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F *SERIES*

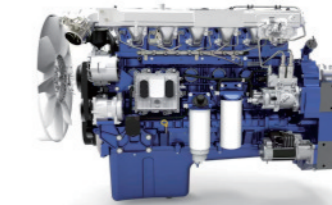


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WEICHAI POWER



WEICHAI POWER, the biggest powertrain group in China and the largest high speed & powered engine manufacturer in the world, which accounts for more than one-third market share in China and with an inventory of over 3.5 million units around the world. Technology leader in the industry, with the only State Key Laboratory of internal combustion reliability modern 'State-level Enterprise Technology Center' and the first-class product experimental center in China. WEICHAI four-valve engine has strong power with large output torque, at lower engine speed, the best power and explosive force in the industry.

High reliability with economy and comfort. WEICHAI WP series engines stand out as the result of collaborative and synchronous development with the world's best auto parts suppliers, fully integrated with the world's cutting-edge technologies to build up the engine of the world-class supply chain. Equipped with high efficiency electromagnetic clutch fan, fuel system protector and intelligent fuel switch, WEICHAI low speed engines not only improve the economy and life expectancy, but at also reduce engine noise for better driving experience.

Quality assurance is not a slogan but an earned honor awarded by the authority. SHACMAN won the first prize of National Science and Technology Progress Award with the project "Key Technologies and Applications of Power Assembly for Heavy Commercial Vehicles".

WP series products(reference)						
Product series	Model	Emission Standard	(kw/rpm)	(N.m)	(/rpm)	Technology roadmap
WP10E22	WP10.310E22	Euro II	220/2200	1240	1200-1600	Mechanical pump + built-in EGR
	WP10.340E22	Euro II	250/2200	1400	1200-1600	Mechanical pump + built-in EGR
Wp10	WP10.380E22	Euro II	280/2200	1600	1200-1600	Mechanical pump + built-in EGR
	WP 10.366	Euro III	247/2200	1250	1200-1600	Electronic controlled high pressure common rail
WP12N	WP12.375N	Euro III	276/1900	1800	1000-1400	Electronic controlled high pressure common rail
	WP12.430N	Euro III	316/1900	2060	1000-1400	Electronic controlled high pressure common rail
	WP12.460N	Euro III	338/1900	2110	1000-1400	Electronic controlled high pressure common rail
WP12E201	WP12.400E201	Euro II	280/2200	1500	1300-1400	Mechanical pump + built-in EGR
	WP12.430E201	Euro II	309/2200	1750	1300-1400	Mechanical pump + built-in EGR
WP12E5	WP12.336E5	Euro V	247/1900	1615	1000-1400	Electronic controlled high pressure common rail + SCR
	WP12.375E5	Euro V	276/1900	1800	1000-1400	Electronic controlled high pressure common rail + SCR
	WP12.400E5	Euro V	294/1900	1920	1000-1400	Electronic controlled high pressure common rail + SCR
	WP12.430E5	Euro V	316/1900	2060	1000-1400	Electronic controlled high pressure common rail + SCR
	WP12.460E5	Euro V	338/1900	2110	1000-1400	Electronic controlled high pressure common rail + SCR



CUMMINS POWER



By supplying SHACMAN vehicles with customized built ISM series engines of excellent power, featured as five key steps in the global system and 1 million kilometers major maintenance free, CUMMINS ISM series engines integrate the five key sub-systems: Intake air handling system, combustion optimization system, electronic control system, fuel system, filtering system and post processing system. With COMMINS power ranges from 345 to 440 horsepower, maximum torque rated at 2100 N.m and maximum rotation rated at 2130 rpm, great low speed torque, fast acceleration, strong gradeability, weight of only 940 kilogram, to achieve great power/weight ratio.

Beyond the power parameters above, fully electronic engines with intelligent control as well as new oil sump design reducing noise levels stand out. Electronically controlled high pressure fuel system allowing high pressure diesel in cylinders by precise injection. Electronic control system also includes cruise control, vehicle speed control and over 100 other functions, which makes sure ISM engines in the best shape, featured in highly integrated module design and uses 30% less parts, greatly reducing failure rate.

