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SECTION 1 - GENERAL INFORMATION

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Specifications*
(250)

VALVES AND GUIDES		
Valve Face Diameter	(intake) (exhaust)	33 mm (1.3 in.) 28 mm (1.1 in.)
Valve/Tappet Clearance (cold engine)	(intake) (exhaust)	0.03-0.08 mm (0.001-0.003 in.) 0.08-0.13 mm (0.003-0.005 in.)
Valve Guide/Stem Clearance	(intake) (exhaust)	0.010-0.037 mm (0.0004-0.0015 in.) 0.030-0.057 mm (0.0012-0.0024 in.)
Valve Guide/Valve Stem Deflection (wobble method)	(max)	0.35 mm (0.014 in.)
Valve Guide Inside Diameter		5.500-5.512 mm (0.2165-0.2170 in.)
Valve Stem Outside Diameter	(intake) (exhaust)	5.475-5.490 mm (0.2156-0.2161 in.) 5.455-5.470 mm (0.2148-0.2154 in.)
Valve Stem Runout	(max)	0.05 mm (0.002 in.)
Valve Head Thickness	(max)	0.5 mm (0.02 in.)
Valve Stem End Length	(max)	2.7 mm (0.11 in.)
Valve Face/Seat Width		0.9-1.1 mm (0.035-0.043 in.)
Valve Seat Angle	(intake) (exhaust)	45° 45°
Valve Face Radial Runout	(max)	0.03 mm (0.001 in.)
Valve Spring Free Length (max)	(inner) (outer)	35.1 mm (1.38 in.) 39.9 mm (1.57 in.)
Valve Spring Tension @ 32.5 mm (1.28 in.)	(inner)	7.1-9.2 kg (15.7-20.3 lb)
Valve Spring Tension @ 36.0 mm (1.42 in.)	(outer)	17.3-21.3 kg (38.1-47.0 lb)
CAMSHAFT AND CYLINDER HEAD		
Cam Lobe Height (min)	(intake) (exhaust)	33.820 mm (1.331 in.) 33.490 mm (1.318 in.)
Camshaft Journal Oil Clearance	(max)	0.15 mm (0.0059 in.)
Camshaft Journal Holder Inside Diameter		22.012-22.025 mm (0.8666-0.8671 in.)
Camshaft Journal Outside Diameter		21.959-21.980 mm (0.8645-0.8654 in.)
Camshaft Runout	(max)	0.10 mm (0.004 in.)
Rocker Arm Inside Diameter		12.000-12.018 mm (0.472-0.473 in.)
Rocker Arm Shaft Outside Diameter		11.977-11.995 mm (0.4715-0.4722 in.)
Cylinder Head Distortion	(max)	0.05 mm (0.002 in.)
Cylinder Head Cover Distortion	(max)	0.05 mm (0.002 in.)

CYLINDER, PISTON, AND RINGS		
Piston Skirt/Cylinder Clearance	(max)	0.12 mm (0.0047 in.)
Cylinder Bore	(max)	66 mm (2.598 in.)
Piston Diameter 18 mm (0.71 in.) from Skirt End		68.380 mm (2.6921 in.)
Piston Ring Free End Gap	(1st ring) (2nd ring)	6.2-7.8 mm (0.24-0.31 in.) 7.3-9.1 mm (0.29-0.36 in.)
Bore x Stroke		66 x 72 mm (2.60 x 2.84 in.)
Cylinder Trueness	(max)	0.05 mm (0.002 in.)
Piston Ring End Gap - Installed (max)	(1st ring) (2nd ring)	0.70 mm (0.0276 in.) 1.0 mm (0.039 in.)
Piston Ring to Groove Clearance (max)	(1st) (2nd)	0.180 mm (0.0071 in.) 0.150 mm (0.0059 in.)
Piston Ring Groove Width	(1st) (2nd) (oil)	1.01-1.04 mm (0.040-0.041 in.) 1.22-1.24 mm (0.048-0.049 in.) 2.01-2.03 mm (0.079-0.080 in.)
Piston Ring Thickness	(1st) (2nd)	0.97-0.99 mm (0.038-0.039 in.) 1.17-1.19 mm (0.046-0.047 in.)
Piston Pin Bore	(max)	17.03 mm (0.6705 in.)
Piston Pin Outside Diameter	(min)	16.98 mm (0.6685 in.)
CRANKSHAFT		
Connecting Rod (small end inside diameter)	(max)	17.040 mm (0.6709 in.)
Connecting Rod (big end side-to-side)		0.1-1.0 mm (0.004-0.039 in.)
Connecting Rod (big end width)		17.95-18.00 mm (0.707-0.709 in.)
Connecting Rod (small end deflection)	(max)	3 mm (0.12 in.)
Crankshaft (web-to-web)		54.9-55.1 mm (2.161-2.169 in.)
Crankshaft Runout (max)	(left) (right)	0.05 mm (0.002 in.) 0.08 mm (0.003 in.)
Oil Pump Reduction Ratio		1.566 (47/30)
Oil Pressure at 60°C (140°F) @3000 RPM	(above) (below)	0.7 kg/cm² (10 psi) 2.8 kg/cm² (40 psi)

CLUTCH	
Clutch Release Screw	1/8 turn back
Drive Plate (fiber) Thickness (min)	2.42 mm (0.094 in.)
Drive Plate (fiber) Tab (min)	11 mm (0.43 in.)
Driven Plate (warpage) (max)	0.1 mm (0.004 in.)
Clutch Spring Length (min)	27.5 mm (1.08 in.)
Clutch Wheel Inside Diameter (max)	Scuffing of contact surface
Starter Clutch Shoe	No groove at any part
Clutch Engagement RPM	1900 ± 200
Clutch Lock-Up RPM	3400 ± 300
Primary Reduction Ratio	3.150 (63/20)
Secondary Reduction Ratio	1.125 (18/16)
Final Reduction Ratio (front) (rear)	3.090 (34/11) 3.647 (62/17)
Secondary Transmission Reduction Ratio (super low) (low) (high)	3.176 (17/18 x 25/11 x 37/25) 1.480 (37/25) 1.112 (11/25 x 18/17 x 43/18)
Gear Ratios (1st) (2nd) (3rd) (4th) (5th) (reverse)	3.083 (37/12) 1.933 (29/15) 1.388 (25/18) 1.095 (23/21) 0.913 (21/23) 2.833 (29/12 x 34/29)
Shift Fork To Groove (side clearance)	0.10-0.50 mm (0.004-0.020 in.)
Secondary Transmission Fork to Groove (side clearance)	0.05-0.50 mm (0.002-0.020 in.)
Reverse Fork to Groove (side clearance)	0.10-0.50 mm (0.004-0.020 in.)
Shift Fork Groove Width (#1, #2, & #3) (secondary transmission - #1 & #2) (reverse)	4.5-4.6 mm (0.177-0.181 in.) 5.45-5.55 mm (0.215-0.219 in.) 4.0-4.1 mm (0.157-0.161 in.)
Shift Fork Thickness (#1, #2, & #3) (secondary transmission-#1 & #2) (reverse)	4.3-4.4 mm (0.169-0.173 in.) 5.3-5.4 mm (0.209-0.213 in.) 3.8-3.9 mm (0.150-0.154 in.)
Engine Oil Thermo-Switch Operating Temperature (off↔on) (on↔off)	160°C (320°F) 140°C (284°F)
CARBURETOR	
Type	Keihin CVK32
Main Jet	138
Slow Jet	38
Pilot Screw Setting (turns)	1 3/4
Jet Needle	N8TT
Needle Jet	4.0/3.4
Idle RPM	1400-1600
Starter Jet	60
Float Arm Height	17 mm (0.7 in.)
Throttle Cable Free-Play (at lever)	3-6 mm (1/8-1/4 in.)

ELECTRICAL	
Ignition Timing	5° BTDC below 1800 RPM 35° BTDC above 3800 RPM
Spark Plug Type	NGK DR7EA
Spark Plug Gap	0.6-0.7 mm (0.024-0.028 in.)
Spark Plug Cap	8000-12,000 ohms
Ignition Coil Resistance (primary) (secondary)	0.1-0.5 ohm (terminal to ground) 5200-7800 ohms (high tension - plug cap removed - to ground)
Magneto Coil Resistance (trigger) (charging)	80-150 ohms (black/yellow to green/white) 0.1-1.0 ohm (yellow to yellow)
Magneto Output (approx)	220W @ 5000 RPM
CHASSIS	
Dry Weight (approx)	2x4 - 248 kg (545 lb) 4x4 - 263 kg (580 lb)
Length (overall)	202 cm (79.5 in.)
Height (overall)	114 cm (45 in.)
Width (overall)	114 cm (45 in.)
Suspension Travel	16.5 cm (6.5 in.)
Ground Clearance	20.3 cm (8.0 in.)
Brake Type	Hydraulic w/Brake Lever Lock and Mechanical Foot Brake
Wheelbase	127 cm (50 in.)
Tracking	89 cm (35 in.)
Tire Size	Front - AT23 x 8-12 Rear - AT24 x 9-12
Tire Inflation Pressure	0.35 kg/cm² (5 psi)
Turning Radius	3.0 m (9.85 ft)
MISCELLANY	
Gas Tank Capacity (rated)	17.98 L (4.75 U.S. gal.)
Reserve Capacity	2.46 L (0.65 U.S. gal.)
Engine Oil Capacity	3.9 L (4.1 U.S. qt)
Gasoline (recommended)	87 Octane Regular Unleaded
Engine Oil (recommended)	SAE 10W-40
Differential Capacity (front - 4x4)	275 ml (9.3 fl oz)
Differential Lubricant (front - 4x4)	SAE Approved 80W-90 Hypoid
Brake Fluid	DOT 4
Taillight/Brakelight	12V/5W/27W
Headlight	12V/27W (2)
Starting System	Electric w/Manual Recoil (Emergency)

* Specifications subject to change without notice.

Specifications*
(300)

VALVES AND GUIDES		
Valve Face Diameter	(intake) (exhaust)	33 mm (1.3 in.) 28 mm (1.1 in.)
Valve/Tappet Clearance (cold engine)	(intake) (exhaust)	0.03-0.08 mm (0.001-0.003 in.) 0.17-0.22 mm (0.007-0.009 in.)
Valve Guide/Stem Clearance	(intake) (exhaust)	0.010-0.037 mm (0.0004-0.0015 in.) 0.030-0.057 mm (0.0012-0.0024 in.)
Valve Guide/Valve Stem Deflection (wobble method)	(max)	0.35 mm (0.014 in.)
Valve Guide Inside Diameter		5.500-5.512 mm (0.2165-0.2170 in.)
Valve Stem Outside Diameter	(intake) (exhaust)	5.475-5.490 mm (0.2156-0.2161 in.) 5.455-5.470 mm (0.2148-0.2154 in.)
Valve Stem Runout	(max)	0.05 mm (0.002 in.)
Valve Head Thickness	(max)	0.5 mm (0.02 in.)
Valve Stem End Length	(max)	2.7 mm (0.11 in.)
Valve Face/Seat Width		0.9-1.1 mm (0.035-0.043 in.)
Valve Seat Angle	(intake) (exhaust)	45° 45°
Valve Face Radial Runout	(max)	0.03 mm (0.001 in.)
Valve Spring Free Length (max)	(inner) (outer)	35.1 mm (1.38 in.) 39.9 mm (1.57 in.)
Valve Spring Tension @ 32.5 mm (1.28 in.)	(inner)	7.1-9.2 kg (15.7-20.3 lb)
Valve Spring Tension @ 36.0 mm (1.42 in.)	(outer)	17.3-21.3 kg (38.1-47.0 lb)
CAMSHAFT AND CYLINDER HEAD		
Cam Lobe Height (min)	(intake) (exhaust)	33.820 mm (1.331 in.) 33.490 mm (1.318 in.)
Camshaft Journal Oil Clearance	(max)	0.15 mm (0.0059 in.)
Camshaft Journal Holder Inside Diameter		22.012-22.025 mm (0.8666-0.8671 in.)
Camshaft Journal Outside Diameter		21.959-21.980 mm (0.8645-0.8654 in.)
Camshaft Runout	(max)	0.10 mm (0.004 in.)
Rocker Arm Inside Diameter		12.000-12.018 mm (0.472-0.473 in.)
Rocker Arm Shaft Outside Diameter		11.977-11.995 mm (0.4715-0.4722 in.)
Cylinder Head Distortion	(max)	0.05 mm (0.002 in.)
Cylinder Head Cover Distortion	(max)	0.05 mm (0.002 in.)

