

Smart Simple Solid

Over 40 years of building forklifts have culminated in the XF series from Hangcha Group. This experience, combined with the latest in forklift technology, the result is a line of forklifts that are efficient, environmentally conscious, comfortable, reliable, and safe. The XF Series represents the true do it all forklift from Hangcha Group.



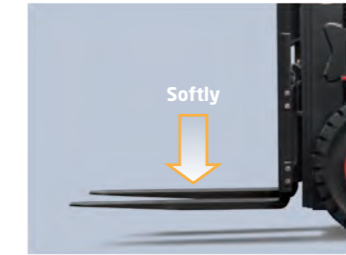
Comfortable Operation

Optimal visibility in all directions creates the best conditions for relaxed and safe working. These conditions promote high productivity among the operators.

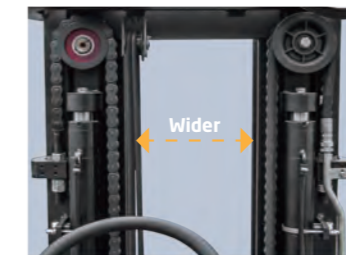


The foot space is now 90% wider to significantly reduce operator fatigue. The new wide, non-slip step makes getting in and out of the forklift safe and easy.

The easy-to-operate levers provide total load handling operation. The armrest is provided to reduce fatigue. The optional electro-hydraulic proportional control system gives the forklift the ability to make load handling more sensitive and precise.



In addition to the soft landing system, the soft lifting system is adopted (front lifting cylinders of the full free-lift stage 2 & 3 masts). As a result, the noise and shock of the mast significantly decrease when lowering materials.



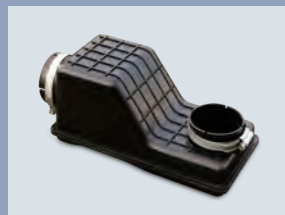
The front lifting cylinders were redesigned with a smaller outer diameter to give the operator superior forward visibility.

The double lifting cylinders also provide better forward visibility.

In developing the XF Series, comfort and ease of operation were carefully considered. For example, vibration levels were improved by adding compound engine dampers and full-floating powertrain mounts. Comfortable operating environments for operators also contribute to increased productivity.