We care about economy and maintenance performance in every detail. Ultra long filter and oil change interval, significantly reducing the cost of daily maintenance. The filtration system utilizes CUMMINS Fleetguard 1003 FS filter. 10 micron Stratapore filter technology designed specifically for the protection of parts with filtering efficiency as high as 98.7%. Intake and exhaust system uses CUMMINS HX55 Holset turbocharger. The waste gas bypass valve can be automatically adjusted according to the need of air flow, achieving four levels of control within the rev range and best fit on high power rated engine. Moreover, adopting mature heavy-duty diesel engine braking system-JACOB engine brake system. 85% absorbance of the vehicle's inertia force with maximum braking capacity 326 horsepower. JACOB makes going downhill in a higher gear and without fuel supply for better fuel economy.

CUMMINS product profile(reference)

Product series	Model	Emission Standard	(kw/Ps)	(rpm)	(N.m)	(rpm)	Technology roadmap
ISM E 30	ISM E345 30	Euro III	254(345)	1900	1710	1200	Electrically controlled pump nozzle
	ISM E385 30	Euro III	283(385)	1900	1835	1200	Electrically controlled pump nozzle
	ISM E420 30	Euro III	306(420)	1900	2010	1200	Electrically controlled pump nozzle
ISM11E5	ISM11E5 345	Euro V	250(345)	1900	1699	1200	Electrically controlled pump nozzle
	ISM11E5 385	Euro V	280(385)	1900	1825	1200	Electrically controlled pump nozzle
	ISM11E5 420	Euro V	301(420)	1900	2000	1200	Electrically controlled pump nozzle
	ISM11E5 440	Euro V	318(440)	1900	2080	1200	Electrically controlled pump nozzle



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FAST GEARBOX



FAST is the largest manufacturer and distributors of heavy-duty transmission in the world, whose annual output ranks the first in China for 15 years, as well the first in the world for 12 years, whose worldwide output exceeds 7 million units in accumulation.

Over 70% market share around the globe explains all, with a global inventory of more than 7 million units, in types of MT, AT, AMT for options, matched with retarder covering multiple gears position for high reliability & stability, as well excellent cost performance.

Perfect matched with both WEICHAÏ & CUMMINS engines, FAST transmission has endured a great number of practical test with its huge output torque with less driving force loss, supporting SHACMAN vehicles in an all-round way running forward.

Model	Torque	Gear ratios(reference)														R1	R2	
		1	2	3	4	5	6	7	8	9	10	11	12	16				
9JS119	1190	12.11	8.08	5.93	4.22	3.36	2.41	1.76	1.32	1							12.66	
9JS135	1350	12.11	8.08	5.93	4.22	3.36	2.41	1.76	1.32	1							12.66	
RTD11509C	1490	12.44	8.31	3.09	4.54	3.36	2.47	1.81	1.35	1							13.02	
10JSD120/140/160/180	1200/1400/1600/1800	14.86	11.02	8.07	6.02	4.46	3.33	2.47	1.81	1.35	1						14.24	
10JSD140T/160T/180T	1400-1800	14.96	11.16	8.28	6.09	4.46	3.35	2.5	1.86	1.36	1						15.07	
10JSD140TA/160TA/180TA	1400-1800	10.93	8.17	6.07	4.46	3.27	2.45	1.83	1.36	1	0.73						11.05	
12JSD160T/180T/200T/240T	1600/1800	15.53	12.08	9.39	7.33	5.73	4.46	3.48	2.71	2.1	1.64	1.28	1				14.86	3.33
16JSD180T/200T/240T	1800-2400	17.04	14.03	11.66	9.6	8.06	6.64	5.53	4.55	3.74	3.08	2.56	2.11	1			16.3	13.42





HANDE AXLE



POWERFUL BUT ECONOMIC

Primary and secondary gear single-stage reduction, transmission efficiency of 10% higher than domestic competitive products with 10%-17% less fuel consumption. 50, 000N.m high torque output to ensure easy operation on the vehicle. Hyperbolic gear structure, with multiple gear ratios in high transmission efficiency, perfectly match the trend of low speed and high horsepower engines. Moreover, more improvements on brake shoes with widened variable cross section for better heat dissipation, stronger breaking power and improved efficiency performance of friction plates.