CYLINDER, PISTON, AND RINGS		
Piston Skirt/Cylinder Clearance	(max)	0.12 mm (0.0047 in.)
Cylinder Bore	(max)	68.580 mm (2.700 in.)
Piston Diameter 18 mm (0.71 in.) from Skirt End		68.380 mm (2.6921 in.)
Piston Ring Free End Gap	(1st ring) (2nd ring)	6.2-7.8 mm (0.24-0.31 in.) 7.3-9.1 mm (0.29-0.36 in.)
Bore x Stroke		68.5 x 76 mm (2.69 x 2.99 in.)
Cylinder Trueness (max)		0.05 mm (0.002 in.)
Piston Ring End Gap - Installed (max)	(1st ring) (2nd ring)	0.70 mm (0.0276 in.) 1.0 mm (0.039 in.)
Piston Ring to Groove Clearance (max)	(1st) (2nd)	0.180 mm (0.0071 in.) 0.150 mm (0.0059 in.)
Piston Ring Groove Width	(1st) (2nd) (oil)	1.01-1.04 mm (0.040-0.041 in.) 1.22-1.24 mm (0.048-0.049 in.) 2.01-2.03 mm (0.079-0.080 in.)
Piston Ring Thickness	(1st) (2nd)	0.97-0.99 mm (0.038-0.039 in.) 1.17-1.19 mm (0.046-0.047 in.)
Piston Pin Bore	(max)	17.03 mm (0.6705 in.)
Piston Pin Outside Diameter	(min)	16.98 mm (0.6685 in.)
CRANKSHAFT		
Connecting Rod (small end inside diameter)	(max)	17.040 mm (0.6709 in.)
Connecting Rod (big end side-to-side)		0.1-1.0 mm (0.004-0.039 in.)
Connecting Rod (big end width)		17.95-18.00 mm (0.707-0.709 in.)
Connecting Rod (small end deflection)	(max)	3 mm (0.12 in.)
Crankshaft (web-to-web)		54.9-55.1 mm (2.161-2.169 in.)
Crankshaft Runout (max)	(left) (right)	0.05 mm (0.002 in.) 0.08 mm (0.003 in.)
Oil Pump Reduction Ratio		1.566 (47/30)
Oil Pressure at 60°C (140°F) @3000 RPM	(above) (below)	0.7 kg/cm² (10 psi) 2.8 kg/cm² (40 psi)

CLUTCH	
Clutch Release Screw	1/8 turn back
Drive Plate (fiber) Thickness (min)	2.42 mm (0.094 in.)
Drive Plate (fiber) Tab (min)	11 mm (0.43 in.)
Driven Plate (warpage) (max)	0.1 mm (0.004 in.)
Clutch Spring Length (min)	27.5 mm (1.08 in.)
Clutch Wheel Inside Diameter (max)	Scuffing of contact surface
Starter Clutch Shoe	No groove at any part
Clutch Engagement RPM	1900 ± 200
Clutch Lock-Up RPM	3400 ± 300
Primary Reduction Ratio	3.150 (63/20)
Secondary Reduction Ratio	1.125 (18/16)
Final Reduction Ratio (front) (rear)	3.090 (34/11) 3.647 (62/17)
Secondary-Transmission Reduction Ratio (super low) (low) (high)	3.176 (17/18 x 25/11 x 37/25) 1.480 (37/25) 1.112 (11/25 x 18/17 x 43/18)
Gear Ratios (1st) (2nd) (3rd) (4th) (5th) (reverse)	3.083 (37/12) 1.933 (29/15) 1.388 (25/18) 1.095 (23/21) 0.913 (21/23) 2.833 (29/12 x 34/29)
Engine Fork To Groove (side clearance)	0.10-0.50 mm (0.004-0.020 in.)
Secondary Transmission Fork to Groove (side clearance)	0.05-0.50 mm (0.002-0.020 in.)
Reverse Fork to Groove (side clearance)	0.10-0.50 mm (0.004-0.020 in.)
Shift Fork Groove Width (#1, #2, & #3) (secondary transmission-#1 & #2) (reverse)	4.5-4.6 mm (0.177-0.181 in.) 5.45-5.55 mm (0.215-0.219 in.) 4.0-4.1 mm (0.157-0.161 in.)
Shift Fork Thickness (#1, #2, & #3) (secondary transmission-#1 & #2) (reverse)	4.3-4.4 mm (0.169-0.173 in.) 5.3-5.4 mm (0.209-0.213 in.) 3.8-3.9 mm (0.150-0.154 in.)
Engine Oil Thermo-Switch Operating Temperature (off↔on) (on↔off)	160°C (320°F) 140°C (284°F)
CARBURETOR	
Type	Keihin CVK32
Main Jet	135
Slow Jet	38
Pilot Screw Setting (turns)	2 1/4
Jet Needle	N8TT
Needle Jet	4.0/3.4
Idle RPM	1400-1600
Starter Jet	65
Float Arm Height	17 mm (0.7 in.)
Throttle Cable Free-Play (at lever)	3-6 mm (1/8-1/4 in.)

ELECTRICAL	
Ignition Timing	5° BTDC @ 1800 RPM 30° BTDC @ 3800 RPM
Spark Plug Type	NGK DR7EA
Spark Plug Gap	0.6-0.7 mm (0.024-0.028 in.)
Spark Plug Cap	8000-12,000 ohms
Ignition Coil Resistance (primary) (secondary)	0.1-0.5 ohm (terminal to ground) 5200-7800 ohms (high tension - plug cap removed - to ground)
Magneto Coil Resistance (trigger) (charging)	80-150 ohms (black/yellow to green/white) 0.1-1.0 ohm (yellow to yellow)
Magneto Output (approx)	220W @ 5000 RPM
CHASSIS	
Dry Weight (approx)	2x4 - 250 kg (550 lb) 4x4 - 266 kg (585 lb)
Length (overall)	202 cm (79.5 in.)
Height (overall)	114 cm (45 in.)
Width (overall)	114 cm (45 in.)
Suspension Travel	16.5 cm (6.5 in.)
Ground Clearance	20.3 cm (8.0 in.)
Brake Type	Hydraulic w/Brake Lever Lock and Mechanical Foot Brake
Wheelbase	127 cm (50 in.)
Tracking	89 cm (35 in.)
Tire Size (2x4)	Front - AT23 x 8-12 Rear - AT25 x 10-12
Tire Size (4x4)	Front - AT24 x 9-12 Rear - AT25 x 10-12
Tire Inflation Pressure	0.35 kg/cm² (5 psi)
Turning Radius	2.7 m (8.9 ft)
MISCELLANY	
Gas Tank Capacity (rated)	17.98 L (4.75 U.S. gal.)
Reserve Capacity	2.46 L (0.65 U.S. gal.)
Differential Capacity (front - 4x4)	275 ml (9.3 fl oz)
Engine Oil Capacity	3.4 L (3.5 U.S. qt)
Gasoline (recommended)	87 Octane Regular Unleaded
Engine Oil (recommended)	SAE 10W-40
Differential Lubricant (front - 4x4)	SAE Approved 80W-90 Hypoid
Brake Fluid	DOT 4
Taillight/Brakelight	12V/5W/27W
Headlight	12V/27W (2)
Starting System	Electric w/Manual Recoil (Emergency)

* Specifications subject to change without notice.

Specifications*
(375)

VALVES AND GUIDES		
Valve Face Diameter	(intake) (exhaust)	30.6 mm (1.20 in.) 27.0 mm (1.06 in.)
Valve/Tappet Clearance (cold engine)	(intake) (exhaust)	0.05-0.10 mm (0.002-0.004 in.) 0.17-0.22 mm (0.007-0.009 in.)
Valve Guide/Stem Clearance	(intake) (exhaust)	0.010-0.037 mm (0.0004-0.0015 in.) 0.030-0.057 mm (0.0012-0.0022 in.)
Valve Guide/Valve Stem Deflection (wobble method)	(max)	0.35 mm (0.014 in.)
Valve Guide Inside Diameter		5.000-5.012 mm (0.1969-0.1973 in.)
Valve Stem Outside Diameter	(intake) (exhaust)	4.975-4.990 mm (0.1959-0.1965 in.) 4.955-4.970 mm (0.1951-0.1957 in.)
Valve Stem Runout	(max)	0.05 mm (0.002 in.)
Valve Head Thickness	(max)	0.5 mm (0.02 in.)
Valve Stem End Length	(max)	2.3 mm (0.09 in.)
Valve Face/Seat Width		0.9-1.1 mm (0.035-0.043 in.)
Valve Seat Angle	(intake) (exhaust)	45° 45°
Valve Face Radial Runout	(max)	0.03 mm (0.001 in.)
Valve Spring Free Length (max)	(inner) (outer)	35.1 mm (1.38 in.) 37.8 mm (1.49 in.)
Valve Spring Tension @ 28 mm (1.10 in.)	(inner)	5.4-6.4 kg (12-14 lb)
Valve Spring Tension @ 31.5 mm (1.24 in.)	(outer)	13.2-15.0 kg (29-33 lb)

CAMSHAFT AND CYLINDER HEAD		
Cam Lobe Height (min)	(intake) (exhaust)	32.830 mm (1.293 in.) 32.830 mm (1.293 in.)
Camshaft Journal Oil Clearance	(max)	0.15 mm (0.0059 in.)
Camshaft Journal Holder Inside Diameter	(right & center) (left)	22.012-22.025 mm (0.8666-0.8671 in.) 17.512-17.525 mm (0.6894-0.6900 in.)
Camshaft Journal Outside Diameter	(right & center) (left)	21.959-21.980 mm (0.8645-0.8654 in.) 17.466-17.484 mm (0.6876-0.6883 in.)
Camshaft Runout	(max)	0.10 mm (0.004 in.)
Rocker Arm Inside Diameter		12.000-12.018 mm (0.472-0.473 in.)
Rocker Arm Shaft Outside Diameter		11.973-11.984 mm (0.4714-0.4718 in.)
Cylinder Head Distortion	(max)	0.05 mm (0.002 in.)
Cylinder Head Cover Distortion	(max)	0.05 mm (0.002 in.)

CYLINDER, PISTON, AND RINGS		
Piston Skirt/Cylinder Clearance		0.065-0.075 mm (0.0026-0.0030 in.)
Cylinder Bore		82.000-82.015 mm (3.2283-3.2289 in.)
Piston Diameter 15 mm (0.6 in.) from Skirt End		81.930-81.945 mm (3.2256-3.2262 in.)
Piston Ring Free End Gap (max)	(1st ring) (2nd ring)	8.9 mm (0.3504 in.) 8.3 mm (0.3268 in.)
Bore x Stroke		82 x 71.2 mm (3.29 x 2.80 in.)
Cylinder Trueness	(max)	0.05 mm (0.002 in.)
Piston Ring End Gap - Installed (max)		0.50 mm (0.020 in.)
Piston Ring to Groove Clearance (max)	(1st) (2nd)	0.180 mm (0.0071 in.) 0.150 mm (0.0059 in.)
Piston Ring Groove Width	(1st) (2nd) (oil)	1.01-1.03 mm (0.0398-0.0406 in.) 1.01-1.03 mm (0.0398-0.0406 in.) 2.01-2.03 mm (0.0791-0.0799 in.)
Piston Ring Thickness	(1st) (2nd)	0.97-0.99 mm (0.0381-0.0389 in.) 0.97-0.99 mm (0.0381-0.0389 in.)
Piston Pin Bore	(max)	20.03 mm (0.789 in.)
Piston Pin Outside Diameter	(min)	19.98 mm (0.787 in.)

CRANKSHAFT		
Connecting Rod (small end inside diameter)	(max)	21.04 mm (0.8283 in.)
Connecting Rod (big end side-to-side)		0.1-1.0 mm (0.004-0.039 in.)
Connecting Rod (big end width)		21.95-22.00 mm (0.8642-0.8661 in.)
Connecting Rod (small end deflection)	(max)	3 mm (0.12 in.)
Crankshaft (web-to-web)		60.9-61.1 mm (2.398-2.406 in.)
Crankshaft Runout	(max)	0.08 mm (0.003 in.)
Oil Pump Reduction Ratio		1.59 (29/20)
Oil Pressure at 60°C (140°F) @3000 RPM	(above) (below)	1.53 kg/cm² (21.7 psi) 3.57 kg/cm² (50.8 psi)
Engine Oil Thermo-Switch Operating Temperature	(off↔on) (on↔off)	160°C (320°F) 140°C (284°F)

CARBURETOR	
Type	Keihin CVK32
Main Jet	150
Slow Jet	38
Pilot Screw Setting (turns)	2 1/8
Jet Needle	N8TV
Needle Jet	4.0/3.4
Idle RPM	1200-1350
Starter Jet	60
Float Arm Height	17 mm (0.7 in.)
Throttle Cable Free-Play (at lever)	3-6 mm (1/8-1/4 in.)

