

TECHNICAL DATA

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ENGINE (General Data)		Width	6 ^{-0.045} -0.063 mm (0.2362 ^{-0.0018} -0.0025 in)
Type	Rotary piston engine, in line 2 rotors, water cooled	Height	10 ⁺⁰ -0.1 mm (0.3937 ⁺⁰ -0.0039 in)
Displacement	573 cc×2 rotors (35.0 cu. in×2 rotors)	Limit of height	8.0 mm (0.3150 in)
Compression ratio	9.4 : 1	Clearance of apex seal and side housing :	
Compression pressure	6.7 kg/cm ² at 220 rpm (95 lb/in ² at 220 rpm)	Standard	0.01~0.05 mm (0.0004~0.0020 in)
Max. Brake horsepower	130 HP/7,000 rpm (SAE)	Limit	0.15 mm (0.0059 in)
Max. Torque	115 ft-lb/4,000 rpm (SAE)	Clearance of apex seal and rotor groove :	
Port timing :		Standard	0.036~0.072 mm (0.0014~0.0028 in)
Intake opens	Primary : 32° A. T. D. C. Secondary : 32° A. T. D. C.	Limit	0.10 mm (0.0039 in)
Intake closes	Primary : 40° A. B. D. C. Secondary : 40° A. B. D. C.	Apex seal spring :	
Exhaust opens	80° B. B. D. C.	Free height	5.8 mm (0.228 in)
Exhaust closes	48° A. T. D. C.	Set height	2.0 mm (0.079 in)
		Set load	2.6±0.2 kg (5.7±0.4 lb)
		Spring constant	0.64 kg/mm (35.8 lb/in)
ENGINE		Corner seal :	
Front and rear housing :		Outside diameter	11 ^{-0.020} -0.030 mm (0.4331 ^{-0.0008} -0.0012 in)
Limit of distortion	0.04 mm (0.002 in)	Width	7 ⁺⁰ -0.2 mm (0.2756 ⁺⁰ -0.0079 in)
Limit of wear	0.10 mm (0.004 in)	Clearance of corner seal and rotor groove :	
Rotor housing :		Standard	0.020~0.048 mm (0.0008~0.0019 in)
Width	70 ⁺⁰ -0.02 mm (2.7559 ⁺⁰ -0.0008 in)	Limit	0.08 mm (0.0031 in)
Limit of distortion	0.04 mm (0.002 in)	Corner seal spring :	
Intermediate housing :		Free height	2.7 mm (0.106 in)
Limit of distortion	0.04 mm (0.002 in)	Set height	1.0 mm (0.039 in)
Limit of wear	0.10 mm (0.004 in)	Set load	1.3±0.3 kg (2.9±0.7 lb)
Width	50±0.1 mm (1.9685±0.0039 in)	Spring constant	0.76 kg/mm (42.6 lb/in)
Rotor :		Side seal :	
Standard weight (with internal gear and bearing)	4.570 kg (10.08 lb)	Thickness	1.0 ^{-0.014} -0.039 mm (0.0394 ^{-0.0006} -0.0015 in)
Inside diameter	80 ^{+0.018} -0 mm (3.1497 ^{+0.0007} -0 in)	Width	3.5 ⁺⁰ -0.1 mm (0.1378 ⁺⁰ -0.0039 in)
Clearance of side housing and rotor	0.13~0.17 mm (0.0051~0.0067 in)	Clearance of side seal and rotor groove :	
Protrusion of land	0.10~0.15 mm (0.004~0.006 in)	Standard	0.04~0.07 mm (0.0016~0.0028 in)
Permissible protrusion of land	Max. 0.2 mm (0.008 in) Min. 0.085 mm (0.003 in)	Limit	0.10 mm (0.0039 in)
Width of apex seal groove	6±0.009 mm (0.2362±0.0004 in)	Clearance of side seal and corner seal :	
Diameter of corner seal cave	11 ^{+0.018} -0 mm (0.4331 ^{+0.0007} -0 in)	Standard	0.05~0.15 mm (0.002~0.006 in)
Depth of corner seal cave	7.9 ⁺⁰ -0.2 mm (0.3110 ⁺⁰ -0.0079 in)	Limit	0.40 mm (0.016 in)
Width of side seal groove	1.0 ^{+0.039} +0.014 mm (0.0394 ^{+0.0015} +0.0006 in)	Side seal spring :	