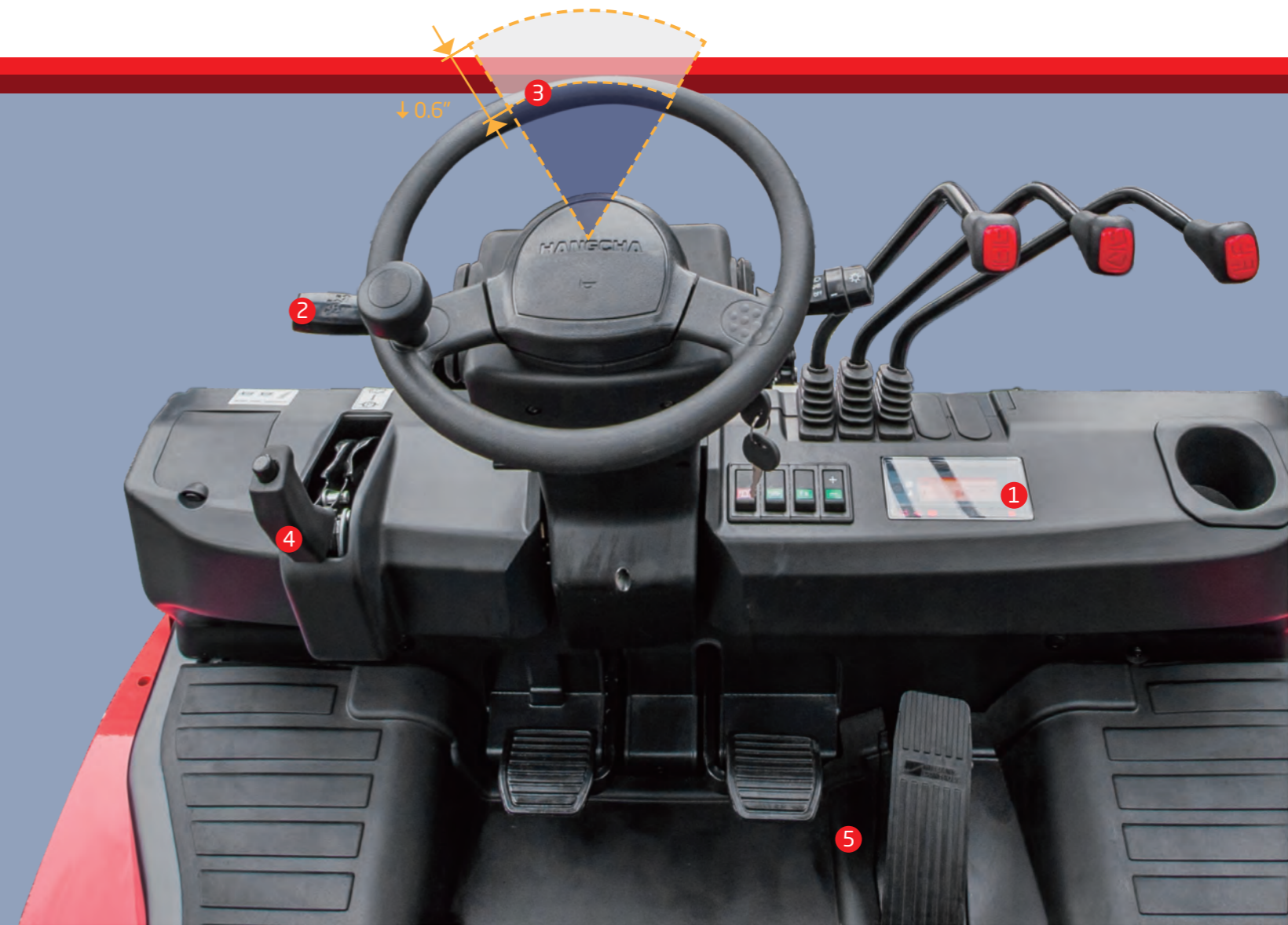


The rubber damper between the frame and the steering axle, the compound engine damper, and the full floating powertrain achieve a flexible connection between the frame and the driving system. As a result, vibrations are significantly reduced to increase operator comfort.



The increased capacity exhaust muffler, intake, and noise shield technology significantly lower the forklift's noise levels.

1. The new relocated, easy-to-see LCD instrument display lets the operator check on all aspects of operational status with a glance.
2. The new automobile-style light/turn-signal stalk and the forward-reverse lever are ergonomically designed and arranged to improve comfort and productivity.
3. The small diameter steering wheel, with tilt adjustment, provides an optimal driving position for the operator. The superior responsiveness of the steering wheel optimizes maneuverability even in narrow spaces.
4. The parking brake was developed to reduce the operational force by 30%.
5. The automobile-style suspended pedals provide a more ergonomic, operator-centered experience.

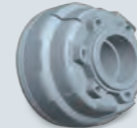




Reliability

By focusing on enhancing reliability and reducing downtime, the XF series is able to increase productivity for the end-users.

XF Series truck is equipped with the world renowned Okamura transmission. The brake drum and hub use a monolithic style construction.



XF series features a rugged design, stamped frame, and an engine hood. The stamped instrument panel, overhead guard, and heavy profile rail mast combine to provide excellent structural rigidity to ensure outstanding reliability and stability in heavy-duty conditions.

The forklifts are equipped with large capacity aluminum radiators. These radiators have optimized heat dissipation channels to enhance cooling capabilities. This keeps the engine running reliably in heavy-duty applications.



The steering axle uses a large-diameter steering cylinder to substantially increase the reliability and service life of the steering system.

Productivity

Dynamic load sensing hydraulic steering system, efficient LED lights, and lower fuel consumption combine to provide increased productivity and reduced operating costs.



The new dynamic load sensing hydraulic steering system improves hydraulic efficiency and reliability.



The new efficient lighting system uses LED's and a new type of reflector to reduce energy consumption. This significantly improves illumination performance while also prolonging operation time.