ELECTRICAL	
Ignition Timing	10° BTDC @ 3000 RPM
Spark Plug Type	NGK CR7E
Spark Plug Gap	0.7-0.8 mm (0.028-0.032 in.)
Spark Plug Cap	8000-12,000 ohms
Ignition Coil Resistance (primary) (secondary)	0.05-0.5 ohm (terminal to ground) 4000-9000 ohms (high tension - plug cap removed - to ground)
Magneto Coil Resistance (trigger) (source/charge) (charging)	130-250 ohms (green to blue) 0.03-1.2 ohms (yellow to white) 0.1-1.0 ohm (black to black)
Magneto Output (approx)	220W @ 5000 RPM
CHASSIS	
Dry Weight (approx)	2x4 - 274 kg (605 lb) 4x4 - 293 kg (645 lb)
Length (overall)	205 cm (81 in.)
Height (overall)	122 cm (48 in.)
Width (overall)	112 cm (44.25 in.)
Suspension Travel (front)	21.5 cm (8.45 in.)
Suspension Travel (rear)	18.2 cm (7.2 in.)
Ground Clearance	20.3 cm (8 in.)
Brake Type	Hydraulic w/Brake Lever Lock and Mechanical Foot Brake

CHASSIS (Cont)	
Wheelbase	127 cm (50 in.)
Wheel Stance	89 cm (35 in.)
Tire Size	Front - AT25 x 8-12 Rear - AT25 x 10-12
Tire Inflation Pressure (front)	0.32 kg/cm² (4.5 psi)
Tire Inflation Pressure (rear)	0.25 kg/cm² (3.5 psi)
Turning Radius	2.7 m (8.9 ft)
MISCELLANY	
Gas Tank Capacity (rated)	17.98 L (4.75 U.S. gal.)
Reserve Capacity	2.46 L (0.65 U.S. gal.)
Rear Drive Capacity	275 ml (9.3 fl oz)
Differential Capacity (front - 4x4)	275 ml (9.3 fl oz)
Engine Oil Capacity	3.08 L (3.25 U.S. qt)
Gasoline (recommended)	87 Octane Regular Unleaded
Engine Oil (recommended)	SAE 10W-40
Differential/Rear Drive Lubricant	SAE Approved 80W-90 Hypoid
Brake Fluid	DOT 4
Taillight/Brakelight	12V/5W/27W
Headlight	12V/27W (2)
Starting System	Electric w/Manual Recoil (Emergency)

* Specifications subject to change without notice.

Specifications*
(400)

VALVES AND GUIDES		
Valve Face Diameter	(intake) (exhaust)	30.6 mm (1.20 in.) 27.0 mm (1.06 in.)
Valve/Tappet Clearance (cold engine)	(intake) (exhaust)	0.05-0.10 mm (0.002-0.004 in.) 0.17-0.22 mm (0.007-0.009 in.)
Valve Guide/Stem Clearance	(intake) (exhaust)	0.010-0.037 mm (0.0004-0.0015 in.) 0.030-0.057 mm (0.0012-0.0022 in.)
Valve Guide/Valve Stem Deflection (wobble method)	(max)	0.35 mm (0.014 in.)
Valve Guide Inside Diameter		5.000-5.012 mm (0.1969-0.1973 in.)
Valve Stem Outside Diameter	(intake) (exhaust)	4.975-4.990 mm (0.1959-0.1965 in.) 4.955-4.970 mm (0.1951-0.1957 in.)
Valve Stem Runout	(max)	0.05 mm (0.002 in.)
Valve Head Thickness	(max)	0.5 mm (0.02 in.)
Valve Stem End Length	(max)	1.8 mm (0.07 in.)
Valve Face/Seat Width		0.9-1.1 mm (0.035-0.043 in.)
Valve Seat Angle	(intake) (exhaust)	45° 45°
Valve Face Radial Runout	(max)	0.03 mm (0.001 in.)
Valve Spring Free Length (max)	(inner) (outer)	35.1 mm (1.38 in.) 37.8 mm (1.49 in.)
Valve Spring Tension @ 28 mm (1.10 in.)	(inner)	5.3-6.5 kg (11.7-14.3 lb)
Valve Spring Tension @ 31.5 mm (1.24 in.)	(outer)	13.1-15.1 kg (28.9-33.3 lb)

CAMSHAFT AND CYLINDER HEAD		
Cam Lobe Height (min)	(intake) (exhaust)	33.150 mm (1.305 in.) 33.220 mm (1.308 in.)
Camshaft Journal Oil Clearance	(max)	0.15 mm (0.0059 in.)
Camshaft Journal Holder Inside Diameter	(right & center) (left)	22.012-22.025 mm (0.8666-0.8671 in.) 17.512-17.525 mm (0.6894-0.6900 in.)
Camshaft Journal Outside Diameter	(right & center) (left)	21.959-21.980 mm (0.8645-0.8654 in.) 17.465-17.484 mm (0.6876-0.6883 in.)
Camshaft Runout	(max)	0.10 mm (0.004 in.)
Cam Chain Length	(max)	128.9 mm (5.07 in.)
Rocker Arm Inside Diameter		12.000-12.018 mm (0.472-0.473 in.)
Rocker Arm Shaft Outside Diameter		11.973-11.984 mm (0.4714-0.4718 in.)
Cylinder Head Distortion	(max)	0.05 mm (0.002 in.)
Cylinder Head Cover Distortion	(max)	0.05 mm (0.002 in.)

CYLINDER, PISTON, AND RINGS		
Piston Skirt/Cylinder Clearance		0.045-0.120 mm (0.0018-0.0047 in.)
Cylinder Bore		84.000-84.085 mm (3.3071-3.3104 in.)
Piston Diameter 15 mm (0.6 in.) from Skirt End		83.880-83.965 mm (3.3024-3.3057 in.)
Piston Ring Free End Gap (approx)	(1st ring) (2nd ring)	8.4-10.5 mm (0.33-0.41 in.) 9.5-11.8 mm (0.37-0.46 in.)
Bore x Stroke		84 x 67 mm (3.30 x 2.64 in.)
Cylinder Trueness	(max)	0.05 mm (0.002 in.)
Piston Ring End Gap - Installed (max)		0.50 mm (0.020 in.)
Piston Ring to Groove Clearance (max)	(1st) (2nd)	0.180 mm (0.0071 in.) 0.150 mm (0.0059 in.)
Piston Ring Groove Width	(1st) (2nd) (oil)	1.21-1.23 mm (0.0476-0.0484 in.) 1.21-1.23 mm (0.0476-0.0484 in.) 2.51-2.53 mm (0.0988-0.0996 in.)
Piston Ring Thickness	(1st) (2nd)	1.17-1.19 mm (0.046-0.047 in.) 1.17-1.19 mm (0.046-0.047 in.)
Piston Pin Bore	(max)	21.03 mm (0.828 in.)
Piston Pin Outside Diameter	(min)	20.98 mm (0.826 in.)

CRANKSHAFT		
Connecting Rod (small end inside diameter)	(max)	21.04 mm (0.8283 in.)
Connecting Rod (big end side-to-side)		0.1-1.0 mm (0.004-0.039 in.)
Connecting Rod (big end width)		25.95-26.00 mm (1.022-1.024 in.)
Connecting Rod (small end deflection)	(max)	3 mm (0.12 in.)
Crankshaft (web-to-web)		70.9-71.1 mm (2.796-2.804 in.)
Crankshaft Runout	(max)	0.05 mm (0.002 in.)
Oil Pump Reduction Ratio		1.45 (29/20)
Oil Pressure at 60°C (140°F) @3000 RPM	(above) (below)	1.3 kg/cm² (18 psi) 1.7 kg/cm² (24 psi)

CLUTCH	
Clutch Release Screw	1/8 turn back
Drive Plate (fiber) Thickness (min)	2.62 mm (0.103 in.)
Drive Plate (fiber) Tab	13-14 mm (0.50-0.55 in.)
Driven Plate (warpage) (max)	0.1 mm (0.004 in.)
Clutch Spring Length (min)	33.7 mm (1.33 in.)
Clutch Wheel Inside Diameter	139.8-140.2 mm (5.504-5.520 in.)
Clutch Shoe	No groove at any part
Clutch Engagement RPM	1700 ± 200
Clutch Lock-Up RPM	3500 ± 300
Primary Reduction Ratio	2.392 (67/28)
Secondary Reduction Ratio	1.133 (17/15)
Final Reduction Ratio (front) (rear)	3.6 (36/10) 3.6 (36/10)
Secondary-Transmission Reduction Ratio (low) (high)	2.363 (22/23 x 28/17 x 42/ 28) 1.5 (42/28)
Gear Ratios (1st) (2nd) (3rd) (4th) (5th) (reverse)	3.09 (34/11) 1.75 (28/16) 1.2 (24/20) 0.956 (22/23) 0.8 (20/25) 2.636 (24/11 x 29/24)
Engine Fork To Groove (side clearance)	0.1-0.3 mm (0.004-0.012 in.)
Secondary Transmission Fork to Groove (side clearance) (max)	0.2 mm (0.008 in.)
Reverse Fork to Groove (side clearance) (max)	0.3 mm (0.012 in.)
Shift Fork Groove Width (#1 and #2) (secondary transmission) (reverse)	5.5-5.6 mm (0.217-0.220 in.) 5.4-5.5 mm (0.213-0.217 in.) 5.0-5.1 mm (0.197-0.201 in.)
Shift Fork Thickness (#1 and #2) (secondary transmission) (reverse)	5.3-5.4 mm (0.209-0.213 in.) 5.3-5.4 mm (0.209-0.213 in.) 4.8-4.9 mm (0.189-0.193 in.)
Thermostat Valve Opening Temperature	48.5-51.5°C (119.3-124.7°F)
Thermostat Valve Lift	Over 3 mm (0.12 in.) at 65°C (149°F)
Cooling Fan	Constant
Water Temperature Warning Light Switch (off↔on)	95°C (203°F)

CARBURETOR	
Type	Keihin CVK34
Main Jet	145
Slow Jet	38
Pilot Screw Setting (turns)	2 1/4
Jet Needle	N601
Needle Jet	6.0/4.0
Idle RPM	1400-1600
Starter Jet	90
Float Arm Height	17 mm (0.7 in.)
Throttle Cable Free-Play (at lever)	3-6 mm (1/8-1/4 in.)

ELECTRICAL	
Ignition Timing	10° BTDC @ 1500 RPM
Spark Plug Type	NGK CR6E
Spark Plug Gap	0.7-0.8 mm (0.028-0.032 in.)
Spark Plug Cap	8000-12,000 ohms
Ignition Coil Resistance (primary) (secondary)	0.1-1.0 ohm (terminal to ground) 4500-10,000 ohms (high tension - plug cap removed - to ground)
Magneto Coil Resistance (trigger) (source/charge) (charging)	150-300 ohms (green to blue) 0.05-1.0 ohm (yellow to white) 0.1-1.0 ohm (black to black)
Magneto Output (approx)	325 W @ 5000 RPM

CHASSIS	
Dry Weight (approx)	2x4 - 277 kg (611 lb) 4x4 - 295 kg (651 lb)
Length (overall)	205 cm (81 in.)
Height (overall)	122 cm (48 in.)
Width (overall)	112 cm (44.25 in.)
Suspension Travel (front)	21.5 cm (8.45 in.)
Suspension Travel (rear)	18.2 cm (7.2 in.)
Ground Clearance	20.3 cm (8 in.)
Brake Type	Hydraulic w/Brake Lever Lock and Mechanical Foot Brake
Wheelbase	127 cm (50 in.)
Wheel Stance	89 cm (35 in.)
Tire Size	Front - AT25 x 8-12 Rear - AT25 x 10-12
Tire Inflation Pressure (front)	0.32 kg/cm² (4.5 psi)
Tire Inflation Pressure (rear)	0.25 kg/cm² (3.5 psi)
Turning Radius	2.7 m (8.9 ft)

MISCELLANY	
Gas Tank Capacity (rated)	17.98 L (4.75 U.S. gal.)
Reserve Capacity	2.46 L (0.65 U.S. gal.)
Coolant Capacity	2.9 L (3.0 U.S. qt)
Rear Drive Capacity	275 ml (9.3 fl oz)
Differential Capacity (front - 4x4)	275 ml (9.3 fl oz)
Engine Oil Capacity	3.08 L (3.25 U.S. qt)
Gasoline (recommended)	87 Octane Regular Unleaded
Engine Oil (recommended)	SAE 10W-40
Differential/Rear Drive Lubricant	SAE Approved 80W-90 Hypoid
Brake Fluid	DOT 4
Taillight/Brakelight	12V/5W/27W
Headlight	12V/27W (2)
Starting System	Electric w/Manual Recoil (Emergency)

* Specifications subject to change without notice.

