

Figure 18. Models 340 S/T, 440 S/T and 440 T/T (CHASSIS Serial No. 4210249 and Below) Wiring Diagram

## 440 S/T HIGH SPEED MIXTURE NEEDLE POSITION/FIXED HIGH SPEED JET GRAPH

**IMPORTANT:** This graph is applicable only when No. 320 (factory-installed in carburetors) or No. 220 (supplied with snowmobile - placed in "Warranty Bag") fixed high speed jets are used.

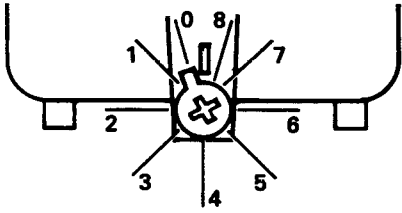
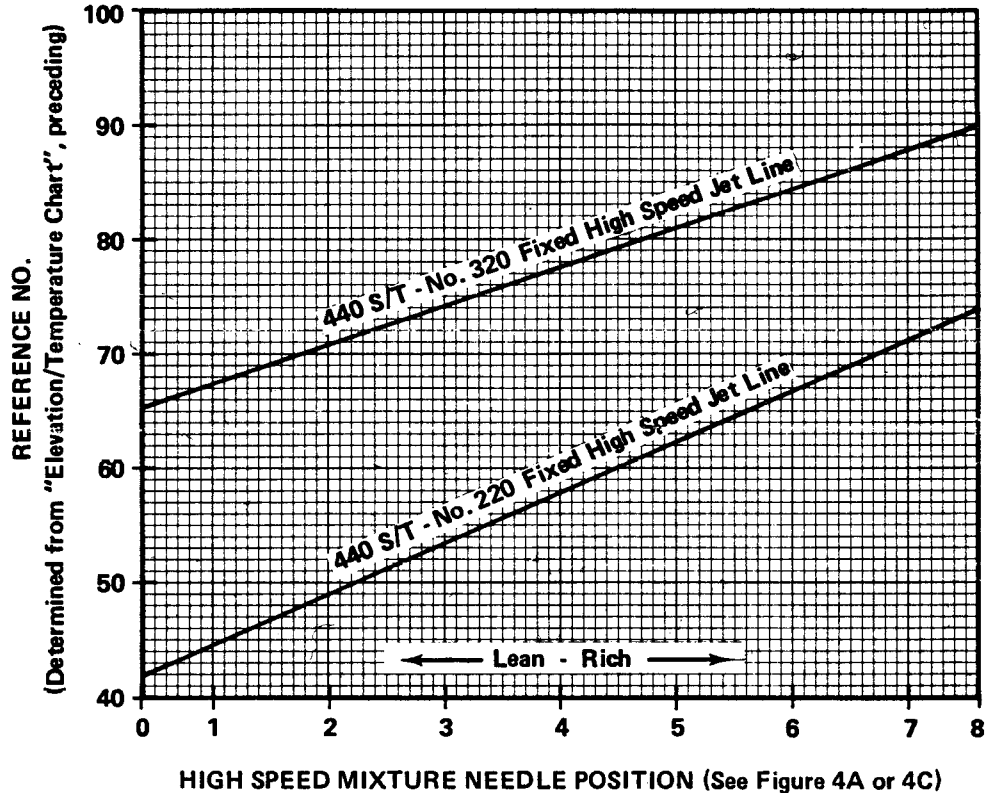


Figure 4C. High Speed Mixture Needle Positions

Use this graph as outlined following: (1) After referring to "Elevation/Temperature Chart", preceding, find applicable reference no. on vertical line (left side of graph), (2) follow straight over until "440 S/T - No. 320 Fixed High Speed Jet Line" or "440 S/T - No. 220 Fixed High Speed Jet Line" is intersected, (3) from this point (point at which either line is intersected), follow straight down to horizontal line (bottom of graph), (4) read high speed mixture needle position on horizontal line and (5) with appropriate fixed high speed jet installed in carburetors (No. 320 or No. 220 - depending on which line was intersected), set each carburetor to this position, using Figure 4A or 4C for reference.



