

**RACING HANDBOOK 1983**



**Husqvarna Motorcycles**

## **HUSQVARNA RACING HANDBOOK**

### **Foreword:**

Thank you for purchasing a new Husqvarna Motorcycle. This handbook will help you enjoy your new Husqvarna motorcycle as much as possible and ensure that you have many years of trouble free riding on it.

All the material contained in this manual is for informational purposes only. It has been prepared so that you may take full advantage of our racing experience. This will supplement information found in your owners manual.

**Husqvarna Technical Service**

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**125XC TECHNICAL DATA/1983****MOTOR**

Displacement (cc)	124
Bore std. (mm)	55.00
1st over	55.25
2nd over	55.50
3rd over	
Stroke (mm)	52.00
Compression ratio	13.1:1

**TRANSMISSION**

Primary transmission ratio	3.89:1
Secondary transmission ratio	4.08:1

Chain dimension  $\frac{5}{8}$ " x  $\frac{1}{4}$ "

Number of cogs, gearbox (MS:AS)

1st	14:33
2nd	17:29
3rd	20:26
4th	23:24
5th	25:22
6th	27:20

Total gear ratios

(crankshaft: rear wheel)

1st	37.37:1
2nd	27.05:1
3rd	20.61:1
4th	16.54:1
5th	13.95:1
6th	11.74:1

Oil capacity gearbox 1400cc

Oil recommendation:  
Bel-Ray L. Viscosity**FUEL SYSTEM**

Fuel Gas min. 92 oct.  
Lubrication Oil-gas mixture 4%  
Gas tank capacity 2.9 gal.-11 lit.  
Oil recommendation:  
Husqvarna/Bel-Ray MC-1 +

**WHEELS AND BRAKES**

Rims 1.60x21/2.50x18  
Tires front 3.00x21"  
rear 4.10x18"  
Spoke 4/4.5mm  
Brake drum 160mm

**DIMENSIONS**

Length 2180mm  
Height 1240mm  
Handlebar width 840mm  
Wheelbase 1500mm  
Seat Height 980mm  
Ground clearance 300mm

WEIGHT 96kg

**CARBURETOR**

Type	Mikuni
Venturi	38
Main jet	470
Needle jet	R-6
Idling jet	35
Needle position	#4
Air jet	2.0
Throttle	2.5
Needle	6DH20
Air screw opening	1.5 from bottom position.

**ELECTRICAL SYSTEM**

Type	CDI
Magneto	Motoplat
Ignition advance	17°
Ignition advance on piston before TDC	1.43mm
Light coil	35 W color yellow W color
Spark plug: Champion	N-2
Bosch	W3C

**ELECTRICAL EQUIPMENT**

Headlight	V-/-
Tail/brakelight	V-/-

**FRONT FORK**

Travel 300mm  
Trail 152mm  
Fork angle (caster) 30°  
Air pressure/leg 8 lbs. maximum  
Oil capacity per leg 500cc  
Oil recommendation: Bel-Ray LT10  
or Husqvarna VSP 10

**REAR SUSPENSION**

Type Ohlin ITC  
Travel 330mm  
Springs white 139 lbs.  
yellow progressive

**TORQUE SPECIFICATIONS—**

	Ft. Lbs.
Flywheel nut	40
Cylinder head nuts	15
Cylinder head screws	15
Engine mounting bolts	35
Crankcase screws	6
Rear fork bolt nuts	35
Screws reed valve housing cylinder	6
Spark plug	20

Specifications subject to change without notice.