Specifications*
(500 - Manual Transmission)

VALVES AND GUIDES		
Valve Face Diameter	(intake) (exhaust)	30.6 mm (1.20 in.) 27.0 mm (1.06 in.)
Valve/Tappet Clearance (cold engine)	(intake) (exhaust)	0.05-0.10 mm (0.002-0.004 in.) 0.17-0.22 mm (0.007-0.009 in.)
Valve Guide/Stem Clearance	(intake) (exhaust)	0.010-0.037 mm (0.0004-0.0015 in.) 0.030-0.057 mm (0.0012-0.0022 in.)
Valve Guide/Valve Stem Deflection (wobble method)	(max)	0.35 mm (0.014 in.)
Valve Guide Inside Diameter		5.000-5.012 mm (0.1969-0.1973 in.)
Valve Stem Outside Diameter	(intake) (exhaust)	4.975-4.990 mm (0.1959-0.1965 in.) 4.955-4.970 mm (0.1951-0.1957 in.)
Valve Stem Runout	(max)	0.05 mm (0.002 in.)
Valve Head Thickness	(max)	0.5 mm (0.02 in.)
Valve Stem End Length	(max)	1.8 mm (0.07 in.)
Valve Face/Seat Width		0.9-1.1 mm (0.035-0.043 in.)
Valve Seat Angle	(intake) (exhaust)	45° 45°
Valve Face Radial Runout	(max)	0.03 mm (0.001 in.)
Valve Spring Free Length	(max) (inner) (outer)	 35.1 mm (1.38 in.) 37.8 mm (1.49 in.)
Valve Spring Tension @ 28 mm (1.10 in.)	(inner)	5.3-6.5 kg (11.7-14.3 lb)
Valve Spring Tension @ 31.5 mm (1.24 in.)	(outer)	13.1-15.1 kg (28.9-33.3 lb)

CAMSHAFT AND CYLINDER HEAD		
Cam Lobe Height (min)	(intake) (exhaust)	33.150 mm (1.305 in.) 33.220 mm (1.308 in.)
Camshaft Journal Oil Clearance	(max)	0.15 mm (0.0059 in.)
Camshaft Journal Holder Inside Diameter	(right & center) (left)	22.012-22.025 mm (0.8666-0.8671 in.) 17.512-17.525 mm (0.6894-0.6900 in.)
Camshaft Journal Outside Diameter	(right & center) (left)	21.959-21.980 mm (0.8645-0.8654 in.) 17.465-17.484 mm (0.6876-0.6883 in.)
Camshaft Runout	(max)	0.10 mm (0.004 in.)
Cam Chain Length	(max)	128.9 mm (5.07 in.)
Rocker Arm Inside Diameter		12.000-12.018 mm (0.472-0.473 in.)
Rocker Arm Shaft Outside Diameter		11.973-11.984 mm (0.4714-0.4718 in.)
Cylinder Head Distortion	(max)	0.05 mm (0.002 in.)
Cylinder Head Cover Distortion	(max)	0.05 mm (0.002 in.)

CYLINDER, PISTON, AND RINGS		
Piston Skirt/Cylinder Clearance		0.038-0.076 mm (0.0015-0.0030 in.)
Cylinder Bore		87.500-87.515 mm (3.4448-3.4454 in.)
Piston Diameter 15 mm (0.6 in.) from Skirt End		87.465-87.470 mm (3.4435-3.4437 in.)
Piston Ring Free End Gap (max)	(1st ring) (2nd ring)	11.3 mm (0.4448 in.) 9.7 mm (0.3818 in.)
Bore x Stroke		87.5 x 82 mm (3.40 x 3.22 in.)
Cylinder Trueness	(max)	0.05 mm (0.002 in.)
Piston Ring End Gap - Installed (max)		0.70 mm (0.0276 in.)
Piston Ring to Groove Clearance (max)	(1st) (2nd)	0.180 mm (0.0071 in.) 0.150 mm (0.0059 in.)
Piston Ring Groove Width	(1st) (2nd) (oil)	1.01-1.03 mm (0.0397-0.0405 in.) 1.21-1.23 mm (0.0476-0.0484 in.) 2.51-2.53 mm (0.0988-0.0996 in.)
Piston Ring Thickness	(1st) (2nd)	0.97-0.99 mm (0.0382-0.0389 in.) 1.17-1.19 mm (0.046-0.047 in.)
Piston Pin Bore	(max)	23.03 mm (0.907 in.)
Piston Pin Outside Diameter	(min)	22.98 mm (0.905 in.)

CRANKSHAFT		
Connecting Rod (small end inside diameter)	(max)	23.04 mm (0.9070 in.)
Connecting Rod (big end side-to-side)		0.1-1.0 mm (0.004-0.039 in.)
Connecting Rod (big end width)		24.95-25.00 mm (0.9822-0.9842 in.)
Connecting Rod (small end deflection)	(max)	3 mm (0.12 in.)
Crankshaft (web-to-web)		70.9-71.1 mm (2.796-2.804 in.)
Crankshaft Runout (max)		0.08 mm (0.003 in.)
Oil Pump Reduction Ratio		1.45 (29/20)
Oil Pressure at 60°C (140°F) @3000 RPM	(above) (below)	1.3 kg/cm² (18 psi) 1.7 kg/cm² (24 psi)

CLUTCH	
Clutch Release Screw	1/4-1/2 turn back
Drive Plate (fiber) Thickness	2.92-3.08 mm (0.1149-0.1212 in.)
Drive Plate (fiber) Tab	13.05 mm (0.5137 in.)
Driven Plate (warpage) (max)	0.1 mm (0.004 in.)
Clutch Spring Length (min)	33.7 mm (1.33 in.)
Clutch Wheel Inside Diameter	140.0-140.2 mm (5.511-5.520 in.)
Clutch Shoe	No groove at any part
Clutch Engagement RPM	1700 ± 200
Clutch Lock-Up RPM	3600 ± 300
Primary Reduction Ratio	2.392 (67/28)
Secondary Reduction Ratio	1.133 (17/15)
Final Reduction Ratio (front/rear)	3.6 (36/10)
Secondary-Transmission (high) Reduction Ratio (low)	1.5 (42/28) 2.363 (22/23 x 28/17 x 42/28)
Gear Ratios (1st) (2nd) (3rd) (4th) (5th) (reverse)	3.09 (34/11) 1.75 (28/16) 1.2 (24/20) 0.956 (22/23) 0.8 (20/25) 2.636 (24/11 x 29/24)
Engine Fork To Groove (side clearance)	0.1-0.3 mm (0.004-0.012 in.)
Secondary Transmission (max) Fork to Groove (side clearance)	0.2 mm (0.008 in.)
Reverse Fork to Groove (max) (side clearance)	0.2 mm (0.008 in.)
Shift Fork Groove (#1 and #2) Width (secondary transmission) (reverse)	5.5-5.6 mm (0.217-0.220 in.) 5.4-5.5 mm (0.213-0.217 in.) 4.9-5.0 mm (0.193-0.197 in.)
Shift Fork Thickness (#1 and #2) (secondary transmission) (reverse)	5.3-5.4 mm (0.209-0.213 in.) 5.3-5.4 mm (0.209-0.213 in.) 4.8-4.9 mm (0.189-0.193 in.)
Thermostat Valve Opening Temperature	73.5-76.5°C (164-170°F)
Thermostat Valve Lift	Over 3 mm (0.12 in.) at 65°C (149°F)
Cooling Fan (off↔on) Thermo-Switch (on↔off) Operating Temperature	88-93°C (190-200°F) 81°C (177°F) (min)

CARBURETOR	
Type	Keihin CVK34
Main Jet	148
Slow Jet	38
Pilot Screw Setting (turns)	2 1/4
Jet Needle	N601
Needle Jet	6.0/4.0
Idle RPM	1200-1350
Starter Jet	102
Float Arm Height	17 mm (0.7 in.)
Throttle Cable Free-Play (at lever)	3-6 mm (1/8-1/4 in.)

ELECTRICAL	
Ignition Timing	10° BTDC @ 1500 RPM
Spark Plug Type	NGK CR6E
Spark Plug Gap	0.7-0.8 mm (0.028-0.032 in.)
Spark Plug Cap	8000-12,000 ohms
Ignition Coil Resistance (primary) (secondary)	0.1-1.0 ohm (terminal to ground) 4500-10,000 ohms (high tension - plug cap removed - to ground)
Magneto Coil Resistance (trigger) (source/charge) (charging)	150-300 ohms (green to blue) 0.05-1.0 ohm (yellow to white) 0.1-1.0 ohm (black to black)
Magneto Output (approx)	325W @ 5000 RPM

CHASSIS	
Dry Weight (approx)	295 kg (651 lb)
Length (overall)	205 cm (81 in.)
Height (overall)	122 cm (48 in.)
Width (overall)	112 cm (44.25 in.)
Suspension Travel (front)	21.5 cm (8.45 in.)
Suspension Travel (rear)	18.2 cm (7.2 in.)
Ground Clearance	20.3 cm (8 in.)
Brake Type	Hydraulic w/Brake Lever Lock and Mechanical Foot Brake
Wheelbase	127 cm (50 in.)
Tracking	89 cm (35 in.)
Tire Size	Front - AT25 x 8-12 Rear - AT25 x 10-12
Tire Inflation Pressure (front)	0.32 kg/cm² (4.5 psi)
Tire Inflation Pressure (rear)	0.25 kg/cm² (3.5 psi)
Turning Radius	2.7 m (8.9 ft)

MISCELLANY	
Gas Tank Capacity (rated)	17.98 L (4.75 U.S. gal.)
Reserve Capacity	2.46 L (0.65 U.S. gal.)
Coolant Capacity	2.9 L (3.0 U.S. qt)
Differential Capacity (front)	275 ml (9.3 fl oz)
Rear Drive Capacity	275 ml (9.3 fl oz)
Engine Oil Capacity	3.4 L (3.5 U.S. qt)
Gasoline (recommended)	87 Octane Regular Unleaded
Engine Oil (recommended)	SAE 10W-40
Differential/Rear Drive Lubricant	SAE Approved 80W-90 Hypoid
Brake Fluid	DOT 4
Taillight/Brakelight	12V/5W/27W
Headlight	12V/27W (2)
Starting System	Electric w/Manual Recoil (Emergency)

* Specifications subject to change without notice.