## REMOVAL

1. Remove carburetor air intake silencer from carburetors.
2. Close fuel shut-off valve at fuel tank and disconnect carburetor fuel hose from fuel pump.
3. Unscrew throttle body cover from carburetor (to be removed) and remove throttle cable, body cover, spring, jet needle and throttle valve from carburetor as an assembly. (Figure 5)
4. Remove carburetor from cylinder.

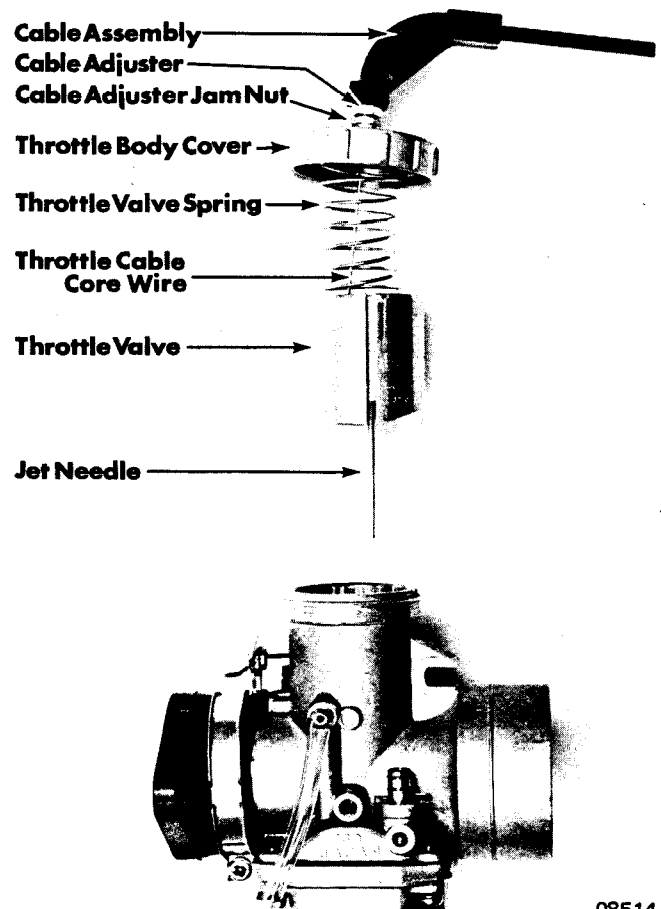


Figure 5. Carburetor Removal/Installation

Model	440 MAX & 440 S/R (438cc) ③	Mark II (644cc) ④	400 S/T (398cc)	340 S/R (338cc)	440 M/X & 440 S/R (438cc) ⑤	340 S/T (339cc)	440 S/T (429.4cc)	440 T/T (436cc) ⑥	340 T/T (339cc)	440 T/T (436cc) ⑦
Engine Mfg.	CCW	Mercury	Kohler	Kohler	Kioritz	Kohler	Kohler	Kohler	Kohler	Kohler
Horsepower	40	50	30	30	44	Not Available	Not Available	50	40	50
Displacement	438cc	644cc	398cc	338cc	438cc	339cc	429.4cc	436cc	339cc	436cc
No. of Cylinders	2	2	2	2	2	2	2	2	2	2
Bore	2.60" (66.04mm)	3.125" (79.38mm)	2.559" (65mm)	2.441" (62mm)	2.60" (66mm)	2.362" (60.0mm)	2.657" (67.5mm)	2.68" (68.0mm)	2.362" (60.0mm)	2.677" (68.0mm)
Stroke	2.52" (64.01mm)	2.56" (65.02mm)	2.362" (60mm)	2.205" (56mm)	2.52" (64mm)	2.362" (60.0mm)	2.362" (60.0mm)	2.36" (60.0mm)	2.362" (60.0mm)	2.362" (60.0mm)
Carburetor	Walbro WDA 47	Walbro WRA 35	Mikuni VM36-9	Walbro WDA 50	Walbro WDA 47A	Mikuni VM36-23	Mikuni VM36-24	Mikuni VM36-25	Mikuni VM 32-91	Mikuni VM 36-34
Dimensions										
Length (Including Skis)	98" (249cm)	99" (252cm)	99" (252cm)	98" (249cm)	105-3/8" (268cm)	99-7/16" (253cm)	99-7/16" (253cm)	99-7/16" (253cm)	99-7/16" (253cm)	99-7/16" (253cm)
Width	35" (89cm)	35" (89cm)	39" (100cm)	34" (88cm)	35-3/8" (90cm)	39" (100cm)	39" (100cm)	39" (100cm)	39" (100cm)	39" (100cm)
Height (Incl. Windshield)	40" (102cm)	40" (102cm)	35" (91cm)	39" (100cm)	44.0 M/X, 39" (100cm) 44.0 S/R, 37" (95cm)	35" (91cm)	35" (91cm)	35" (91cm)	35" (91cm)	35" (91cm)
Track Width	15" (38cm)	17" (43cm)	15" (38cm)	15" (38cm)	15" (38cm)	15" (38cm)	15" (38cm)	15" (38cm)	15" (38cm)	15" (38cm)