Depth of side seal groove	4.4 ⁺⁰ -0.2 mm (0.1732 ⁺⁰ -0.0079 in)	Free height	2.0 mm (0.079 in)
Width of oil seal groove	3.5 ^{+0.06} +0.03 mm (0.1378 ^{+0.0024} +0.0012 in)	Set height	1.0 mm (0.039 in)
Depth of oil seal groove	6.4±0.1mm (0.2520±0.0039 in)	Set load	3.6±0.3 kg (7.9±0.7 lb)
Apex seal :		Spring constant	3.6 kg/mm (201.6 lb/in)
Length	69.97 ⁺⁰ -0.02 mm (2.7548 in ⁺⁰ -0.0008 in)	Oil seal :	
		Thickness	5.5 ^{+0.2} -0 mm (0.2165 ^{+0.0079} -0 in)

Width	3.37 ^{+0.05} _{-0.10} mm (0.1327 ^{+0.0020} _{-0.0039} in)	LUBRICATING SYSTEM	
Outside diameter of outer oil seal	126 ^{-0.04} _{-0.10} mm (4.9607 ^{-0.0016} _{-0.0039} in)	Oil pump :	
Outside diameter of inner oil seal	116 ^{-0.03} _{-0.09} mm (4.5670 ^{-0.0012} _{-0.0035} in)	Feeding capacity	16~20 liter/min (34~42 U.S. pint/min, 28~35 Imp. pint/min) at 6,000 rpm
Contact width of oil seal lip :		Clearance of outer rotor and body	0.20~0.25mm (0.008~0.010 in)
Standard	0.2 mm (0.008 in)	Clearance of outer rotor and inner rotor	0.01~0.09 mm (0.0004~0.0035 in)
Limit	0.8 mm (0.031 in)	Rotor end float	0.10~0.20 mm (0.0039~0.0079 in)
Oil seal spring :		Backlash of oil pump drive gear and driven gear	0.08~0.12 mm (0.0031~0.0047 in)
Free height	Inner side : 2.6 mm (0.102 in) Outer side : 2.5 mm (0.098 in)	Oil pressure :	
Set height	1.0 mm (0.039 in)	Normal	5.0 kg/cm ² (71.1 lb/in ²) at 3,000 rpm
Set load	12 ⁺³ ₋₀ kg (26.5 ^{+6.6} ₋₀ lb)	Warning lamp lights	2.5 kg/cm ² (35.6 lb/in ²) at 700 rpm
Spring constant	Inner side : 7.5 kg/mm (420.0 lb/in) Outer side : 8.3 kg/mm (464.8 lb/in)	Pressure regulator control spring:	
Mian bearing :		Free length	46.4 mm (1.827 in)
Inner diameter	43 ^{+0.055} _{+0.040} mm (1.6929 ^{+0.0022} _{+0.0016} in)	Set length	35.3 mm (1.390 in)
Main bearing clearance :		Set load	7.1 kg (15.6 lb)
Standard	0.04~0.07 mm (0.0016~0.0028 in)	Relief valve opens :	
Limit	0.10 mm (0.0039 in)	Regulated pressure	1.0±0.2 kg/cm ² (14.2±2.8lb/in ²)
Rotor bearing :		Oil thermo-valve :	
Inner diameter	74 ^{+0.060} _{+0.035} mm (2.9134 ^{+0.0024} _{+0.0014} in)	Starts to close	71°C (160°F)
Rotor bearing clearance :		Closes completely	78°C (172°F)
Standard	0.05~0.09 mm (0.0020~0.0035 in)	Lift	6 mm (0.236 in) at 78°C (172°F)
Limit	0.10 mm (0.0039 in)	Oil thermo-valve return spring :	17 mm (0.669 in) at 140°C (284°F)
Eccentric shaft :		Free length	43.8±0.5 mm (1.724±0.020 in)
Eccentricity of rotor journal	15 ⁺⁰ _{-0.03} mm (0.5906 ⁺⁰ _{-0.0012} in)	Initial load	4 kg (8.8 lb)
Main journal diameter	43 ⁺⁰ _{-0.015} mm (1.6929 ⁺⁰ _{-0.0006} in)	Spring constant	0.432 kg/mm (24.2 lb/in)
Rotor journal diameter	74 ^{-0.015} _{-0.030} mm (2.9134 ^{-0.0006} _{-0.0012} in)	Oil cooler :	
Permissible run-out	Less than 0.02 mm (Less than 0.0008 in)	Core area	1.9 m ² (20.5 ft ²)