**125CR TECHNICAL DATA/1983****MOTOR**

Displacement (cc)	124
Bore std. (mm)	55.00
1st over	55.25
2nd over	55.50
3rd over	
Stroke (mm)	52.00
Compression ratio	13.1:1

**TRANSMISSION**

Primary transmission ratio	3.89:1
Secondary transmission ratio	4.08:1

Chain dimension  $\frac{5}{8}$ " x  $\frac{1}{4}$ "

Number of cogs, gearbox (MS:AS)

1st	15:31
2nd	18:28
3rd	21:26
4th	23:24
5th	25:22
6th	27:21

Total gear ratios

(crankshaft: rear wheel)

1st	32.8:1
2nd	24.68:1
3rd	19.65:1
4th	16.56:1
5th	13.96:1
6th	12.34:1

Oil capacity gearbox 1400cc

Oil recommendation:  
Bel-Ray L. Viscosity**FUEL SYSTEM**

Fuel Gas min. 92 oct.  
Lubrication Oil-gas mixture 4%  
Gas tank capacity 2.7 gal.-10 lit.  
Oil recommendation:  
Husqvarna/Bel-Ray MC-1 +

**WHEELS AND BRAKES**

Rims 1.60x21/2.50x18  
Tires front 3.00x21"  
rear 4.10x18"  
Spoke 4/4.5mm  
Brake drum 160mm

**DIMENSIONS**

Length 2180mm  
Height 1240mm  
Handlebar width 840mm  
Wheelbase 1500mm  
Seat Height 980mm  
Ground clearance 360mm

WEIGHT 95kg

**CARBURETOR**

Type	Mikuni
Venturi	38
Main jet	470
Needle jet	R-6
Idling jet	35
Needle position	#4
Air jet	2.0
Throttle	2.5
Needle	60H20
Air screw opening	1.5 from bottom position.

**ELECTRICAL SYSTEM**

Type	CDI
Magneto	Motoplat
Ignition advance	12°
Ignition advance on piston before TDC	.76mm
Light coil	W color W color
Spark plug: Champion	N-2
Bosch	W3C

**ELECTRICAL EQUIPMENT**

Headlight	V-/-
Tail/brakelight	V-/-

**FRONT FORK**

Travel 300mm  
Trail 152mm  
Fork angle (caster) 30.5°  
Air pressure/leg 8 lbs. maximum  
Oil capacity per leg 500cc  
Oil recommendation: Bel-Ray LT10  
or Husqvarna VSP 10

**REAR SUSPENSION**

Type Ohlin ITC  
Travel 300mm  
Springs white 139 lbs.  
yellow progressive

**TORQUE SPECIFICATIONS—**

	Ft. Lbs.
Flywheel nut	50
Cylinder head nuts	15
Cylinder head screws	15
Engine mounting bolts	35
Crankcase screws	6
Rear fork bolt nuts	35
Screws reed valve housing cylinder	6
Spark plug	20

Specifications subject to change without notice.

# 250WR TECHNICAL DATA / 1983

## MOTOR

Displacement (cc)	245
Bore std. (mm)	69.50
1st over	69.75
2nd over	70.00
3rd over	70.25
Stroke (mm)	64.50
Compression ratio	12.3:1

## TRANSMISSION

Primary transmission ratio	2.41:1
Secondary transmission ratio	4.07:1
Chain dimension	5/8"x1/4"
Number of cogs, gearbox (MS:AS)	
1st	14:33
2nd	17:29
3rd	20:26
4th	23:24
5th	25:22
6th	27:20

## Total gear ratios (crankshaft: rear wheel)

1st	25.1:1
2nd	18.2:1
3rd	13.8:1
4th	11.1:1
5th	9.4:1
6th	7.9:1

Oil capacity gearbox 1600cc  
 Oil recommendation: Bel-Ray L. Viscosity

## FUEL SYSTEM

Fuel Gas min. 92 oct.  
 Lubrication Oil-gas mixture 4%  
 Gas tank capacity 3.2 gal.  
 Oil recommendation: Husqvarna/Bel-Ray MC-1 +

## WHEELS AND BRAKES

Rims 1.60x21/2.50x18  
 Tires front 3.00x21"  
           rear 5.50x18"  
 Spoke 4/4.5mm  
 Brake drum 160mm

## DIMENSIONS

Length 2190mm  
 Height 1250mm  
 Handlebar width 840mm  
 Wheelbase 1470mm  
 Seat Height 940mm  
 Ground clearance 300mm

WEIGHT 108kg

## CARBURETOR

Type	Mikuni
Venturi	38
Main jet	450
Needle jet	P-8
Idling jet	45
Needle position	#4
Air jet	2.0
Throttle	2.0
Needle	6F16
Air screw opening	1.5
	from bottom position.