Safety

A wide range of technology is applied to ensure absolute safety for both the operator and those in the vicinity.

An optional rear grip with a horn button enhances operational safety while traveling in reverse.

There is a locking mechanism found on the engine hood, damper, and parking brake for the operator's safety.



1. The Operator Presence Sensing (OPS) System incorporates a lifting, tilting, and traveling stop function. When the operator leaves the seat, the system automatically locks the lifting/tilting functions and disables the forklift from traveling to ensure safety.
2. The throttling device locks the mast in place if there is a hydraulic failure. This adds to the operational safety of the truck.

Easy Maintenance

The XF Series is designed to facilitate easy inspections and servicing. Easy maintenance reduces the amount of downtime & cost of ownership.



The cover on the dash can be lifted to easily check the brake fluid.

The two-piece design makes the floorboard easy to lift and remove for access to the powertrain.

The easy-to-operate latch provides quick access to the engine compartment.

The radiator cover fasteners can be turned by hand easily to enable quick inspections or servicing.



The new controller is integrated into all of the electrical components. It also features excellent durability in harsh temperatures, water, and vibrations. This promotes reliability in the most demanding operations.

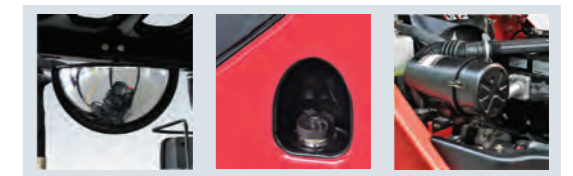
Standards

Transmission	Steering	Chassis	Control	Hydraulic
<ul style="list-style-type: none"> / Okamura Transmission / Suspended Transmission / Oil Filter / Dipstick / Oil Cooler / Non-Asbestos Brake Pads 	<ul style="list-style-type: none"> / Full Hydraulic Power Steering / Smaller Diameter Steering Wheel / Adjustable Steering Column 	<ul style="list-style-type: none"> / Anti-Slip, Rubber Pedal / Engine Compartment Hood Strut 	<ul style="list-style-type: none"> / Power Steering / Suspension Pedal / Integrated Combination Switch / Parking Brake 	<ul style="list-style-type: none"> / Dynamic Load Sensing Control Valve / Hydraulic Oil Filter / Tilt Cylinder Self-Lock Valve / Hydraulic Oil Dipstick / Dual Hydraulic Pump

Truck	Electronics	Mast
<ul style="list-style-type: none"> / Traction Device / Hand Grip / Standard Seat / Standard Overhead Guard / Waterproof Cover on the Guard / Rearview Mirror / Air Pneumatic Tires / Tilt Cylinder Cover / Tilt Cylinder Boot 	<ul style="list-style-type: none"> / Counterweight Grill / Fan Protector / Large Capacity Aluminum Radiator / Pre-Cleaner / Highly Efficient Intake Muffler / Highly Efficient Exhaust Muffler / Counterweight Exhaust System / Overhead Exhaust System 	<ul style="list-style-type: none"> / LED Headlights / LED Rear Lights / Maintenance-Free Battery / Combination Controller / LCD Display / Neutral Switch / Hour Meter / Fuel Gauge / Strobe Light