End play :		Capacity	0.3 liter (0.6 U.S. pint, 0.5 Imp. pint)
Standard	0.04~0.07 mm (0.0016~0.0028 in)	Oil metering pump feeding capacity :	
Limit	0.09 mm (0.0035 in)	Idling position of lever	6.5 ± 1 cc/10 min at 2000 rpm
Internal gear :		Full opening position of lever	17.0±1.5cc/10 min at 2000 rpm
Number of teeth	51	Oil capacity :	
Backlash of internal gear and stationary gear	0.06~0.08 mm (0.0024~0.0031in)	Oil pan	4.5 liters (9.5 U.S. pints, 7.9 Imp. pints)
Stationary gear :		Full capacity	5.5 liters (11.6 U.S. pints, 9.7 Imp. pints)
Number of teeth	34	COOLING SYSTEM	
Inner diameter	48 ^{+0.016} ₋₀ mm (1.8898 ^{+0.0006} ₋₀ in)	Water pump :	
		Type	Centrifugal
		Feeding capacity	110~120 liter (233~ 254 U.S. pint, 194~211 Imp. pint)/min
		Fan :	
		Standard revolution	1,600~1,950 rpm at 2,000 rpm of engine
		Fan diameter	370 mm (14.57 in)
		Number of blades	4
		Water pump pulley ratio	1.035 : 1
		Thermostat :	
		Starts to open	82°C (180°F)

Fully opens Lift	95°C (203°F) More than 8 mm (0.31 in) at 95°C (203°F)	Leading	Start : 0° at 100 mmHg Max. : 11° at 400 mmHg 58° ± 3° 1—2 Trailing : 5° A. T. D. C. Leading : 0° Eccentric shaft pulley
Radiator : Type Core area Relief valve pressure	Corrugated fin 6.8 m ² (73.2 ft ²) 0.9 ± 0.1 kg/cm ² (12.8 ± 1.4 lb/in ²)	Dwell angle Firing order Ignition timing	
Cooling capacity : With heater Without heater	8.0 liters (16.9 U.S. pints, 14.1 Imp. pints) 7.0 liters (14.8 U.S. pints, 12.3 Imp. pints)	Marking location Spark plug type and gap : Hot type	NGK B-6EJ 0.8~0.9 mm (0.031~0.035 in) Denso W20EG2 0.8~0.9 mm (0.031~0.035 in) NGK B-7EJ 0.8~0.9 mm (0.031~0.035 in) Denso W22EG2 0.8~0.9 mm (0.031~0.035 in) NGK B-8EJ 0.8~0.9 mm (0.031~0.035 in) Denso W25EG2 0.8~0.9 mm (0.031~0.035 in)
FUEL SYSTEM		Standard type	
Fuel tank capacity	65.5 liters (17.3 U.S. gallons, 14.5 Imp. gallons)	Cold type	
Fuel filter	Paper element, cartridge type	Starting motor :	
Fuel pump : Type Rated terminal voltage Min. operating voltage Feeding pressure	Electrical 12V Less than 10V 0.20~0.30 kg/cm ² (2.8~4.3 lb/m ²)	Capacity Free running test	1.0 KW Voltage : 12V Current : Less than 70A at 3,600 rpm or more Voltage : 6.0V Current : 60A or less Torque : 2.7m-kg (19.5 ft-lb)
Feeding capacity	More than 900 cc (0.23 U.S. gallon, 0.20 Imp. gallon)/min.	Lock test	1.13 kg (40.0 oz) 9.0V
Current on full discharging Point gap	Less than 1.5 A 1.0 mm (0.039 in)	Brush spring tension Magnet switch operating voltage	
Carburettor : Type	Down-draft, Zenith Stronberg	Alternator :	Negative 12V 40A 8 Voltage : 14V at 1,050 rpm or less Current : 0A Voltage : 14V at 2,500 rpm or less Current : 32A 350gr (12.5 oz) 33 mm ± 0.2 (1.299 ± 0.008 in)
Venturi diameter	Primary : 20 × 13 × 6.5 mm (0.787 × 0.512 × 0.256 in) Secondary : 28 × 10 mm (1.102 × 0.394 in)	Load test	Ratio of alternator and eccentric shaft 2 : 1