## ELECTRICAL SYSTEM

Type	CDI
Magneto	SEM
Ignition advance	20°
Ignition advance on piston before TDC	2.55mm
Light coil	70W color yellow
	70W color yellow
Spark plug: Champion	N-3
	Bosch W4C

## ELECTRICAL EQUIPMENT

Headlight	12V 40/45W
Tail/brakelight	12V 5/10W

## FRONT FORK

Travel	270mm
Trail	152mm
Fork angle (caster)	30°
Air pressure/leg	8 lbs. maximum
Oil capacity per leg	430cc
Oil recommendation:	Bel-Ray LT10 or Husqvarna VSP 10

## REAR SUSPENSION

Type	Ohlin ITC
Travel	285mm
Springs white	139 lbs.
	yellow progressive

## TORQUE SPECIFICATIONS—

	Ft. Lbs.
Flywheel nut	40
Cylinder head nuts	22
Cylinder head screws	15
Engine mounting bolts	35
Crankcase screws	6
Rear fork bolt nuts	35
Screws reed valve housing cylinder	6
Spark plug	20

Specifications subject to change without notice.

# 250CR TECHNICAL DATA / 1983

## MOTOR

Displacement (cc)	245
Bore std. (mm)	69.50
1st over	69.75
2nd over	70.00
3rd over	70.25
Stroke (mm)	64.50
Compression ratio	12.3:1

## TRANSMISSION

Primary transmission ratio	2.41:1
Secondary transmission ratio	4.42:1
Chain dimension	5/8"x1/4"
Number of cogs, gearbox (MS:AS)	
1st	15:31
2nd	18:28
3rd	21:26
4th	23:24
5th	25:22
6th	27:21

## Total gear ratios (crankshaft: rear wheel)

1st	22.05:1
2nd	16.62:1
3rd	13.21:1
4th	11.08:1
5th	9.37:1
6th	8.31:1

Oil capacity gearbox 1600cc  
 Oil recommendation: Bel-Ray L. Viscosity

## FUEL SYSTEM

Fuel Gas min. 92 oct.  
 Lubrication Oil-gas mixture 4%  
 Gas tank capacity 2.7 gal.-10 lit.  
 Oil recommendation: Husqvarna/Bel-Ray MC-1 +

## WHEELS AND BRAKES

Rims 1.60x21/2.50x18  
 Tires front 3.00x21"  
           rear 4.50x18"  
 Spoke 4/4.5mm  
 Brake drum 160mm

## DIMENSIONS

Length 2180mm  
 Height 1240mm  
 Handlebar width 840mm  
 Wheelbase 1500mm  
 Seat Height 980mm  
 Ground clearance 360mm

WEIGHT 102kg

## CARBURETOR

Type	Mikuni
Venturi	38
Main jet	440
Needle jet	R-4
Idling jet	45
Needle position	#4
Air jet	2.0
Throttle	2.0
Needle	6DH20
Air screw opening	1.5
	from bottom position.

## ELECTRICAL SYSTEM

Type	CDI
Magneto	Motoplat
Ignition advance	20°
Ignition advance on piston before TDC	2.55mm
Light coil	W color
	W color
Spark plug: Champion	N-3
	Bosch W4C

## ELECTRICAL EQUIPMENT

Headlight	V—/—
Tail/brakelight	V—/—

## FRONT FORK

Travel	300mm
Trail	152mm
Fork angle (caster)	30°
Air pressure/leg	8 lbs. maximum
Oil capacity per leg	500cc
Oil recommendation:	Bel-Ray LT10 or Husqvarna VSP 10

## REAR SUSPENSION

Type	Ohlin ITC
Travel	330mm
Springs white	137 lbs.
	yellow progressive

## TORQUE SPECIFICATIONS—

	Ft. Lbs.
Flywheel nut	50
Cylinder head nuts	22
Cylinder head screws	15
Engine mounting bolts	35
Crankcase screws	6
Rear fork bolt nuts	35
Screws reed valve housing cylinder	6
Spark plug	20

Specifications subject to change without notice.