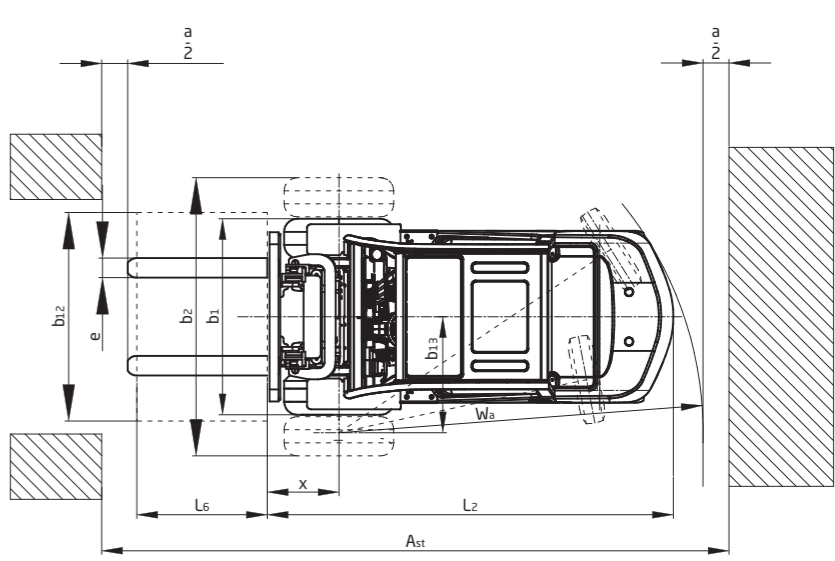
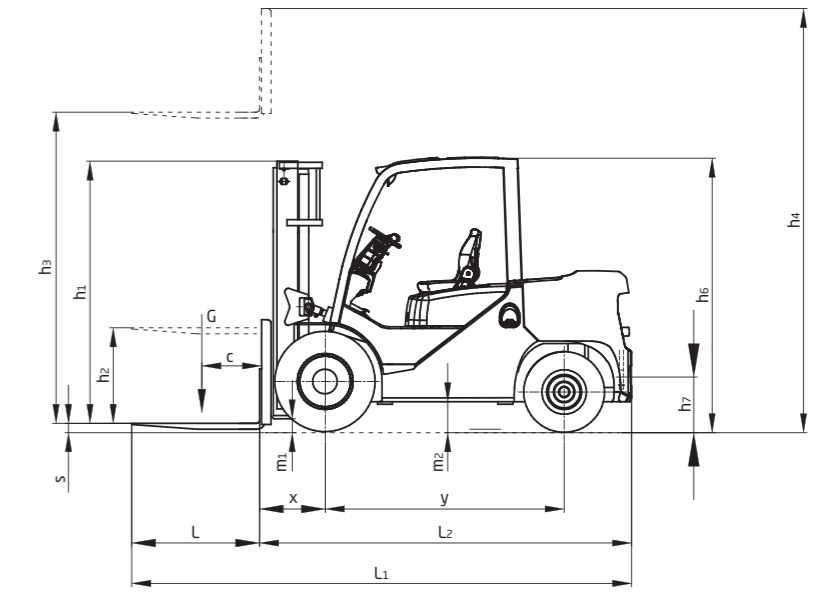
Options

- / Full Cabin
- / Cabin Heater
- / Front Window
- / Solid Pneumatic Tires
- / Non-Marking Tires
- / Full Suspension Seat
- / Fire Extinguisher
- / Higher Overhead Gaurd
- / Rear Reverse Handle with Horn
- / Custom Paint Colors
- / Dual Front Wheels
- / Large Capacity Copper Radiator
- / Radiator Screen
- / Auxiliary Hydraulic Valve
- / Electro-Hydraulic Proportional Control System
- / Return Oil Filter
- / Front & Rear Working Light
- / Special Forks
- / Wider Fork Carriage
- / Wider Load Backrest
- / Sideshifter
- / Various Specialty Attachments