MORE RELIABILITY & SAFETY

Optimized design and finite element analysis of axle shell guaranteed the bearing capacity. Spindle nose utilizes friction welding technology to increase loading capacity and to eliminate impact load deformation. Advanced axles utilizing HANDE single/double-stage reduction axle technology as well as heavy duty off-road military truck axle technology, super load carrying capacity tested over 1.3 million times without major failing.

HIGHER USABILITY

Utilized full wheel side oil lubrication, great heat dissipation, non-disassembly maintenance features, equipped with external brake drum and allows the changing of the friction plate without removing the wheel.

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Gear ratios for axles(reference)											
HANDE	13T single-stage reduction	3.083	3.364	3.7	4.111	4.625	5.286	6.167			
	13T double-stage reduction	3.866	4.266	4.769	5.262	5.92	6.733	7.63	8.88		
	16T double-stage reduction	3.712	3.866	4.266	4.578	4.769	5.262	5.92	6.733	7.63	8.88



PRAGMATIC INTERIOR LAYOUT

American VISTEON technology interior by adopting 100% natural negative ion fiber fabric, new material berth for better quality. Timed air conditioning external cycle and activated carbon air filter for better interior air quality.

Car-like dashboard with new multi-function VDO instruments including auto-control AC, MP3 and radio. Moreover, both sides of driver and passenger are equipped with easy-operating and adjustable sunshades.

Integrated structure floor mat is equipped with protective strips, featured as great insulation and sealing, easy-to-clean and good noise reduction. Telescopic shaft shift system is fixed shift lever base for better cab sealing quality as well lowering engine noise transmission.

Four-point air suspended automatic seat design plus man-machine curve, providing the driver with premium quality and comfort, effectively reducing driving fatigue while offering a safe and comfortable driving.

Advanced SIS suspension system, light-weight, maintenance free and good load balance. Better steel plate spring suspension equipped with high quality shock absorber and front & rear axle stabilizer bar. New balanced suspension with better load capacity and durability.



IMPRESSIVE APPEARANCE

Sync with European cab with German advanced welding technology. The world's top ABB and KUKA robots automatic welding brings higher welding strength.

The vehicle body adopts international sedan electrophoretic multi-layer painting, making better corrosion resistance and durability than similar products in industry. Brand new body design to achieve the lowest drag coefficient in the industry.

Advanced noise isolation technology and strengthened cab body structure. Applying polyester material to reduce cab noise and increase insulation qualities.

Four-point air suspension system, double sealed cab doors and electrically controlled automatic constant temperature air conditioning to increase driving comfort. Independent heating system to ensure driving comfort in cold climates.

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F3000 SUPER DUMP TRUCK

MORE RELIABILITY

Newly updated air intake & exhaust system to improve durability and service life. Suspension bushing adopting steel material to prolong suspension use cycle. Oil tank protection updated by using steel bottom protection plate, flat iron tank material and three strips around.

HIGHER TRAFFICABILITY

Ground clearances of all kinds of equipment adopted on this super F3000 have been all raised for higher trafficability, including radiator, front & rear suspensions, accumulator box, muffler, air reservoir, oil tank.

STRONGER CAPACITY

Thickness of leaf springs up to 300mm in total for better adaption to severe working sites like mining area, as well reinforced wheel hub increased to target 200 kg capacity increased for one single tire. And multiple types of professional tires to choose for different roads.

BETTER LOOK & SEALING

Bumper, fenders and boarding steps use matte painting for powerful and concise appearance of dark color. Air tightness for both the cab and doors improved to make a better sealing performance in driving. Front bumper optimized to steel plate of 5mm thickness, matched with front lamp hood for better defense mechanism.