**250XC TECHNICAL DATA / 1983****MOTOR**

Displacement (cc)	245
Bore std. (mm)	69.50
1st over	69.75
2nd over	70.00
3rd over	70.25
Stroke (mm)	64.50
Compression ratio	12.3:1

**TRANSMISSION**

Primary transmission ratio	2.41:1
Secondary transmission ratio	4.42:1
Chain dimension	5/8"x1/4"
Number of cogs, gearbox (MS:AS)	
1st	14:33
2nd	17:29
3rd	20:26
4th	23:24
5th	25:22
6th	27:20

**Total gear ratios**

(crankshaft: rear wheel)	
1st	25.1:1
2nd	18.2:1
3rd	13.8:1
4th	11.1:1
5th	9.4:1
6th	7.9:1

Oil capacity gearbox 1600cc  
Oil recommendation:

Bel-Ray L. Viscosity

**FUEL SYSTEM**

Fuel	Gas min. 92 oct.
Lubrication	Oil-gas mixture 4%
Gas tank capacity	3.2 gal.
Oil recommendation:	

Husqvarna/Bel-Ray MC-1+

**WHEELS AND BRAKES**

Rims	1.60x21/2.50x18
Tires front	3.20x21"
rear	4.50x18"
Spoke	4/4.5mm
Brake drum	160mm

**DIMENSIONS**

Length	2180mm
Height	1240mm
Handlebar width	840mm
Wheelbase	1500mm
Seat Height	980mm
Ground clearance	300mm

**WEIGHT** 105kg

**CARBURETOR**

Type	Mikuni
Venturi	38
Main jet	440
Needle jet	R-4
Idling jet	45
Needle position	#4
Air jet	2.0
Throttle	2.0
Needle	6DH20
Air screw opening	1.5
	from bottom position.

**ELECTRICAL SYSTEM**

Type	CDI
Magneto	Motoplat
Ignition advance	20°
Ignition advance	
on piston before TDC	2.55mm
Light coil	35W color yellow
	W color yellow
Spark plug: Champion	N-3
Bosch	W4C

**ELECTRICAL EQUIPMENT**

Headlight	V-/-
Tail/brakelight	V-/-

**FRONT FORK**

Travel	300mm
Trail	152mm
Fork angle (caster)	30°
Air pressure/leg	8 lbs. maximum
Oil capacity per leg	500cc
Oil recommendation:	Bel-Ray LT10
	or Husqvarna VSP 10

**REAR SUSPENSION**

Type	Ohlin ITC
Travel	330mm
Springs white	139 lbs.
yellow	progressive

**TORQUE SPECIFICATIONS—**

	Ft. Lbs.
Flywheel nut	40
Cylinder head nuts	22
Cylinder head screws	15
Engine mounting bolts	35
Crankcase screws	6
Rear fork bolt nuts	35
Screws reed valve	6
housing cylinder	
Spark plug	20

Specifications subject to change without notice.

**500XC TECHNICAL DATA / 1983****MOTOR**

Displacement (cc)	488
Bore std. (mm)	86.00
1st over	86.50
2nd over	87.00
3rd over	
Stroke (mm)	84.00
Compression ratio	9.5:1

**TRANSMISSION**

Primary transmission ratio	1.79:1
Secondary transmission ratio	4.42:1
Chain dimension	5/8"x1/4"
Number of cogs, gearbox (MS:AS)	
1st	13:34
2nd	16:29
3rd	19:26
4th	23:24
5th	25:22
6th	27:20

**Total gear ratios**

(crankshaft: rear wheel)	
1st	20.03:1
2nd	13.84:1
3rd	10.48:1
4th	7.95:1
5th	6.73:1
6th	5.66:1

Oil capacity gearbox 1600cc  
Oil recommendation:

Bel-Ray L. Viscosity

**FUEL SYSTEM**

Fuel	Gas min. 92 oct.
Lubrication	Oil-gas mixture 4%
Gas tank capacity	3.2 gal.
Oil recommendation:	