Main jet	Primary : #90 Secondary : #155	Brush spring pressure Slip ring diameter	Regulator : Constant voltage relay
Main air bleed	Primary : #80 Secondary : #160		Air gap : 0.7~1.1 mm (0.028~0.043 in) Point gap : 0.3~0.4 mm (0.012~0.016 in) Back gap : 0.7~1.1 mm (0.028~0.043 in)
Slow jet	Primary : #50 Secondary : #130		Regulated voltage, without load
Slow air bleed	Primary : #70 & #210 Secondary : #60 & #100		14 ± 0.5V
Vacuum jet	Primary : #180 Secondary : #80		Bulbs :
Pump nozzle	0.7 mm (0.028 in)		Head lamp Front turn signal & side lamp Side turn signal lamp Fog lamp Interior lamp Step lamp Glove compartment lamp Turn signal lamp (rear) Stop, tail & reverse lamp Licence lamp
ELECTRICAL SYSTEM			
Battery : Voltage Capacity Terminal ground Specific gravity	12V (NS50Z) 60AH (20 hours rate) Negative Fully charged : 1.26 Recharge at : 1.20		
Distributor (T & L) : Contact point gap Point pressure	0.45 ± 0.05 mm (0.018 ± 0.002 in) 0.575 ± 0.075 kg (1.27 ± 0.17 lb)		
Condenser capacity Centrifugal advance : Trailing	0.27 ± 0.027 μF Start : 0° at 500 rpm of dis. Max. : 5° at 1500 rpm of dis.		
Leading	Start : 0° at 500 rpm of dis. Max. : 6° at 1700 rpm of dis.		
Vacuum advance : Trailing	Start : 0° at 100 mmHg Max. : 17.5° at 400 mmHg		

CLUTCH		Lubricant Above -18°C (0°F) : HP. SAE 90 Below -18°C (0°F) : HP. SAE 80 Oil capacity 1.2 liters (2.5 U.S. pints, 2.1 Imp. pints) Free play of axle shaft 0~0.1 mm (0~0.004 in) Permissible deflection of ring gear 0.1 mm (0.0039 in or less) Mounting distance 90±0.025 mm (3.5434±0.0010 in) Drive pinion bearing preload 9~14 cm-kg (7.8~12.2 in-lb) Backlash between ring gear and drive pinion 0.17~0.19 mm (0.0067~0.0075 in) Backlash between side gear and pinion 0.1 mm (0.004 in or less)	Type Single dry plate Spring Diaphragm spring Pressure plate : Inner diameter 150 mm (5.91 in) Outer diameter 215 mm (8.47 in) Clutch disk : Inner diameter 154 mm (6.06 in) Outer diameter 215 mm (8.47 in) Clutch disk friction assembly thickness 8.5±0.3 mm (0.335±0.012 in) Clearance between push rod and clutch release fork 3.0 mm (0.12 in) Pedal free travel 20~30 mm (0.8~1.2 in) Master cylinder bore 15.87 mm (0.6248 in) Release cylinder bore 17.46 mm (0.6874 in)
TRANSMISSION			
Type Four-forward speed and one reverse speed, with synchro- nizing for all forward and selective for reverse Shift lever location Floor Gear ratio : First 3.683 Second 2.263 Third 1.397 Top 1.000 Reverse 3.692 Lubricant Above -18°C (0°F) : EP. SAE 90 Below -18°C (0°F) : EP. SAE 80 Oil capacity 2.5 liters (5.3 U.S. pints, 4.4 Imp. pints) Backlash of gears : Main drive & counter gear 0.03~0.10 mm (0.001~0.004 in) First gear 0.10~0.20 mm (0.004~0.008 in) Second gear 0.05~0.15 mm (0.002~0.006 in) Third gear 0.05~0.15 mm (0.002~0.006 in) Reverse gear 0.10~0.20 mm (0.004~0.008 in)		BRAKES	