Specifications*
(500 - Automatic Transmission)

VALVES AND GUIDES		
Valve Face Diameter	(intake) (exhaust)	30.6 mm (1.20 in.) 27.0 mm (1.06 in.)
Valve/Tappet Clearance (cold engine)	(intake) (exhaust)	0.05-0.10 mm (0.002-0.004 in.) 0.17-0.22 mm (0.007-0.009 in.)
Valve Guide/ Stem Clearance	(intake) (exhaust)	0.010-0.037 mm (0.0004-0.0015 in.) 0.030-0.057 mm (0.0012-0.0022 in.)
Valve Guide/Valve Stem Deflection (wobble method)	(max)	0.35 mm (0.014 in.)
Valve Guide Inside Diameter		5.000-5.012 mm (0.1969-0.1973 in.)
Valve Stem Outside Diameter	(intake) (exhaust)	4.975-4.990 mm (0.1959-0.1965 in.) 4.955-4.970 mm (0.1951-0.1957 in.)
Valve Stem Runout	(max)	0.05 mm (0.002 in.)
Valve Head Thickness	(max)	0.5 mm (0.02 in.)
Valve Stem End Length	(max)	1.8 mm (0.07 in.)
Valve Face/Seat Width		0.9-1.1 mm (0.035-0.043 in.)
Valve Seat Angle	(intake) (exhaust)	45° 45°
Valve Face Radial Runout	(max)	0.03 mm (0.001 in.)
Valve Spring Free Length (max)	(inner) (outer)	35.1 mm (1.38 in.) 37.8 mm (1.49 in.)
Valve Spring Tension @ 28 mm (1.10 in.)	(inner)	5.3-6.5 kg (11.7-14.3 lb)
Valve Spring Tension @ 31.5 mm (1.24 in.)	(outer)	13.1-15.1 kg (28.9-33.3 lb)

CAMSHAFT AND CYLINDER HEAD		
Cam Lobe Height (min)	(intake) (exhaust)	33.150 mm (1.305 in.) 33.220 mm (1.308 in.)
Camshaft Journal Oil Clearance	(max)	0.15 mm (0.0059 in.)
Camshaft Journal Holder Inside Diameter	(right & center) (left)	22.012-22.025 mm (0.8666-0.8671 in.) 17.512-17.525 mm (0.6894-0.6900 in.)
Camshaft Journal Outside Diameter	(right & center) (left)	21.959-21.980 mm (0.8645-0.8654 in.) 17.465-17.484 mm (0.6876-0.6883 in.)
Camshaft Runout	(max)	0.10 mm (0.004 in.)
Cam Chain Length	(max)	128.9 mm (5.07 in.)
Rocker Arm Inside Diameter		12.000-12.018 mm (0.472-0.473 in.)
Rocker Arm Shaft Outside Diameter		11.973-11.984 mm (0.4714-0.4718 in.)
Cylinder Head Distortion	(max)	0.05 mm (0.002 in.)
Cylinder Head Cover Distortion	(max)	0.05 mm (0.002 in.)

CYLINDER, PISTON, AND RINGS		
Piston Skirt/Cylinder Clearance		0.038-0.076 mm (0.0015-0.0030 in.)
Cylinder Bore		87.500-87.515 mm (3.4448-3.4454 in.)
Piston Diameter 15 mm (0.6 in.) from Skirt End		87.465-87.470 mm (3.4435-3.4437 in.)
Piston Ring Free End Gap (max)	(1st ring) (2nd ring)	11.3 mm (0.4448 in.) 9.7 mm (0.3818 in.)
Bore x Stroke		87.5 x 82 mm (3.40 x 3.22 in.)
Cylinder Trueness	(max)	0.05 mm (0.002 in.)
Piston Ring End Gap - Installed (max)		0.70 mm (0.0276 in.)
Piston Ring to Groove Clearance (max)	(1st) (2nd)	0.180 mm (0.0071 in.) 0.150 mm (0.0059 in.)
Piston Ring Groove Width	(1st) (2nd) (oil)	1.01-1.03 mm (0.0397-0.0405 in.) 1.21-1.23 mm (0.0476-0.0484 in.) 2.51-2.53 mm (0.0988-0.0996 in.)
Piston Ring Thickness	(1st) (2nd)	0.97-0.99 mm (0.0382-0.0389 in.) 1.17-1.19 mm (0.046-0.047 in.)
Piston Pin Bore	(max)	23.03 mm (0.907 in.)
Piston Pin Outside Diameter	(min)	22.98 mm (0.905 in.)

CRANKSHAFT		
Connecting Rod (small end inside diameter)	(max)	23.04 mm (0.9070 in.)
Connecting Rod (big end side-to-side)		0.1-1.0 mm (0.004-0.039 in.)
Connecting Rod (big end width)		24.95-25.00 mm (0.9822-0.9842 in.)
Connecting Rod (small end deflection)	(max)	3 mm (0.12 in.)
Crankshaft (web-to-web)		70.9-71.1 mm (2.796-2.804 in.)
Crankshaft Runout	(max)	0.08 mm (0.003 in.)
Oil Pump Reduction Ratio		1.45 (29/20)
Oil Pressure at 60°C (140°F) @3000 RPM	(above) (below)	1.9 kg/cm² (27 psi) 2.5 kg/cm² (36 psi)
Cooling Fan Thermo-Switch Operating Temperature	(off↔on) (on↔off)	88-93°C (190-200°F) 81°C (177°F) (min)

CARBURETOR	
Type	Keihin CVK34
Main Jet	148
Slow Jet	38
Pilot Screw Setting (turns)	2 1/4
Jet Needle	N601
Needle Jet	6.0/4.0
Idle RPM	1200-1350
Starter Jet	102
Float Arm Height	17 mm (0.7 in.)
Throttle Cable Free-Play (at lever)	3 -6 mm (1/8-1/4 in.)
ELECTRICAL	
Ignition Timing	10° BTDC @ 1500 RPM
Spark Plug Type	NGK CR6E
Spark Plug Gap	0.7-0.8 mm (0.028-0.032 in.)
Spark Plug Cap	8000-12,000 ohms
Ignition Coil Resistance (primary) (secondary)	0.1-1.0 ohm (terminal to ground) 4500-10,000 ohms (high tension - plug cap removed - to ground)
Magneto Coil Resistance (trigger) (source/charge) (charging)	150-300 ohms (green to blue) 0.05-1.0 ohm (yellow to white) 0.1-1.0 ohm (black to black)
Magneto Output (approx)	325W @ 5000 RPM

CHASSIS	
Dry Weight (approx)	300 kg (661 lb)
Length (overall)	205 cm (81 in.)
Height (overall)	122 cm (48 in.)
Width (overall)	112 cm (44.25 in.)
Suspension Travel (front)	21.5 cm (8.45 in.)
Suspension Travel (rear)	18.2 cm (7.2 in.)
Ground Clearance	20.3 cm (8 in.)
Brake Type	Hydraulic w/Brake Lever Lock and Mechanical Foot Brake
Wheelbase	127 cm (50 in.)
Tracking	89 cm (35 in.)
Tire Size	Front - AT25 x 8-12 Rear - AT25 x 10-12
Tire Inflation Pressure (front)	0.32 kg/cm² (4.5 psi)
Tire Inflation Pressure (rear)	0.25 kg/cm² (3.5 psi)
Turning Radius	2.7 m (8.9 ft)
MISCELLANY	
Gas Tank Capacity (rated)	17.98 L (4.75 U.S. gal.)
Reserve Capacity	2.46 L (0.65 U.S. gal.)
Coolant Capacity	2.9 L (3.0 U.S. qt)
Differential Capacity (front)	275 ml (9.3 fl oz)
Rear Drive Capacity	275 ml (9.3 fl oz)
Engine Oil Capacity	2.5 L (2.6 U.S. qt)
Gasoline (recommended)	87 Octane Regular Unleaded
Engine Oil (recommended)	SAE 10W-40
Differential/Rear Drive Lubricant	SAE Approved 80W-90 Hypoid
Brake Fluid	DOT 4
Taillight/Brakelight	12V/5W/27W
Headlight	12V/27W (2)
Starting System	Electric w/Manual Recoil (Emergency)

* Specifications subject to change without notice.

Break-In Procedure

A new ATV and an overhauled ATV engine require a "break-in" period. The first 10 hours (or 200 miles) are most critical to the life of this ATV. Proper operation during this break-in period will help assure maximum life and performance from the ATV.

During the first 10 hours (or 200 miles) of operation, always use less than 1/2 throttle. Varying the engine RPM during the break-in period allows the components to "load" (aiding the mating process) and then "unload" (allowing components to cool). Although it is essential to place some stress on the engine components during break-in, care should be taken not to overload the engine too often. Do not pull a trailer or carry heavy loads during the 10-hour break-in period.

When the engine starts, allow it to warm up properly. Idle the engine several minutes until the engine has reached normal operating temperature. Do not idle the engine for excessively long periods of time.

During the break-in period, a maximum of 1/2 throttle is recommended; however, brief full-throttle accelerations and variations in driving speeds contribute to good engine break-in.

During the break-in period (or whenever the brake pads are replaced), the hydraulic brake pads must be burnished. Slow disc-speed hydraulic brakes must be properly burnished in order to achieve maximum stopping power.

⚠ CAUTION

BRAKE PADS MUST BE BURNISHED TO ACHIEVE FULL BRAKING EFFECTIVENESS. Braking distance will be extended until brake pads are properly burnished.

TO PROPERLY BURNISH THE BRAKES, USE FOLLOWING PROCEDURE:

- **Choose an area sufficiently large to safely accelerate ATV to 30 mph and to brake to a stop.**
- **Accelerate to 30 mph; then compress brake lever to decelerate to 0-5 mph.**
- **Repeat procedure 5 times until brakes are burnished.**
- **This procedure burnishes the brake pads, stabilizes the pad material, and extends the life of the brake pads.**

⚠ WARNING

Do not attempt sudden stops or put the ATV into a situation where a sudden stop will be required until the brake pads are properly burnished.

■ **NOTE: Do not be reluctant to heat up the brake pads during the burnishing procedure.**

After the completion of the break-in period, the engine oil and oil filter should be changed. Other maintenance after break-in should include checking of all prescribed adjustments and tightening of all fasteners.

Gasoline - Oil - Lubricant

RECOMMENDED GASOLINE

The recommended gasoline to use is 87 minimum octane regular unleaded. In many areas, oxygenates (either ethanol or MTBE) are added to the gasoline. Oxygenated gasolines containing up to 10% ethanol, 5% methane, or 5% MTBE are acceptable gasolines.

When using ethanol blended gasoline, it is not necessary to add a gasoline antifreeze since ethanol will prevent the accumulation of moisture in the fuel system.

⚠ CAUTION

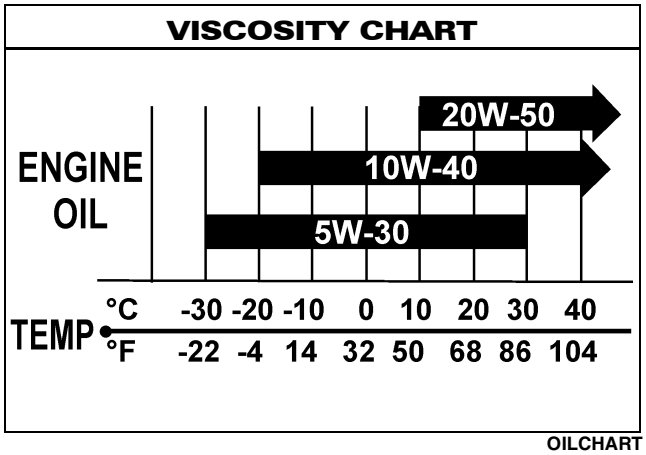
Do not use white gas. Only Arctic Cat approved gasoline additives should be used.

RECOMMENDED ENGINE/ TRANSMISSION OIL

⚠ CAUTION

Any oil used in place of the recommended oil could cause serious engine damage. Do not use oils which contain graphite or molybdenum additives. These oils can adversely affect clutch operation. Also, not recommended are racing, vegetable, non-detergent, and castor-based oils.

The recommended oil to use is Arctic Cat 4-Cycle Engine Oil (p/n 0436-005) or an equivalent oil which is rated SE, SF, or SG under API service classification. These oils meet all of the lubrication requirements of the Arctic Cat ATV engine. The recommended engine oil viscosity is SAE 10W-40. Ambient temperature should determine the correct weight of oil. See the following viscosity chart for details.



OILCHART

RECOMMENDED FRONT DIFFERENTIAL/REAR DRIVE LUBRICANT

The recommended lubricant is Arctic Cat Gear Lube (p/n 0436-007) or an equivalent gear lube which is SAE approved 80W-90 hypoid. This lubricant meets all of the lubrication requirements of the Arctic Cat ATV front differentials and rear drives.

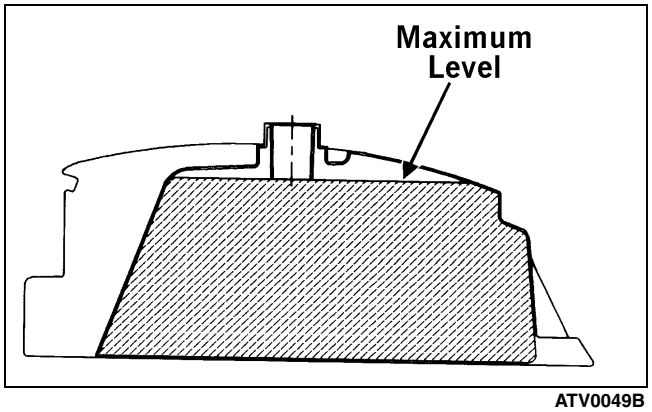
⚠ CAUTION

Any lubricant used in place of the recommended lubricant could cause serious front differential/ rear drive damage.