F SERIES TRAILER TRUCK



		F3000 Trailer Truck			
Drive		4x2	6x4		
Vehicle versions		Compound	Enhanced	Super	
GCW(t)		50	90	120	
Main configuration	Cab	Type	Extended high roof/Extended flat roof		
		Suspension	Air suspension/Hydraulic suspension		
		Seat	Air main seat/Hydraulic main seat		
		Air condition	Electric automatic constant temperature AC/Single cooling AC		
	Engine	Brand	WEICHAI & CUMMINS		
		Emission Standards	EURO II/EURO III/EURO V		
		Rated Output (hp)	340-430		340-550
		Rated Speed	1800-2200		
		Max torque /Speed range (N.m/r/min)	1400-2550/1000-1500		
		Displacement (L)	10-13		
		Clutch	Type	Φ 430 diaphragm spring clutch	
	Brand		FAST		
	Shift type		MT(F10/F12/F16)		
	Transmission	Max torque (N.m)	2000 (2400N.m transmission for engines over 430hp)		
Dimensions (mm)		(940-850)×300(single-layer 8mm)	850×300(8+5)	850×300(8+7)	
Frame	Front axle (t)	7.5	7.5	9.5	
	Rear axle (t)	13t double-stage	13t double-stage	16t double-stage	
	Ratio	3.866(4.266)	4.266(4.769)	4.266(4.769)	
Suspension	Type	F10/R15	F10/R12	F10/R12	
	Tire	12R22.5	12.00R20	12.00R20	
Performance	Economic/Max speed (km/h)	50-70/100	45-60/95	45-60/95	
	Minimum clearance of chassis (mm)	245	270	270	
	Max gradeability (%)	30%	30%	30%	
	Saddle height above ground(mm)	1320±20	1410±20	1420±20	
	Front/rear turning radius(mm)	2120/2000	2650/2200	2650/2200	
Weight	Curb weight (t)	6.8	9.6	9.8	
	Dimensions (mm)	5850×2490×(3200-3675)	6825×2490×(3280-3725)	6825×2490×(3280-3725)	
Size	Wheel base (mm)	3600	3175+1400	3175+1400	
	Tread (mm)	2036/1860			
	Basic equipment	Electric window lifter, Manual tilt cab, Central locking (dual remote control), Metal bumper, Hinged pedal			
Options	Telematics(overseas version), Integral fenders, Jost 90 saddle, Hydraulic retarder, PTO				

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F SERIES DUMP TRUCK

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SUCCESS WITH QUALITY



		F3000 Dump Truck		
Drive		6x4		8x4
Vehicle versions		Enhanced	Enhanced	Super
GVW(t)		50	70	90
Main configuration	Cab	Type	Extended flat roof/Middle-length flat roof	
		Suspension	Air suspension/Hydraulic suspension	
		Seat	Air main seat/Hydraulic main seat	
		Air condition	Electric automatic constant temperature AC/Single cooling AC	
	Engine	Brand	WEICHAI POWER & CUMMINS	
		Emission Standards	EURO II/EURO III/EURO V	
		Rated Output (hp)	340-430	
		Rated Speed(r/min)	1800-2200	
		Max torque /Speed range (N.m/r/min)	1400-2000/1000-1500	
	Clutch	Displacement (L)	10—12	
		Type	Φ 430 diaphragm spring clutch	
		Brand	FAST	
	Transmission	Shift type	MT(F9/F10/F12/F16)	
		Max torque (N.m)	2000	
	Frame	Dimensions (mm)	850×300(8+7)	850×300×(8+7)
Front axle (t)		HANDE 9.5t forging front axle	HANDE 9t forging front axle	HANDE 9.5t forging front axle
Axle	Rear axle (t)	HANDE 16t double reduction casting rear axle	HANDE 16t double reduction casting rear axle	HANDE 16t double reduction casting rear axle
	Ratio	5.262/5.92	5.262/5.92	5.262/5.92
Suspension	Type	F10/R12	F14/R12	F14/R12
	Tire	12.00R20	12.00R20	12.00R20
Performance	Economic/Max speed (km/h)	40-55/80	45-60/85	45-60/80
	Minimum clearance of chassis (mm)	285mm	285mm	285mm
	Max gradeability (%)	30%	30%	30%
Weight	Curb weight (kg)	9350	10800	12500
	Dimensions (mm)	7550×2490×(3220±30)	9500×2490×(3220±30)	9500×2490×(3220±30)
Size	Wheel base (mm)	3775+1400	1800+3775+1400	1800+3775+1400
	Tread(mm)	2036/1860	2036/1860	2036/1860
Options	Packing case size (mm)	5600×2300×1500	7600×2300×1500	7600×2300×1500
Basic equipment	Electric window lifter, Manual tilt cab, Metal bumper, Water tank protection grille			
Options	Telematics(overseas version), Electric heated rearview mirror, Electric tilt cab, Oil bath air filter, Front & rear headlight protection grille			