PROPELLER SHAFT		Master cylinder : Type Tandem master cylinder Bore 22.22 mm (7/8 in) Permissible clearance of piston and bore 0.15 mm (0.0059 in) Pedal free travel 5~15 mm (0.2~0.6 in) Power brake unit : Type Bendix type disk brake Power cylinder diameter 152.4 mm (6.0001 in) Power cylinder stroke 35mm (1.38 in) Front brake : Type Bendix type disk brake Number of shoe per wheel 2 Shoe material F50 Dimension of lining and shoe (width×thickness×length) 46×14×97 mm (1.81×0.55×3.82 in) Minimum allowable thickness of lining and shoe 8mm (0.315 in) Brake disk outer diameter 230 mm (9.055 in) Permissible brake disk run-out 0.15 mm (0.0059 in) Rear brake : Type Drum type with leading and trailing Drum inner diameter 200 mm (7.8741 in) Lining material D-852 Lining dimension (width×thickness×length) 32×4×199 mm (1.26×0.16×7.83 in) Wheel cylinder bore 19.05 mm (3/4 in) Parking brake : Type Mechanical internal expansion Operates at Rear wheels	
Length : Front 502 mm (19.76 in) Rear 719 mm (28.31 in) Permissible unbalance : Front joint 20 cm-gr (0.28 in-oz) at 4,000 rpm Center joint 12.5 cm-gr (0.17 in-oz) at 4,000 rpm Rear joint 20 cm-gr (0.28 in-oz) at 4,000 rpm Permissible run-out 0.4 mm (0.016 in) Outer diameter 50.8 mm (2.00 in)		STEERING	
REAR AXLE		Type Recirculating ball nut (Variable ratio gear) Reduction ratio 17~19 : 1 Free play of steering wheel 10~30 mm (0.4~1.2 in) Max. steering angle : Inner wheel 43° Outer wheel 31° Lubricant EP. SAE 90 Oil capacity 250 cc (0.5 U.S. pint, 0.4 Imp. pint) Backlash of rack and sector gear 0 Worm bearing preload 1.0~4.0 cm-kg (0.9~3.5 in-lb) End clearance of sector shaft 0.02~0.08 mm (0.001~0.003 in)	
Type Semi-floating, hypoid gears Reduction ratio 3.7 Number of teeth 37 : 10			

Steering geometry :		Free length	371 mm (14.61 in)
King pin inclination	9°15'	Fitting length	247 mm (9.73 in)
Camber	-0°15'	Spring Pressure :	When the spring length is compressed to 247 mm (9.7 in)
Caster	1°03'	1dot	263.4~271 kg (581~597 lb)
Toe in	-4~2 mm (-0.16~0.08 in)	2dots	271~279 kg (597~615 lb)
Trail	5 mm (0.2 in)	3dots	279~286.6 kg (615~632 lb)
FRONT SUSPENSION		Shock absorber	De carbon
Type	Strut	WHEELS AND TIRES	
Spring constant	1.85±0.129 kg/mm (103.5±7.2 lb/in)	Wheel type :	
Spring pressure :	When the spring length is compressed to 194 mm (7.638 in)	Front	4-J×13 WDC
1 dot	281~289 kg (619~637 lb)	Rear	4-J×13 WDC
2dots	289~296 kg (637~653 lb)	Tire :	
3dots	296~304 kg (653~670 lb)	Front	155 SR 13 or 155 HR 13
Wire diameter	11.5 mm (0.45 in)	Rear	155 SR 13 or 155 HR 13
Outer coil diameter	121.5 mm (4.78 in)	Tube :	
Free length	352 mm (13.86 in)	Front	155 SR 13 or 155 HR 13
Fitting length	194 mm (7.64 in)	Rear	155 SR 13 or 155 HR 13