Husqvarna/Bel-Ray MC-1+

**WHEELS AND BRAKES**

Rims	1.60x21/2.50x18
Tires front	3.20x21"
rear	5.00x18"
Spoke	4/4.5mm
Brake drum	160mm

**DIMENSIONS**

Length	2180mm
Height	1240mm
Handlebar width	840mm
Wheelbase	1500mm
Seat Height	980mm
Ground clearance	300mm

**WEIGHT** 109kg

**CARBURETOR**

Type	Mikuni
Venturi	40
Main jet	340
Needle jet	AA-5
Idling jet	45
Needle position	#4
Air jet	7
Throttle	2.0
Needle	7DH3
Air screw opening	1.5
	from bottom position.

**ELECTRICAL SYSTEM**

Type	CDI
Magneto	Motoplat
Ignition advance	18°
Ignition advance	
on piston before TDC	2.8mm
Light coil	35W color yellow
	W color
Spark plug: Champion	N-3
Bosch	W4C

**ELECTRICAL EQUIPMENT**

Headlight	V-/-
Tail/brakelight	V-/-

**FRONT FORK**

Travel	300mm
Trail	152mm
Fork angle (caster)	30°
Air pressure/leg	8 lbs. maximum
Oil capacity per leg	500cc
Oil recommendation:	Bel-Ray LT10
	or Husqvarna VSP 10

**REAR SUSPENSION**

Type	Ohlin ITC
Travel	330mm
Springs white	137 lbs.
yellow	progressive

**TORQUE SPECIFICATIONS—**

	Ft. Lbs.
Flywheel nut	40
Cylinder head nuts	22
Cylinder head screws	15
Engine mounting bolts	35
Crankcase screws	6
Rear fork bolt nuts	35
Screws reed valve	6
housing cylinder	
Spark plug	20

Specifications subject to change without notice.

**500CR TECHNICAL DATA / 1983****MOTOR**

Displacement (cc)	488
Bore std. (mm)	86.00
1st over	86.50
2nd over	87.00
3rd over	
Stroke (mm)	84.00
Compression ratio	9.5:1

**TRANSMISSION**

Primary transmission ratio	1.79:1
Secondary transmission ratio	4.42:1
Chain dimension	$\frac{5}{8}'' \times \frac{1}{4}''$
Number of cogs, gearbox (MS:AS)	
1st	17:29
2nd	20:26
3rd	23:24
4th	25:22
Total gear ratios (crankshaft: rear wheel)	
1st	13.50:1
2nd	10.24:1
3rd	8.23:1
4th	6.96:1
Oil capacity gearbox	1600cc
Oil recommendation:	Bel-Ray L. Viscosity

**FUEL SYSTEM**

Fuel	Gas min. 92 oct.
Lubrication	Oil-gas mixture 4%
Gas tank capacity	2.7 gal.-10 lit.
Oil recommendation:	Husqvarna/Bel-Ray MC-1 +

**WHEELS AND BRAKES**

Rims	1.60x21/2.50x18
Tires front	3.00x21''
rear	5.50x18''
Spoke	4/4.5mm
Brake drum	160mm

**DIMENSIONS**

Length	2180mm
Height	1240mm
Handlebar width	840mm
Wheelbase	1500mm
Seat Height	980mm
Ground clearance	360mm

<b>WEIGHT</b>	106kg
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**CARBURETOR**

Type	Mikuni
Venturi	40
Main jet	340
Needle jet	AA-5
Idling jet	45
Needle position	# 4
Air jet	.7
Throttle	2.0
Needle	7DH3
Air screw opening	1.5 from bottom position.