FILLING GAS TANK

⚠ WARNING

Always fill the gas tank in a well-ventilated area. Never add fuel to the ATV gas tank near any open flames or with the engine running. DO NOT SMOKE while filling the gas tank.



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Since gasoline expands as its temperature rises, the gas tank must be filled to its rated capacity only. Expansion room must be maintained in the tank particularly if the tank is filled with cold gasoline and then moved to a warm area.

⚠ WARNING

Do not overflow gasoline when filling the gas tank. A fire hazard could materialize. Always allow the engine to cool before filling the gas tank.

Tighten the gas tank cap securely after filling the tank.

⚠ WARNING

Do not over-fill the gas tank.

Genuine Parts

When replacement of parts is necessary, use only genuine Arctic Cat ATV parts. They are precision-made to ensure high quality and correct fit. Refer to the appropriate Illustrated Parts Manual for the correct part number, quantity, and description.

Load Capacity Ratings Chart

Arctic Cat ATV Load Capacity Ratings		
ITEM	Specifications	
	(lb)	(kg)*
Max Load Capacity	500	227
Front Rack (max)	100	45
Rear Rack (max)	200	90
Tongue Weight	35	16
Tongue and Rear Cargo Weight	200	90
Towing Capacity (max) - 250/300	850	386
Towing Capacity (max) - 375/400/500	1050	477

* Rounded off

ATV Load Capacity - Total weight of rider, tongue weight, and cargo on front and rear racks.

Tongue Weight - Weight on trailer tongue.

Accessory Weight - Winch, gun scabbard brackets, etc.

Tongue and Rear Cargo Weight - Total weight on trailer tongue and rear rack.

Towing Capacity - Total weight of trailer and all cargo in the trailer.

■ **NOTE: Tongue and accessory weight must be included as part of the front and rear rack weights.**

Loading and Accessories - Use extra caution when operating an ATV with additional loads such as accessories and/or cargo. Handling of the ATV may be adversely affected. Reduce speed when adding additional loads.

Preparation For Storage

⚠ CAUTION

Prior to storing the ATV, it must be properly serviced to prevent rusting and component deterioration.

Arctic Cat recommends the following procedure to prepare the ATV for storage.

1. Clean the seat cushion (cover and base) with a damp cloth and allow it to dry.
2. Clean the ATV thoroughly by washing dirt, oil, grass, and other foreign matter from the entire ATV. Allow the ATV to dry thoroughly. DO NOT get water into any part of the engine or air intake.
3. Either drain the gas tank or add Fuel Stabilizer (p/n 0638-165) to the gas in the gas tank. Remove the air filter housing cover and air filter. Start the engine and allow it to idle; then using Arctic Cat Engine Storage Preserver (p/n 0636-177), rapidly inject the preserver into the air filter opening for a period of 10 to 20 seconds; then stop the engine. Install the air filter and housing cover.
4. Drain the carburetor float chamber.
5. Plug the exhaust hole in the exhaust system with a clean cloth.
6. Apply light oil to the upper steering post bushing and plungers of the shock absorbers.
7. Tighten all nuts, bolts, cap screws, and screws. Make sure rivets holding components together are tight. Replace all loose rivets. Care must be taken that all calibrated nuts, cap screws, and bolts are tightened to specifications.
8. On liquid cooled models, fill the cooling system to the bottom of the stand pipe in the radiator neck with properly mixed coolant.
9. Clean the ATV thoroughly.
10. Disconnect the battery cables; then remove the battery, clean the battery posts and cables, and store in a clean, dry area.
11. Store the ATV indoors in a level position.

⚠ CAUTION

Avoid storing outside in direct sunlight and avoid using a plastic cover as moisture will collect on the ATV causing rusting.

Preparation After Storage

Taking the ATV out of storage and correctly preparing it will assure many miles and hours of trouble-free riding. Arctic Cat recommends the following procedure to prepare the ATV.

1. Clean the ATV thoroughly.
2. Clean the engine. Remove the cloth from the exhaust system.
3. Check all control wires and cables for signs of wear or fraying. Replace if necessary.
4. Change the engine/transmission oil and filter.
5. On liquid cooled models, check the coolant level and add properly mixed coolant as necessary.
6. Charge the battery; then install. Connect the battery cables.
7. Check the entire brake systems (fluid level, pads, etc.), all controls, headlights, taillight, brakelight, and headlight aim; adjust or replace as necessary.
8. Tighten all nuts, bolts, cap screws, and screws making sure all calibrated nuts, cap screws, and bolts are tightened to specifications.
9. Check tire pressure. Inflate to recommended pressure as necessary.
10. Make sure the steering moves freely and does not bind.
11. Check the spark plug. Clean or replace as necessary.
12. Inspect the air filter and air cleaner housing for obstructions.

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NOTES

SECTION 2 - PERIODIC MAINTENANCE/TUNE-UP

TABLE OF CONTENTS

Periodic Maintenance Chart

A = Adjust
C = Clean
D = Drain
I = Inspect
L = Lubricate
R = Replace

Item	Initial Service After Break-In (First Mo or 200 Mi)	Every Day	Every Month or Every 100 Miles	Every 3 Months or Every 300 Miles	Every 6 Months or Every 500 Miles	Every Year or Every 1500 Miles	As Needed
Battery	I		I				C
Fuses				I			R
Air Filter/Drain Tube	I	I	C*				R
Valve/Tappet Clearance	I				I		A
Engine Compression						I	
Spark Plug				I			R (4000 Mi or 18 Mo)
Muffler/Spark Arrester						C	R
Gas/Vent Hoses		I					C
Gas Tank Valve						I	C
Throttle Cable	I	I			C-L		A-R
Carb Float Chamber				D*			
Engine RPM (Idle)	I				I		A
Engine-Transmission Oil Level		I					A
Engine-Transmission Oil/Filter	R		I		R*		R
Oil Strainer	I				I		C
Front Differential/Rear Drive Lubricant	I		I	I	I	R	
Clutch	I				I		A
Tires				I			R
Steering Components	I	I		I			R
V-Belt	I				I		R
Suspension (Ball joint boots, drive axle boots front and rear, tie rods, differential and rear drive bellows)				I*			R
Nuts/Cap Screws/Screws	I			I	I		A
Ignition Timing						I	
Headlight/Taillight-Brakelight	I	I					R
Switches		I					R
Reverse Shift Lever					I		A-L
Choke Cable				I	C-L		R
Recoil Starter		I					C-R
Handlebar Grips		I					R
Handlebars		I					R
Gauges/Indicators		I					R
Frame/Welds/Racks			I		I		
Electrical Connections					I		C
Complete Brake System (Hydraulic & Mechanical)	I	I		C			L-R
Brake Pads	I			I*			R
Brake Fluid	I			I			R (2 Yrs)
Brake Hoses	I			I			R (4 Yrs)
Coolant/Cooling System	I		I				R (2 Yrs)

* Service/Inspect more frequently when operating in adverse conditions.

Lubrication Points

It is advisable to lubricate certain components periodically to ensure free movement. Apply light oil to the components using the following list as reference.

A. Throttle Lever Pivot/Cable Ends

B. Brake Lever Pivot/Cable Ends

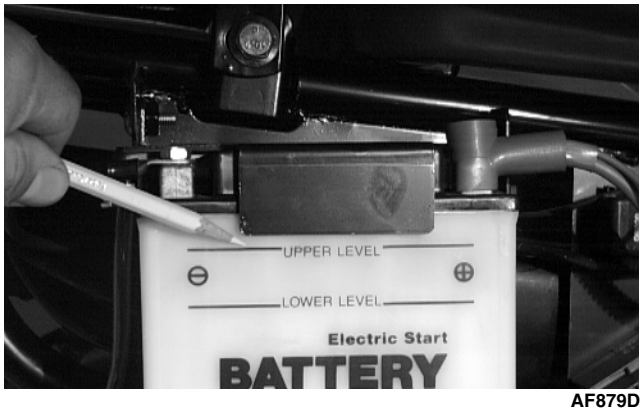
C. Mechanical Brake Cable Ends

D. Choke Cable Upper End

E. Reverse Lever Cable End

F. Idle RPM Screw (Carburetor)

Battery



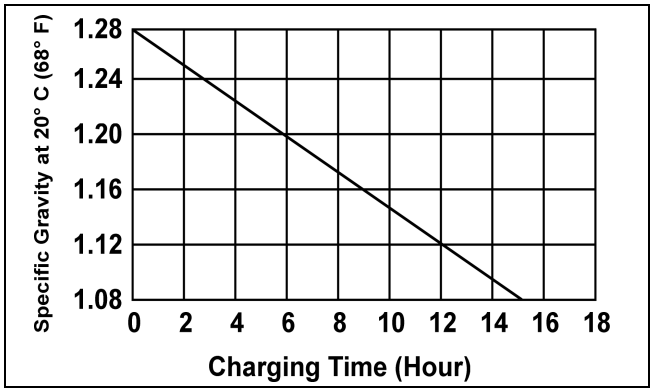
AF879D

The level of the battery fluid must be kept between the upper and lower level lines at all times. If the level drops below the lower level line, add only **distilled water** until it reaches upper level line.

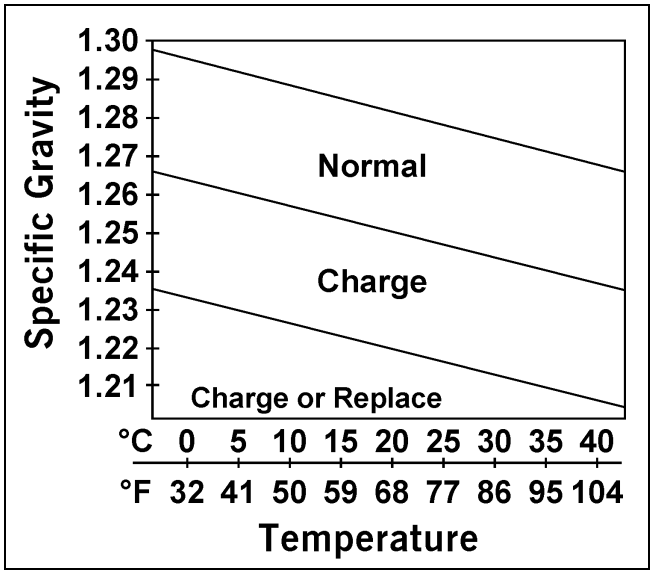
⚠ WARNING

Battery acid is harmful if it contacts eyes, skin, or clothing. Care must be taken whenever handling a battery.

If the battery is discharged, remove the battery from the ATV and charge the battery at the standard charging rate of 1.4A x 10 hr.



ChargTim



Charge

To remove and charge the battery, use the following procedure.

⚠ WARNING

Anytime service is performed on a battery, the following must be observed: keep sparks, open flame, cigarettes, or any other flame away. Always wear safety glasses. Protect skin and clothing when handling a battery. When servicing battery in enclosed space, keep the area well-ventilated. Make sure battery venting is not obstructed.

1. Remove the battery hold-down bracket.
2. Remove the negative battery cable; then remove the positive cable and the battery vent tube. Remove the battery from the ATV. Care should be taken not to damage the vent tube.

⚠ WARNING

Avoid spillage and contact with skin, eyes, and clothing.

⚠ CAUTION

Do not charge the battery while it is in the ATV with the battery terminals connected.

3. Remove the vent plugs; then (if necessary) fill the battery with **distilled water** to the upper level indicated on the battery.

4. Trickle charge the battery at 1.4 amps for 10 hours.

⚠ CAUTION

Never exceed the standard charging rate.

5. After charging, check fluid level and fill with distilled water as necessary; then install vent plugs.

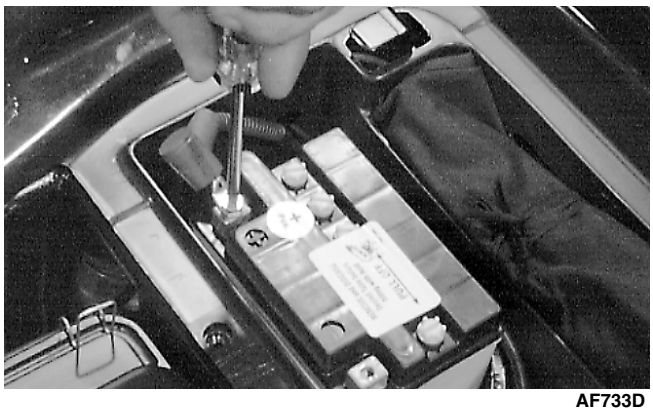
⚠ CAUTION

Before installing the battery, make sure the ignition switch is in the OFF position.