XF Series Pneumatic Tire Forklift 8,000-11,000lb Specification

		HANGCHA GROUP CO.,LTD.										
Distinguishing Marks	1.1	Manufacturer										
	1.2	FD40	FD45	FD50S	FD55	FP40	FP45	FP50S	FP55			
Weight	1.3	Manufacturer's Type Designation										
	1.4	CPD40-XW76B	CPD45-XW76B	CPD50-XXW76B	CPD55-XXW76B	CPYD40-XW68B	CPYD45-XW68B	CPYD50-XXW68B	CPYD55-XXW68B			
Tires & Chassis	1.5	Drive: electric (battery or mains), diesel, petrol, fuel gas										
	1.6	Operator Type: hand, pedestrian, stand-up, sit-down, order-picker										
Dimensions	1.5	Rated Capacity/Rated Load	Q (lb)	8000	9000	10000	11000	8000	9000	10000	11000	
	1.6	Load Centre Distance	c (in)	24	24	24	24	24	24	24	24	
Performance Data	1.8	Load Distance, centre of drive axle to fork	x (in)	21.7	21.7	21.9	23	21.7	21.7	21.9	23	
	1.9	Rear Overhang	in	21	22.2	22	23.4	21	22.2	22	23.4	
Additional Data	2.1	Service Weight	lb	14300	14800	15100	16000	14300	14800	15100	16000	
	2.2	Axle Loading, laden front/rear	lb	19260/3040	20740/3060	22000/3100	24200/2800	19260/3040	20740/3060	22000/3100	24200/2800	
Performance Data	2.3	Conterweight	lb	4690	5100	5400	6130	4690	5100	5400	6130	
	2.3	Axle Loading, unladen front/rear	lb	6640/7660	6640/8160	6640/8460	7250/8750	6640/7660	6640/8160	6640/8460	7250/8750	
Performance Data	3.1	Tires: solid rubber, superelastic, pneumatic, polyurethane	Pneumatic									
	3.2	Tire Size, front	8.25-15-14PR									
Performance Data	3.3	Tire Size, rear	7.00-12-12PR									
	3.5	Wheels, number front / rear (x = driven wheels)	2									
Performance Data	3.6	Tread, front	b10 (in)	46.2	47.4	47.4	47.4	46.2	47.4	47.4	47.4	
	3.7	Tread, rear	b11 (in)	44.5	44.5	44.5	44.5	44.5	44.5	44.5	44.5	
Performance Data	4.1	Tilt of Mast/Fork Carriage Forward/Backward	α/β(°)	6/12	6/12	6/12	6/12	6/12	6/12	6/12	6/12	
	4.2	Height, mast lowered	h1 (in)	88.4	88.4	88.4	94.3	88.4	88.4	88.4	94.3	
Performance Data	4.3	Free Lift	h2 (in)	6.3	6.3	6.3	6.7	6.3	6.3	6.3	6.7	
	4.4	Lift	h3 (in)	118	118	118	118	118	118	118	118	
Performance Data	4.5	Height, mast extended	h4 (in)	164.2	164.2	172	173.2	164.2	164.2	172	173.2	
	4.7	Height of Overhead Guard (cabin)	h6 (in)	89.4	89.4	89.4	89.4	89.4	89.4	89.4	89.4	
Performance Data	4.8	Seat Height Relating to SIP	h7 (in)	51.4	51.4	51.4	51.4	51.4	51.4	51.4	51.4	
	4.12	Coupling Height	h10 (in)	17.7	17.7	17.7	17.7	17.7	17.7	17.7	17.7	
Performance Data	4.19	Overall Length	l1 (in)	163.6	164.8	170.7	177.2	163.6	164.8	170.7	177.2	
	4.20	Length to Face of Forks	l2 (in)	121.5	122.6	128.5	131.1	121.5	122.6	128.5	131.1	
Performance Data	4.21	Overall Width	b1 (in)	55.9	59.2	59.2	59.2	55.9	59.2	59.2	59.2	
	4.22	Fork Dimensions	s/e/l (in)	2/4.8/42.1	2/5.9/42.1	2/5.9/42.1	2/4.8/42.1	2/5.9/42.1	2/5.9/42.1	2/5.9/42.1	2/4.8/42.1	
Performance Data	4.24	Fork-Carriage Width	b3 (in)	49.2	49.2	49.2	49.2	49.2	49.2	49.2	49.2	
	4.25	Distance between Fork-Arms	bs (in)	12.2~47.2	12.2~47.2	12.2~47.2	12.2~47.2	12.2~47.2	12.2~47.2	12.2~47.2	12.2~47.2	