**ELECTRICAL SYSTEM**

Type	CDI
Magneto	Motoplast
Ignition advance	18°
Ignition advance on piston before TDC	2.8mm
Light coil	W color
	W color
Spark plug: Champion	N-3
Bosch	W4C

**ELECTRICAL EQUIPMENT**

Headlight	V—/—
Tail/brakelight	V—/—

**FRONT FORK**

Travel	300mm
Trail	152mm
Fork angle (caster)	30°
Air pressure/leg	8 lbs. maximum
Oil capacity per leg	500cc
Oil recommendation:	Bel-Ray LT10 or Husqvarna VSP 10

**REAR SUSPENSION**

Type	Ohlin ITC
Travel	330mm
Springs white	139 lbs.
yellow	progressive

**TORQUE SPECIFICATIONS—**

	Ft. Lbs.
Flywheel nut	50
Cylinder head nuts	22
Cylinder head screws	15
Engine mounting bolts	35
Crankcase screws	6
Rear fork bolt nuts	35
Screws reed valve housing cylinder	6
Spark plug	20

Specifications subject to change without notice.

**430WR TECHNICAL DATA / 1983****MOTOR**

Displacement (cc)	435
Bore std. (mm)	86.00
1st over	86.50
2nd over	87.00
3rd over	
Stroke (mm)	74.00
Compression ratio	11.0:1

**TRANSMISSION**

Primary transmission ratio	1.73:1
Secondary transmission ratio	4.42:1
Chain dimension	$\frac{5}{8}'' \times \frac{1}{4}''$
Number of cogs, gearbox (MS:AS)	
1st	13:34
2nd	16:29
3rd	19:26
4th	23:24
5th	25:22
6th	27:20
Total gear ratios (crankshaft: rear wheel)	
1st	20.03:1
2nd	13.84:1
3rd	10.48:1
4th	7.95:1
5th	6.73:1
6th	5.66:1
Oil capacity gearbox	1600cc
Oil recommendation:	Bel-Ray L. Viscosity

Fuel	Gas min. 92 oct.
Lubrication	Oil-gas mixture 4%
Gas tank capacity	3.2 gal.
Oil recommendation:	Husqvarna/Bel-Ray MC-1 +

**FUEL SYSTEM**

Fuel	Gas min. 92 oct.
Lubrication	Oil-gas mixture 4%
Gas tank capacity	3.2 gal.
Oil recommendation:	Husqvarna/Bel-Ray MC-1 +

**WHEELS AND BRAKES**

Rims	1.60x21/2.50x18
Tires front	3.00x21''
rear	5.50x18''
Spoke	4/4.5mm
Brake drum	160mm

**DIMENSIONS**

Length	2190mm
Height	1250mm
Handlebar width	840mm
Wheelbase	1470mm
Seat Height	940mm
Ground clearance	300mm

<b>WEIGHT</b>	110kg
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**CARBURETOR**

Type	Mikuni
Venturi	38
Main jet	430
Needle jet	Q-8
Idling jet	45
Needle position	# 4
Air jet	2.0
Throttle	2.0
Needle	6DH3
Air screw opening	1.5 from bottom position.

**ELECTRICAL SYSTEM**

Type	CDI
Magneto	SEM
Ignition advance	17°
Ignition advance on piston before TDC	2.2mm
Light coil	70W color yellow
	70W color yellow
Spark plug: Champion	N-3
Bosch	W4C

**ELECTRICAL EQUIPMENT**

Headlight	12V 40/45W
Tail/brakelight	12V 5/10W

**FRONT FORK**

Travel	270mm
Trail	152mm
Fork angle (caster)	30°
Air pressure/leg	8 lbs. maximum
Oil capacity per leg	430cc
Oil recommendation:	Bel-Ray LT10 or Husqvarna VSP 10

**REAR SUSPENSION**

Type	Ohlin ITC
Travel	285mm
Springs white	139 lbs.
yellow	progressive

**TORQUE SPECIFICATIONS—**

	Ft. Lbs.
Flywheel nut	40
Cylinder head nuts	22
Cylinder head screws	15
Engine mounting bolts	35
Crankcase screws	6
Rear fork bolt nuts	35
Screws reed valve housing cylinder	6
Spark plug	20

Specifications subject to change without notice.