Electrical System										
Battery Rating	32 Amp.	32 Amp.	N.A.	N.A.	32 Amp.	N.A.	N.A.	N.A.	N.A.	N.A.
Fuel Tank Capacity	5 U.S. Gals. (18.9L) (4.15 Imp. Gals.)	5 U.S. Gals. (18.9L) (4.15 Imp. Gals.)	6.2 U.S. Gals. (23.5L) (5.2 Imp. Gals.)	5 U.S. Gals. (18.9L) (4.15 Imp. Gals.)	5 U.S. Gals. (18.9L) (4.15 Imp. Gals.)	6.2 U.S. Gals. (23.5L) (5.2 Imp. Gals.)	6.2 U.S. Gals. (23.5L) (5.2 Imp. Gals.)	6.2 U.S. Gals. (23.5L) (5.2 Imp. Gals.)	6.2 U.S. Gals. (23.5L) (5.2 Imp. Gals.)	6.2 U.S. Gals. (23.5L) (5.2 Imp. Gals.)
Fuel Requirement	Automotive Regular	Regular ▲▲	Automotive Premium ▲	Automotive Regular	Automotive Regular	Automotive Premium ▲	Automotive Premium ▲	Automotive Premium	Automotive Regular	Automotive Regular
Fuel/Oil Ratio	50:1 Normal Service § 25:1 Severe Service	§ 25:1 Severe Service	20:1	50:1 Normal Service § 25:1 Severe Service	§ 25:1 Severe Service	20:1	20:1	50:1 Normal Service § 25:1 Severe Service	50:1 Normal Service § 25:1 Severe Service	50:1 Normal Service § 25:1 Severe Service
Compression Ratio	7.85:1	7.6:1	12.4:1	7.5:1	7.85:1	13.6:1	12.9:1	11.5:1	11.8:1	11.5:1
Ignition	Flywheel Magneto	Thunderbolt	Champion N-19V or Champion N-55G	Flywheel Magneto	Flywheel Magneto	Capacitor Discharge	Capacitor Discharge	Capacitor Discharge	Capacitor Discharge	Capacitor Discharge
Spark Plug Type	Champion RN3	Champion GL-77V	Champion N-19V or Champion N-55G	AC S42XLR	AC S43XLR	Champion N-19V or Champion N-55G	Champion N-19V or Champion N-55G	Champion N-19V	Champion QN-19V	Champion QN-19V
Spark Plug Gap	0.18" - 0.20" (4.6mm - 5.08mm)	Perma Gap	0.20" - 0.25" (5.1mm - 6.4mm)	0.18" - 0.20" (4.6mm - 5.1mm)	0.18" - 0.20" (4.6mm - 5.1mm)	0.20" - 0.25" (5.1mm - 6.4mm)	0.20" - 0.25" (5.1mm - 6.4mm)	Perma Gap	Perma Gap	Perma Gap
Point Gap	0.12" - 0.16" (3.04mm - 4.06mm)	N.A.	N.A.	0.14" - 0.18" (3.6mm - 4.6mm)	0.12" - 0.16" (3.0mm - 4.1mm)	N.A.	N.A.	N.A.	N.A.	N.A.