Shock absorber	Hydraulic double action	Air pressure :	
Piston rod :		Front	1.5 kg/cm ² (21.3 lb/in ²) less than 100 km/h (60 mile/h)
Diameter	20 mm (0.787 in)	Rear	1.7 kg/cm ² (24.2 lb/in ²) more than 100 km/h (60 mile/h)
Permissible run-out	0.05 mm (0.002 in)		1.5 kg/cm ² (21.3 lb/in ²) less than 100 km/h (60 mile/h)
Piston assembly :			1.7 kg/cm ² (24.2 lb/in ²) more than 100 km/h (60 mile/h)
Relief valve thickness	0.2±0.015 mm (0.0079±0.0006 in)	Permissible unbalance	0.20 cm-kg (0.0278 in-oz)
Center ring valve thickness	0.1±0.008 (0.0039±0.00031 in)	Permissible deviation of disk wheel	Under 1.3 mm (0.0512 in)
Check valve thickness	0.15±0.01 mm (0.0059±0.0004 in)	WEIGHTS AND DIMENSIONS	
Flatness	0.25 mm (0.0098 in)	Overall length	4,150 mm (163.39 in)
Pressure tube :		Overall width	1,580 mm (62.21 in)
Inner diameter	30 mm (1.181 in)	Overall height	1,420 mm (55.91 in)
Bottom valve :		Wheel base	2,470 mm (97.25 in)
Tention valve thickness	0.1±0.008 mm (0.0039±0.00031 in)	Tread :	
Compression valve thickness	0.15±0.01 mm (0.0059±0.0004 in)	Front	1,285 mm (50.59 in)
	0.2±0.015 mm (0.0079±0.0006 in)	Rear	1,280 mm (50.39 in)
REAR SUSPENSION		Minimum turning radius	4,700 mm (185.04 in)
Type	4 links & lateral rod	Road clearance	160 mm (6.30 in)
Spring constant :	2.22±0.16 kg/mm (124.2±9.2 lb/in)	Overhang :	
Coil spring :		Front	645 mm (25.39 in)
Wire diameter	10.8 mm (0.43 in)	Rear	980 mm (38.58 in)
Outer coil diameter	100.8 mm (3.97 in)	Seating capacity	5
		Car weight (no load)	955 kg (2105.4 lb)

TIGHTENING TORQUE LIST

	m-kg	ft-lb		m-kg	ft-lb
Engine :			Tie rod lock nut	7.5	55
Tension bolt	2.5	18	Steering gear housing	5.0	40
Flywheel	45.0	350	Pitman arm	15.0	110
Eccentric shaft pley	7.0	50	Idler arm	5.0	40
Spark plug	2.0	14	Steering joint	1.5	10
Oilpan	0.6	4.5			
6 mm bolt & nut	1.0	7	Brake :		
8 mm bolt & nut	2.0	15	Caliper bracket	5.5	40
10mm bolt & nut	4.0	30	Frant backing plate	4.0	30
			Front hub attaching bolt	5.0	40
Clutch :			Rear backing plate	2.5	20
Pressure plate	2.0	15	Master cylinder joint bolt	6.5	50
Master cyliuder reserver	2.5	20	Master cylinder set bolt	0.2	1.0
Transmission :			Wheel :		
Main shaft lock nut	23.0	170	wheel bolt	9.5	70
Shift fork lock bolt	1.0	10			
Trans mission case :			Suspension :		
8 mm bolt	2.5	20	Suspension arm	8.0	60
10mm bolt	3.5	25	Arm ball joint	6.5	50
			Stabilizer	9.0	65
Propeller shaft :			Front damper cap nut	5.5	40
Yoke attaching bolt	3.0	20	Front damper piston	1.5	10
			Front damper base valve	0.15	1.0
Rear axle :			Rear suspension link	11.0	80
Companion flange	15.0	110			
Ring gear	6.0	45	Standard bolts :		
Bearing cap	4.0	30	6 mm p=1.0	0.8	5
Drain plug	2.0	15	8 mm p=1.25	2.0	15
			10mm p=1.25	4.0	30
Steering :			12mm p=1.5	7.0	50
Tie rod ball joint	3.0	20	14mm p=1.5	9.0	65