6. Place the battery into position in the ATV and secure with the hold-down bracket.

7. Attach the vent tube and check the vent tube to make sure it is not crimped or obstructed in any way and that it is properly routed through and secured to the frame.

8. Connect cables to the proper terminals: positive cable to the positive terminal (+) and negative cable to the negative terminal (-). Connect the negative cable last.



AF733D

⚠ CAUTION

Connecting cables in reverse (positive to negative and negative to positive) can cause serious damage to the electrical system.

Fuses

The main (30 Amp) fuse is located on the frame near the right rear tire and protected by a snap-on cover.

■ NOTE: To remove the fuse, compress the locking tabs on either side of the fuse case and lift out.

The remaining fuses are located under the center cover in the front fender assembly (on the 250/300) or under the seat in the battery compartment (on the 375/400/500).

If there is any type of electrical system failure, always check the fuses first.

⚠ CAUTION

Always replace a blown fuse with a fuse of the same type and rating.

Air Cleaner
(250/300)

The two-part air filter inside the air cleaner must be kept clean to provide good engine power and gas mileage. If the ATV is used under normal conditions, service the filter at the intervals specified. If operated in dusty, wet, or muddy conditions, inspect and service the filter more frequently.

CLEANING AND INSPECTING FILTER

⚠ CAUTION

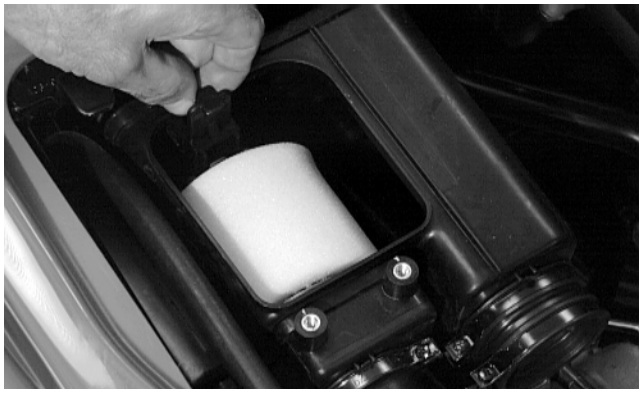
Failure to inspect the air filter frequently if the ATV is used in dusty, wet, or muddy conditions can damage the ATV engine.

1. Remove the seat.

2. Remove the two machine screws securing the air cleaner housing cover.

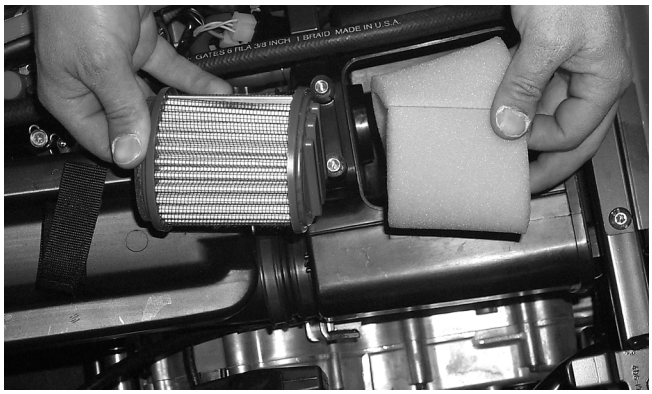
CH044D

3. Pull the retainer out and remove the filter with foam wrap.



CH045D

4. Remove the foam wrap from the filter.



AL642D

5. Wash the polyester filter and the foam wrap with warm soapy water and rinse.

6. Allow the foam wrap to air dry thoroughly.

■ **NOTE: Either allow the polyester filter to air dry or blow dry using low-pressure compressed air. Direct the compressed air through the filter from the opposite direction as normal operation air flow.**

⚠ CAUTION

Do not put oil on either the filter or the foam wrap.

7. Place the foam wrap around the air filter; then install the filter with wrap into the air cleaner making sure it is properly in position and properly seated and secure with the retainer.

CH046D

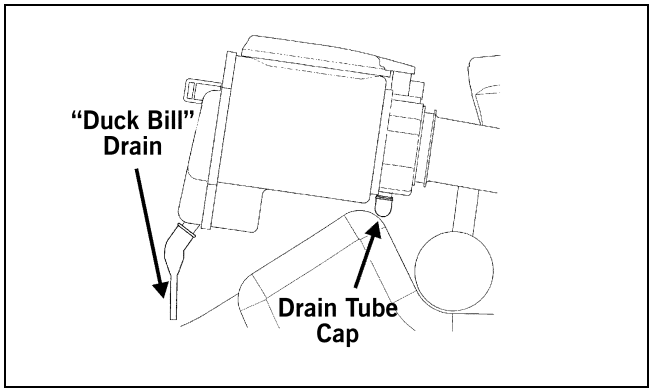
CH045D

8. Install the air cleaner housing cover and secure with the machine screws; then install the seat making sure the seat is properly secured.

CH044D

9. Check the drain tube for gasoline or oil accumulation. If noticed, remove the drain tube cap from beneath the cleaner, drain the gasoline or oil into a suitable container, and install and secure the tube cap.

10. Inspect “duck bill” drain beneath the air cleaner for debris and sealing.



733-715B

REMOVING AIR CLEANER

1. Remove the seat; then remove the air-intake snorkel.

CH040D

CH041D

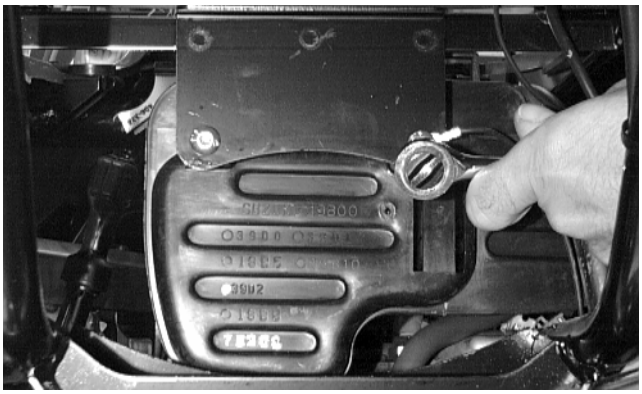
2. Remove the two machine screws securing the air cleaner housing cover.

CH044D

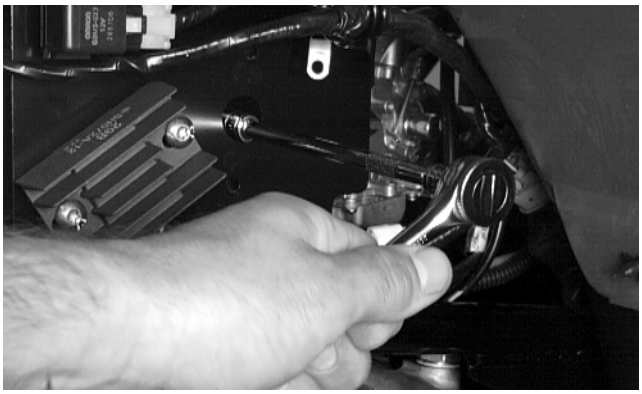
3. Pull the retainer out and remove the filter with foam wrap.

CH045D

4. Remove the machine screws securing the air cleaner to the frame.



CH047D

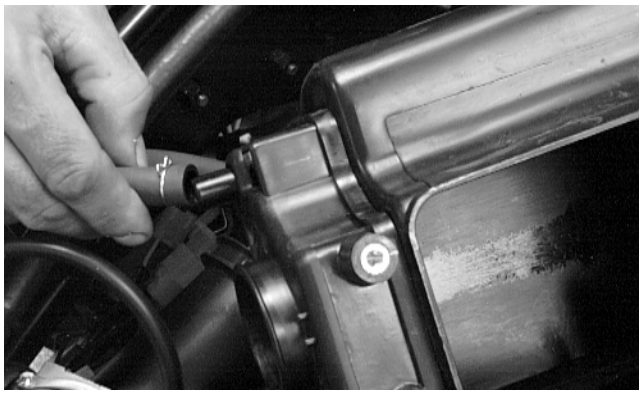


CH048D

5. Loosen the clamp securing the air cleaner to the carburetor boot.

CH049D

6. Remove the crankcase breather hose from the air cleaner.

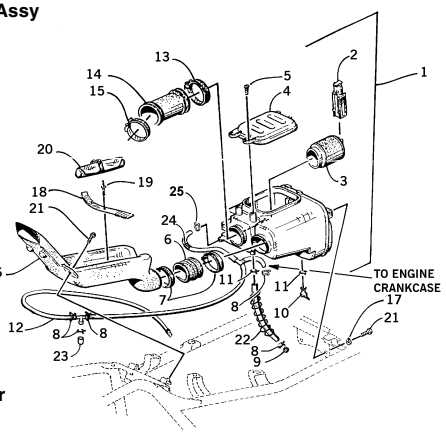


CH050D

7. Remove the air cleaner from the frame.

INSTALLING AIR CLEANER

KEY
1. Air Cleaner Assy
2. Retainer
3. Filter
4. Cap
5. Cap Screw
6. Joint
7. Clamp
8. Clamp
9. Drain Plug
10. Valve
11. Clamp
12. Hose Assy
13. Clamp
14. Boot
15. Clamp
16. Snorkel
17. Lock Washer
18. Strap
19. Plug
20. Tool Kit
21. Cap Screw
22. Spring
23. Plug
24. Check Valve
25. Clip



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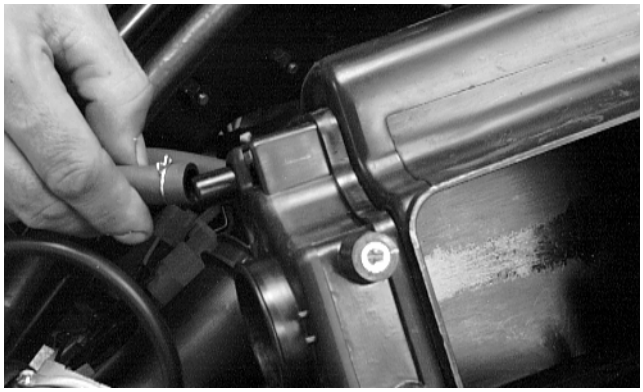
1. Place the air cleaner into the frame; then connect the crankcase breather hose.



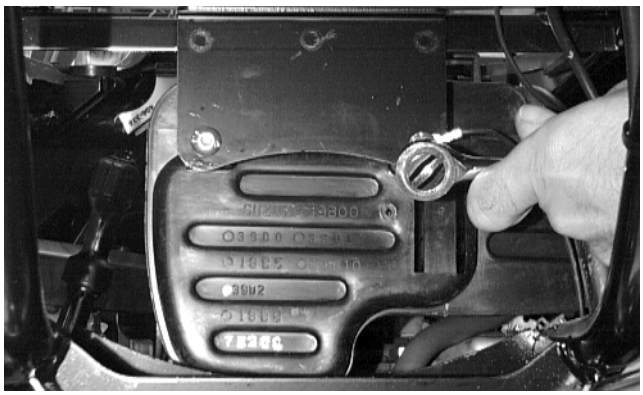
CH050D

2. Secure the carburetor boot to the air cleaner.

CH049D

3. Install the machine screws securing the air cleaner to the frame.

CH048D



CH047D

4. Install the filter with foam wrap into the air cleaner; then secure with the retainer.

CH045D

5. Install the air cleaner housing cover and secure with the machine screws.

CH044D

6. Install the air-intake snorkel.

CH041D

CH040D

7. Install the seat making sure it is properly secured.

Air Cleaner/Filter (375/400/500)

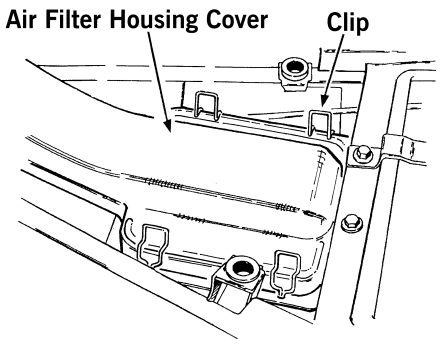
The air filter inside the air filter housing must be kept clean to provide good engine power and gas mileage. If the ATV is used under normal conditions, service the filter at the intervals specified. If operated in dusty, wet, or muddy conditions, inspect and service the filter more frequently. Use the following procedure to remove the filter and inspect and/or clean it.