Timing (BTDC)	0.03" - 0.04" (0.81mm - 1.02mm)	21° @ 3000 RPM	* 0.60" (1.52mm) @ 3000 RPM	20° @ 2500 RPM or 0.88" - 0.92" (2.24mm - 2.34mm) Static	17° - 19° @ 2500 RPM or 0.04" - 0.06" (1.02mm - 1.52mm) Static	* 0.60" (1.52mm) @ 3000 RPM	* 0.60" (1.52mm) @ 3000 RPM	0.95" (2.41mm) @ 3000 RPM	0.80" (2.03mm) @ 3000 RPM	0.80" (2.03mm) @ 3000 RPM
Idle RPM	2000-2200	2:00-2:50	2000 (Trail Riding); 3000 (Competition)	2200-2400	2000-2200	2500-3000	2500-3000	2400-2600	2000	2000
Max. RPM at WOT	6800-7000	6:30-6:50	8300-8500	6800-7000	6800-7000	8250	8250	7000	7000	7000
Clutch										
Clutch Engagement RPM	3300-3600	3200-3400	3600-4000	3300-3600	3300-3600	3600-4000	3600-4000	3400-3600	3100-3300	3100-3300
Piston Skirt Clearance	0.04" - 0.10" (1.02mm - 2.54mm)	0.03" - 0.10" (0.76mm - 2.54mm)	0.034" - 0.066" (0.863mm - 1.676mm)	0.038" - 0.10" (0.96mm - 2.54mm)	0.04" - 0.10" (1.02mm - 2.54mm)	0.034" - 0.066" (0.863mm - 1.676mm)	0.034" - 0.066" (0.863mm - 1.676mm)	0.034" - 0.066" (0.863mm - 1.676mm)	0.034" - 0.066" (0.863mm - 1.676mm)	0.034" - 0.066" (0.863mm - 1.676mm)
Reed Stop Height	7/16" (11.1mm)	5/16" (7.94mm)	N.A.	N.A.	7/16" (11.1mm)	N.A.	N.A.	N.A.	N.A.	N.A.
Reed Clearance	0.08" (2.03mm)	N.A.	N.A.	N.A.	0.08" (2.03mm)	N.A.	N.A.	N.A.	N.A.	N.A.
Crankshaft End Play	N.A.	0.04" - 0.08" (1.02mm - 2.03mm)	0.06" - 0.12" (1.52mm - 3.05mm)	0.06" - 0.12" (1.52mm - 3.05mm)	N.A.	0.06" - 0.12" (1.52mm - 3.05mm)	0.06" - 0.12" (1.52mm - 3.05mm)	0.06" - 0.12" (1.52mm - 3.05mm)	0.06" - 0.12" (1.52mm - 3.05mm)	0.06" - 0.12" (1.52mm - 3.05mm)

③ CHASSIS Serial No. 3709838 thru 3795657  
 ④ CHASSIS Serial No. 3787640 and ABOVE  
 ⑤ CHASSIS Serial No. 4064097 thru 4070296  
 ⑥ CHASSIS Serial No. 4210249 and Below  
 ⑦ CHASSIS Serial No. 4347125 and Above  
 N.A. = Not Applicable  
 § Mercury Quickstart Snowmobile Oil or Formula 50-D ONLY  
 ▲ 96 AVERAGE Octane Minimum for Trail Riding and 100/130 Av Gas for Competition  
 ● Competition  
 ▲▲ 89 AVERAGE Octane Minimum (If Not Available, Use Automotive Premium)  
 \* Advance Timing to .080" (2.03mm) BTDC for Competition