## BREAKING-IN

Your Husqvarna is designed for off-road competition. Port timing, exhaust system and carburetion allow the engine to reach high r.p.m. levels quite easily. Running at high r.p.m. levels with only small throttle openings may not give the engine the necessary lubrication. To avoid trouble the following is recommended:

1. Do not overrev with small throttle openings. More throttle at lower r.p.m. gives the engine better lubrication.
2. Let the engine pull instead of rev.
3. Allow the engine to be properly broken-in before making any jetting changes. Refer to owners manual.
4. Use good quality engine oil.
5. Do not allow the engine to idle for extended periods of time. The transmission must have oil circulating during the break-in period. Damage to the gearbox can result.
6. Please refer to your owner's manual and check all the items listed to be checked during this critical period. Many problems can be prevented by properly following the steps from the manual.
7. Allow at least one full tank of gas during the break-in period before using the machine for racing.
8. Remember! Your new Husqvarna is a highly-tuned racing machine. It's performance is directly affected by the treatment that you give it. Ignoring the service schedule in the owners manual will reduce performance and the excellent resale value that Husqvarna has always had.

## LUBRICATION POINTS

Our racing teams use the Bel-Ray anti-seize compound at many points. It doesn't wash away and isn't affected by heat.

The brake pedal bushings can be lubricated using this anti-seize compound. The XC and WR models use a steel bushing and can benefit from this lubricant. Lubricate the brass bushing in the rear backing plate on the CR models.

Use the anti-seize compound on the aluminum bush that supports the chain tension wheel. Keeping this bush pivoting freely in the swing arm will lengthen the life of the wheel considerably.

Use the anti-seize compound on the heim joint for the shock absorbers.

Standard grease should be used at the following points:

1. Swing arm bearings.

2. Steering head bearings.
3. Foot peg pivot area.
4. Sidestand pivot.
5. The sealed bearings of your chain tension wheel can be serviced. With a sharp instrument, pry out the seal of the bearing. Lubricate the bearing with grease and push the seals back into place.
6. Seals for the upper shock heim joint.
7. Pivot point for upper kick start arm.
8. Speedometer drive.

High temperature wheel bearing grease should be used on the brake shoe pivot points.

## LUBRICANTS AND CAPACITY

### Front Fork

Generally a good starting point for fork oil viscosity is 10w. This applies to all models. Please see the specification chart for the correct quantity.

We change fork oil after every 4 rides. This allows you to keep track of oil level and keeps out any water build up. Use a reputable brand of oil.

### Engine Oil

Bel-Ray Light Viscosity Trans Oil should be used in the transmissions. Multi-grade oils have additives that can effect our clutch facings in a negative way.

Model	Capacity	Viscosity
125 WR, XC, CR	1400	Bel-Ray LV
250 WR, XC, CR	1600	Bel-Ray LV
420 AE, AXC	1200	Husky ATF
430 WR, XC, CR	1600	Bel-Ray LV

## SUSPENSION TUNING

The front fork action can be adjusted three ways: The oil level, oil viscosity and air pressure. The oil level affects the compression ratio of the air inside. This pressure can be adjusted by raising or lowering the oil level in the forks. For example, if the fork is bottoming out more than you like and the viscosity and air pressure don't have much effect, raise the oil level by adding a measured amount to the fork. This will cause the air inside the fork leg to have a considerably higher pressure than before in the compressed state.



The oil viscosity controls the hydraulic action of the front fork. The damping of the forks will increase with use of heavier oil and visa-versa.

Air pressure can be added or subtracted to set the riding height and slightly change the compression ratio of the air inside the fork leg.

#### Rear Suspension

There are three external changes you can make to your rear shocks. They are:

1. Changing the pre-load circlip position. This can change the riding height and affect how the motorcycle tracks while exiting or entering a turn. A general rule for setting this is to adjust the clip so that after compressing the rear of the bike it returns to within about one inch of full extension.
2. Nitrogen pressure, raising or lowering this slightly effects the compression and rebound of the rear suspension. Use only nitrogen. The stock pressure setting is about 155 lbs.
3. Increase or decrease spring rate by changing shock springs.