CLEANING AND INSPECTING FILTER

⚠ CAUTION

Failure to inspect the air filter frequently if the vehicle is used in dusty, wet, or muddy conditions can damage the engine.

1. Remove the seat.
2. Remove the air filter housing cover from the retaining clips.



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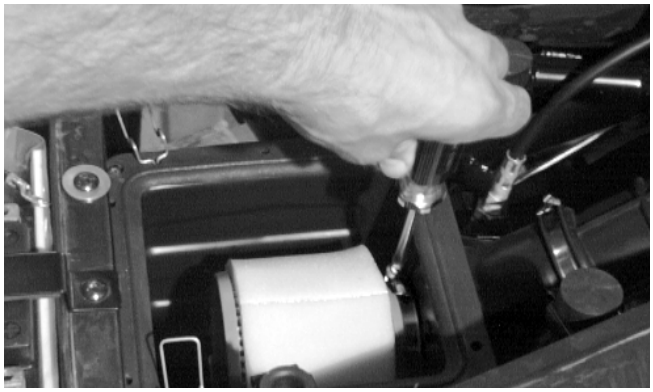
3. Loosen the clamp; then remove the filter.



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4. Fill a wash pan larger than the filter with a non-flammable cleaning solvent; then dip the filter in the solvent and wash it.

■ NOTE: Foam Filter Cleaner (p/n 0436-194) and Foam Filter Oil (p/n 0436-195) are available from Arctic Cat.

5. Dry the filter.

6. Put the filter in a plastic bag; then pour in air filter oil and work the filter.

⚠ CAUTION

A torn air filter can cause damage to the ATV engine. Dirt and dust may get inside the engine if the element is torn. Carefully examine the element for tears before and after cleaning it. Replace the element with a new one if it is torn.

7. Clean any dirt or debris from inside the air cleaner. Be sure no dirt enters the carburetor.

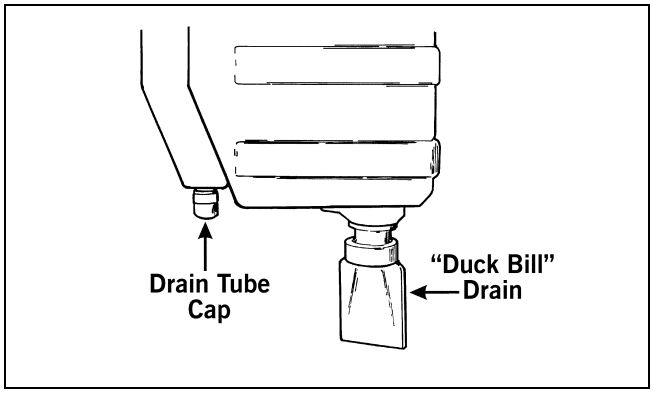
8. Place the filter in the air filter housing making sure it is properly in position and properly seated and secure with the clamp.

9. Install the air filter housing cover and secure with the retaining clips; then install the seat making sure the seat is properly secured.

CHECKING/DRAINING DRAIN TUBE

1. Periodically check the drain tube for gasoline or oil accumulation. If noticed, remove the drain tube cap from beneath the front housing, drain the gasoline or oil into a suitable container, and install and secure the tube cap.

2. Inspect "duck bill" drain beneath the main housing for debris and for proper sealing.



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REMOVING AIR CLEANER

1. Remove the seat.

2. Remove the air cleaner cover from the retaining clips.

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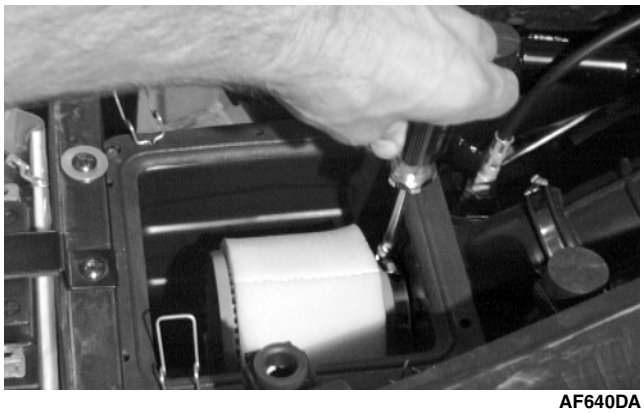
3. Loosen the clamp and remove the filter.



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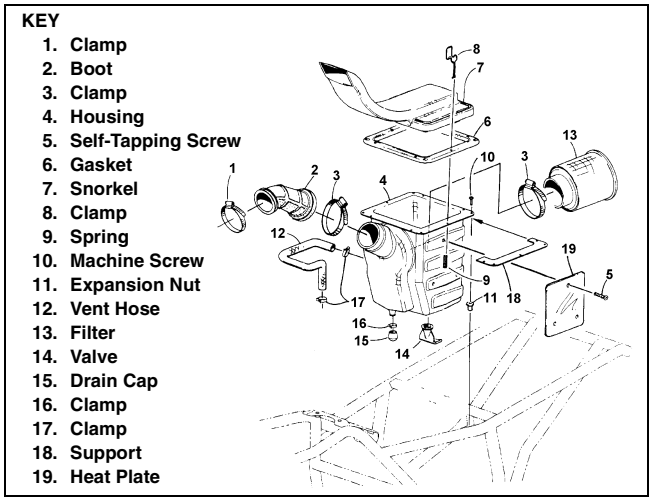
4. Loosen the clamp securing the air cleaner to the front boot; then loosen the clamp securing the air cleaner to the rear filter sleeve.

5. Remove the machine screws securing the air cleaner to the flange support and frame.

6. Remove the air cleaner from the frame.

INSTALLING



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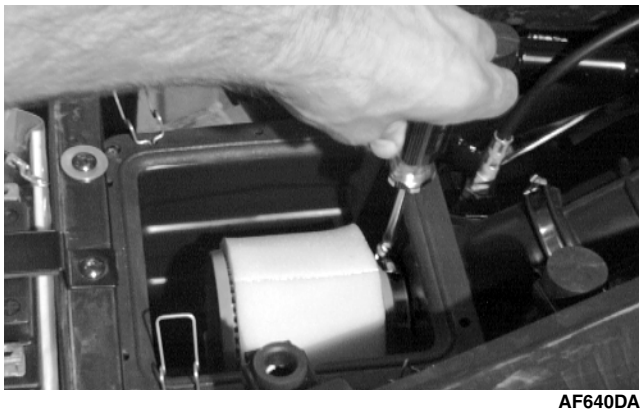
1. Place the air cleaner into the frame.

2. Install the machine screws securing the air cleaner to the flange support and frame.

3. Install the rear filter sleeve onto the air cleaner; then tighten the clamp securely.

4. Install the front boot onto the air cleaner; then tighten the clamp securely.

5. Install the filter with foam wrap into the air cleaner; then tighten the clamp securely.



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6. Place the air cleaner cover into position and secure with the retaining clips.

AL645D

7. Install the seat making sure the seat is properly secured.

Valve/Tappet Clearance
(Feeler Gauge Procedure)

To check and adjust valve/tappet clearance, use the following procedure.

■ NOTE: On the 250/300, the seat and air-intake snorkel must be removed for this procedure.

■ NOTE: On the 375/400/500, the seat assembly, side panels, and gas tank must be removed for this procedure.

1. Remove the timing inspection plug; then remove the tappet covers (for more detailed information, see Section 3 - Servicing Top-Side Components).

2. Rotate the crankshaft to the TDC position on the compression stroke.

■ NOTE: At this point, the rocker arms and adjuster screws must not have pressure on them.

3. Using a feeler gauge, check each valve/tappet clearance. If clearance is not within specifications, loosen the jam nut and rotate the tappet adjuster screw until the clearance is within specifications. Tighten each jam nut securely after completing the adjustment.

⚠ CAUTION

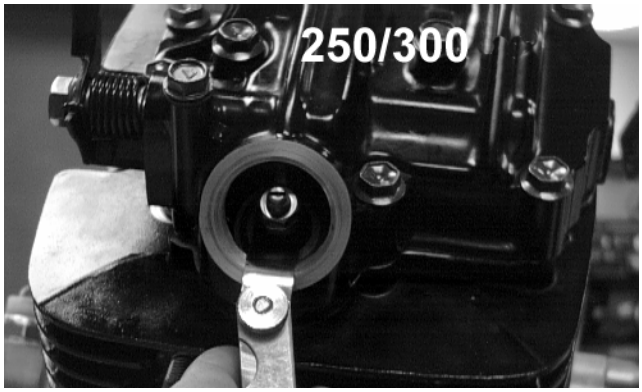
The feeler gauge must be positioned at the same angle as the valve and valve adjuster for an accurate measurement of clearance. Failure to measure the valve clearance accurately could cause valve component damage.

Product: 2002 Arctic Cat 250/300/375/400/500 ATV Service Repair Workshop Manual
Full Download: https://www.arepairmanual.com/downloads/2002-arctic-cat-250300375400500-atv-service-repair-workshop-manual/

VALVE/TAPPET CLEARANCE (250)	
Intake	0.03-0.08 mm (0.001-0.003 in.)
Exhaust	0.08-0.13 mm (0.003-0.005 in.)

VALVE/TAPPET CLEARANCE (300)	
Intake	0.03-0.08 mm (0.001-0.003 in.)
Exhaust	0.17-0.22 mm (0.007-0.009 in.)

VALVE/TAPPET CLEARANCE (375/400/500)	
Intake	0.05-0.10 mm (0.002-0.004 in.)
Exhaust	0.17-0.22 mm (0.007-0.009 in.)



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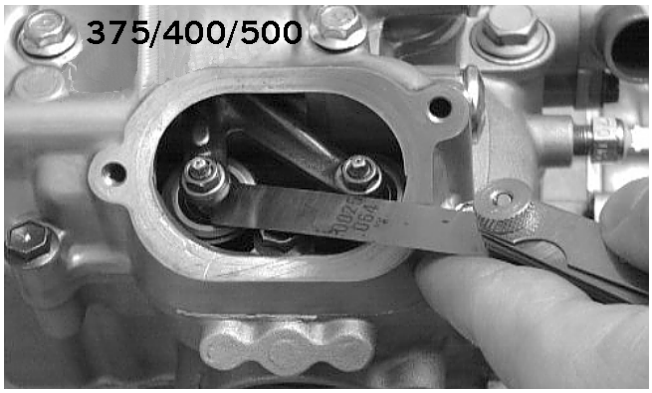

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4. Install the timing inspection plug.
5. Place the two tappet covers into position making sure the proper cap screws are with the proper cover. Tighten the cap screws securely.

Valve/Tappet Clearance
(Valve Adjuster Procedure)

To check and adjust valve/tappet clearance, use the following procedure.

■NOTE: On the 250/300, the seat and air-intake snorkel must be removed for this procedure.

■NOTE: On the 375/400/500, the seat assembly, side panels and gas tank must be removed for this procedure.

1. Remove the timing inspection plug; then remove the tappet covers (for more detailed information, see Section 3 - Servicing Top-Side Components).
2. Rotate the crankshaft to the TDC position on the compression stroke.

■NOTE: At this point, the rocker arms and adjuster screws must not have pressure on them.

■NOTE: Use Valve Gap Adjuster (p/n 0444-092) for the 250/300 or Valve Clearance Adjuster (p/n 0444-078) for the 375/400/500 for this procedure.

3. Place the valve adjuster onto the jam nut securing the tappet adjuster screw; then rotate the valve adjuster dial clockwise until the end is seated in the tappet adjuster screw.
4. While holding the valve adjuster dial in place, use the valve adjuster handle and loosen the jam nut; then rotate the tappet adjuster screw clockwise until friction is felt.
5. Align the valve adjuster handle with one of the marks on the valve adjuster dial.
6. While holding the valve adjuster handle in place, rotate the valve adjuster dial counterclockwise until proper valve/tappet clearance is attained.

■NOTE: Refer to the appropriate Specifications for the proper valve/tappet clearance.

■NOTE: Rotating the valve adjuster dial counterclockwise will open the valve/tappet clearance by 0.05 mm (0.002 in.) per mark.

7. While holding the adjuster dial at the proper clearance setting, tighten the jam nut securely with the valve adjuster handle.
8. Place the two tappet covers with O-rings into position; then tighten the covers securely.

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9. Install the spark plug; then install the timing inspection plug.

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