Performance Data	4.31	Ground Clearance, laden, below mast	m1 (in)	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	
	4.32	Ground Clearance, centre of wheelbase	m2 (in)	9	9	9	9	9	9	9	9	
Performance Data	4.34.1	Aisle Width for Pallets 39" x 47" Crossways	Ast (in)	174.8	176	182.3	184.6	174.8	176	182.3	184.6	
	4.34.2	Aisle width for pallets 31.5" x 47" Lengthways	Ast (in)	182.7	183.9	190.2	192.6	182.7	183.9	190.2	192.6	
Performance Data	4.35	Turning Radius	Wa (in)	105.9	107.1	113.2	114.4	105.9	107.1	113.2	114.4	
	4.36	Internal Turning Radius	b13 (in)	33.3	33.3	34.4	34.4	33.3	33.3	34.4	34.4	
Performance Data		Min. Right Angle Stacking Aisle Width (Ast)	in	127.6	128.7	135	137.4	127.6	128.7	135	137.4	
	5.1	Travel Speed, laden/unladen	mph	-/16.2	-/16.2	-/16.2	-/16.2	-/14.9	-/14.9	-/14.9	-/14.9	
Performance Data	5.2	Lift Speed, laden/unladen	ft/min	90.6/-	90.6/-	78.7/-	78.7/-	90.6/-	90.6/-	78.6/-	78.6/-	
	5.3	Lowering Speed, laden/unladen	ft/min	98.4/-	98.4/-	98.4/-	98.4/-	98.4/-	98.4/-	98.4/-	98.4/-	
Performance Data	5.5	Drawbar Pull, laden/unladen	lbf	8543/-	8543/-	8543/-	8543/-	8543/-	8543/-	8543/-	8543/-	
	5.7	Gradeability, laden/unladen	%	33/-	29/-	27/-	31/-	29/-	27/-	31/-	27/-	
Performance Data	5.10	Service Brake		Hydraulic	Hydraulic	Hydraulic	Hydraulic	Hydraulic	Hydraulic	Hydraulic	Hydraulic	
		Parking Brake		Mechanical	Mechanical	Mechanical	Mechanical	Mechanical	Mechanical	Mechanical	Mechanical	
Performance Data	7.1	Engine Manufacturer/Type		mitsubishi/S6S	mitsubishi/S6S	mitsubishi/S6S	mitsubishi/S6S	PSI4.3L	PSI4.3L	PSI4.3L	PSI4.3L	
	7.2	Engine Power According to DIN ISO 1585	HP	70	70	70	70	103	103	103	103	
Performance Data	7.3	Rated Speed	r/min	2300	2300	2300	2300	2300	2300	2300	2300	
	7.4	Number of Cylinders/Displacement	(- / (in³))	6/303	6/303	6/303	6/303	6/262	6/262	6/262	6/262	
Performance Data	7.8	Generator	A	60	60	60	60	100	100	100	100	
	7.9	Vehicle Electrical System Voltage	V	12	12	12	12	12	12	12	12	
Performance Data	7.10	Battery Voltage/Nominal Capacity	V/Ah	24/60	24/60	24/60	24/60	12/60	12/60	12/60	12/60	
		Rated Torque	N·m/r/min	248/1700	248/1700	248/1700	248/1700	332.85/1400	332.85/1400	332.85/1400	332.85/1400	
Performance Data		Transmissions Manufacturer		OKAMURA	OKAMURA	OKAMURA	OKAMURA	OKAMURA	OKAMURA	OKAMURA	OKAMURA	
		Stage FWD/RVS		2/1	2/1	2/1	2/1	2/1	2/1	2/1	2/1	
Performance Data		Bore × Stroke	in	3.7x4.	3.7x4.	3.7x4.	3.7x4.	4x3.5	4x3.5	4x3.5	4x3.5	
		Transmission Type		Powershift	Powershift	Powershift	Powershift	Powershift	Powershift	Powershift	Powershift	
Performance Data	10.1	Operating Pressure for Attachments	bar	190	190	190	190	190	190	190	190	
	10.3	Hydraulic Tank - Capacity (drain & refill)	gal	17.6	17.6	19.8	19.8	17.6	17.6	19.8	19.8	
Performance Data	10.4	Fuel Tank Capacity	gal	17.6	17.6	19.8	19.8	17.6	17.6	19.8	19.8	
	10.7	Sound Pressure Level at the Driver's Seat	dB (A)	85	85	85	85	85	85	85	85	



$$A_{st} = W_a + X + L_6 + a;$$

applies only if $\frac{b_{12}}{2} \leq b_{13}$