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F SERIES CEMENT MIXER

F SERIES
SUCCESS WITH QUALITY



		F3000 Cement Mixer		
Drive		6x4	8x4	
Vehicle versions		Enhanced	Enhanced	
GVW(t)		35	50	
Main configuration	Cab	Type	Extended flat roof/Middle-length flat roof	
		Suspension	Air suspension/Hydraulic suspension	
		Seat	Air main seat/Hydraulic main seat	
		Air condition	Electric automatic constant temperature AC/Single cooling AC	
	Engine	Brand	WEICHAI POWER & CUMMINS	
		Emission Standards	EURO II/EURO III/EURO V	
		Rated Output (hp)	340-430	
		Rated Speed(r/min)	1800-2200	
		Max torque /Speed range (N.m/r/min)	1400-2000/1000-1500	
		Displacement (L)	10—12	
	Clutch	Type	Φ 430 diaphragm spring clutch	
		Brand	FAST	
	Transmission	Shift type	MT(F9/F10/F12/F16)	
		Max torque (N.m)	2000	
	Frame	Dimensions (mm)	850×300(8+7)	850×300×(8+7)
		Front axle (t)	HANDE 9.5t forging front axle	HANDE 9t forging front axle
Axle	Rear axle (t)	HANDE 16t double reduction casting rear axle	HANDE 16t double reduction casting rear axle	
	Ratio	5.262/5.92	5.262/5.92	
Suspension	Type	F10/R12	F14/R12	
	Tire	12.00R20	12.00R20	
Performance	Economic/Max speed (km/h)	40-55/80	45-60/85	
	Minimum clearance of chassis (mm)	285mm	285mm	
	Max gradeability (%)	30%	30%	
Weight	Curb weight (kg)	9400	10850	
	Dimensions (mm)	8200×2490×(3220±30)	9400×2490×(3220±30)	
Size	Wheel base (mm)	3775+1400	1800+2975+1400	
	Tread(mm)	2036/1860	2036/1860	
Bodywork	Packing case size (mm)	10m ³	12m ³	
Basic equipment	Electric window lifter, Manual tilt cab, Metal bumper, Water tank protection railing			
Options	Telematics(overseas version),electric heated rear mirror, electric tilt cab, oil bath air cleaner, front & rear headlights protection railing			

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F SERIES OIL TANKER

F SERIES
SUCCESS WITH QUALITY



		F3000 Oil Tanker(Sprinkler)		
Drive		6x4	8x4	
Vehicle versions		Compound	Compound	
GVW(t)		40	50	
Main configuration	Cab	Type	Extended flat roof/Middle-length flat roof	
		Suspension	Air suspension/Hydraulic suspension	
		Seat	Air main seat/Hydraulic main seat	
		Air condition	Electric automatic constant temperature AC/Single cooling	
	Engine	Brand	WEICHAI POWER & CUMMINS	
		Emission Standards	EURO II/EURO III/EURO V	
		Rated Output (hp)	340-430	
		Rated Speed(r/min)	1800-2200	
		Max torque /Speed range (N.m/r/min)	1400-2000/1000-1500	
		Displacement (L)	10—12	
	Clutch	Type	Φ 430 diaphragm spring clutch	
		Brand	FAST	
	Transmission	Shift type	MT(F9/F10/F12/F16)	
		Max torque (N.m)	2000	
	Frame	Dimensions (mm)	850×300(8+5)	
		Front axle (t)	MAN 7.5T	
	Axle	Rear axle (t)	13T MAN双极	
Ratio		5.262		
Suspension	Type	F10/R12	F14/R12	
	Tire	12.00R20	12.00R20	
Performance	Economic/Max speed (km/h)	50-70/90		
	Minimum clearance of chassis (mm)	270mm	270mm	
	Max gradeability (%)	30%	30%	
Weight	Curb weight (kg)	9400	10800	
	Dimensions (mm)	9700×2490×(3220±30)	11600×2490×(3220±30)	
Size	Wheel base (mm)	4375+1400	1800+4575+1400	
	Tread(mm)	2036/1860	2036/1860	
	Packing case size (mm)	20m³	35m³	
Basic equipment	Electric window lifter,manual tilt cab, mental bumper, water tank protection railing			
Options	Telematics(overseas version),electric heated rear mirror, electric tilt cab, oil bath air cleaner, front & rear headlights protection railing,fireproof cover			

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