearbox).

Source : KAMAZ, analysis Russian Automotive Market Research

Ford-Sollers

Region: Elabuga

Petrol engine: Duratec, 1.6 liters, 85 h.p., 105 h.p., 125 h.p.

Capacity: 105 000, potential: up to 200 000

Start of production: September 2015

Localization: 2015 - 45%

Suppliers: «RosALit» / «ZMZ» (engine block, cylinder head, crankshaft bearing cap), Kostroma Autocomponent plant, Kostroma region (engine piston), GAZ Group (crankshaft casting), spark plugs, 2016 – pistons, fittings, wires

Source : Russian Automotive Market Research

Volkswagen

Region: Kaluga

Start of production: September 2015

Petrol engine: series EA211, 1.6 liters

Annual capacity: 150 000

Operations: machining of engine block, cylinder head, crankshaft and engine assembly.

Localization: 30%

Suppliers: Nemak, Ulyanovsk region, (blanks of engine block and cylinder head), RUSAL (aluminium), Fujikura, Republic of Chuvashia (cables)

Source : Russian Automotive Market Research

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