## STEERING & FRONT FORK MAINTENANCE

Several items influence the action of the front fork. The steering head bearings are sensitive to moisture. Even though they are well sealed the bearings must be given periodic servicing. Avoid spraying high-pressure water into the bearing area. If water gets in, rust will quickly damage the bearings and make it necessary to replace them. Make it a habit to grease these bearings at each major service. Avoid over-tightening of the bearing retainer nut. Please, check that the forks move freely from side to side when the top nut is tightened. If there is too much drag, loosen the top nut, adjust the bearing retaining nut and retighten the top nut. There is a fine line between having the steering stem too loose or too tight.

The forks function better having everything the way it was intended. This means keeping the oil fresh and the level correct. The Bel-Ray LT fork oils provide superior hydraulic damping and lubrication. After considerable time the forks may tend to "top out." This is not a dangerous condition but it can cause some distraction to the rider. Inside the fork are small plastic rings that help control the hydraulic action. These are "wear" items and are easily replaced after disassembly of the front fork. When the forks are apart to replace the rings, be sure and clean any dirt out of the fork seals. Please see your dealer for assistance.

## PREPARING FOR COMPETITION

The following points should be loctited and properly torqued. These points should be checked frequently, especially during the first few hours of operation. Before using loctite be sure all the threads are free from dirt and grease. Blue loctite is sufficient and recommended.

#### Loctite:

1. Top Shock mounting bolts. Torque to 6 ft. lbs.
2. Rear brake pedal mounting bolt (XC, WR, AE)
3. Steering stem nut
4. Chain rubbing pad screws
5. Fender to seat bolts
6. Rear sprocket bolts
7. Silencer end cap screws (CR)
8. Allen bolt holding kick starter in place.

Removing the paint from working surfaces. Paint can act as a lubricant on working surfaces. By removing the paint, it is possible to have a tighter fit of parts and there is less of a possibility for some bolts to work loose. The following items should have the paint removed. Sand paper or paint remover works well.

1. Triple clamp. Inside of clamps that surround the fork tubes.
2. Rear hub. Area that the rear sprocket seats against.
3. Engine mounting plates. Area where the plates meet the frame and engine mounts.
4. Chain adjuster bolts. Remove paint from swing arm where the axle adjusters tighten down.

#### Waterproofing

1. Owners of 1983 CR and XC must get the special water shield for the airbox if used in sloppy conditions. It is standard on the WR. Part # 1515-028-01.
2. Seal the carburetor boot to the airbox. Use sealer other than silicone. Silicone does not seem to stick well to the material the airbox is composed of.
3. *Do not* use silicone seal on any of the ignition components or wires. The drying agent in silicone sealer can attack the windings and other internal parts.
4. In extremely wet conditions use duct tape to protect the airbox from water around the seat junction area and near the area that breathes under the frame.
5. After racing in wet conditions, remove the ignition cover to allow any condensation to evaporate.

doing this promotes rust, corrosion and the wearing out of the moving parts rather rapidly.

7. Pay close attention to control cables. A frayed housing invites water to get into the cables making for sticky operation.

8. Our off road racing teams use the Husky Products "o" ring chain. This chain will outlast other chains in wet conditions and increase sprocket life. See your dealer to obtain the chain.

9. Use genuine filter oil on the air filter. The latest formulas restrict the flow of water from entering the engine.

10. Glue the airbox drain valve to the airbox housing.

11. There are rubber bushings in both ends of the brake torque arm on the CR models. Replace these when play in the pivot areas is detected.

## ACCESSORIES (Please see your dealer)

Workshop Manual (Primary kick)  
1519-986-01 (1981-83)

Workshop Manual 1018-035-26 (to 1980)

Wall Chart 1981 1011-004-01

Wall Chart 1982 1011-004-02

Wall Chart 1983 1519-944-02

Tool Set (Complete hand tool set—see  
your dealer for details) 1519-697-01

Crankcase Separator Tool 1519-810-01  
(250, 430)

Crankcase Assy. Tool 1519-564-01

Front Fork Tool 1519-122-01

Auto Workshop Manual 1018-032-26

Crankcase Separator Tool 1519-556-01  
(125, 420)

## NOTES

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