



STATE OF NEW HAMPSHIRE
DEPARTMENT OF RESOURCES AND ECONOMIC
DEVELOPMENT
DIVISION OF PARKS AND RECREATION
BUREAU OF TRAILS

**NASH STREAM ATV TRAIL BASELINE
NOISE TESTING RESULTS**

July 3, 2002
By
Chris Gamache
Program Specialist

Introduction:

The baseline noise testing was performed to be able to answer noise issue questions, in regards to ATV use, on trails on DRED lands, specifically the Nash Stream Forest.

Many of the complaints against development of ATV trails on Public lands are the noise level associated with the All Terrain Vehicle. The intent of the testing is to establish a baseline decibel level for ATV use, compared with decibel levels of other vehicles and sources of noise on the Nash Stream Forest property.

Methods & Equipment used:

The sound testing was done using a Quest Electronics 208 Sound Level Meter. The sound meter was calibrated on July 1, 2002 using a Quest Model CA-12B Sound Calibrator, and calibration was reconfirmed on July 3, 2002.

The two tests performed for the baseline data were the 20" Tailpipe Test, which tests the Decibel level of the vehicles exhaust system when running at a predetermined RPM; and the Scale A Test which is a Decibel level test conducted from a distance of 50' from the vehicle.

Vehicles used for the 20" Exhaust test were: Polaris Sportsman 500 ATV, Polaris 6x6 500, Honda 350 ES ATV, Artic Cat 500 ATV and a 2002 Ford F350 Pick up truck.

Vehicles tested from a distance of 50' included all of the above, except for the Artic Cat ATV (it had a backhoe attachment on it). We also tested the decibel level of the Nash Stream itself, from a distance of 25', a locomotive with one freight car, from a distance of 100' and a car and tractor trailer on Route 3 in N. Stratford, NH.

All of the test results are on the attached graph, showing date, time, weather, vehicle used and the decibel readings at the above-mentioned distances and certain speeds (in MPH).

Environment:

The field tests were performed on Tuesday, July 2, 2002 between 11:00 AM and 2:00 PM. The Polaris ATVs and the Ford P/U were tested in the field at the north end of the West Side Road, in Nash Stream. The Nash Stream decibel reading was taken from the bridge over Nash Stream at the south entrance to West Side Road and the readings from the Honda and Artic Cat ATVs, locomotive, car and tractor-trailer were all taken at Burns Truck Stop on Route 3, in N. Stratford, NH.

The weather on July 2, 2002 was hazy, hot and humid with the temperature over 85 degrees F, humidity over 70% and a 0-10 mph wind out of the south.

Testers:

Paul Gray, Chief, NH Bureau of Trails and Chris Gamache, Program Specialist, NH Bureau of Trails, performed all of the noise data collection and testing.

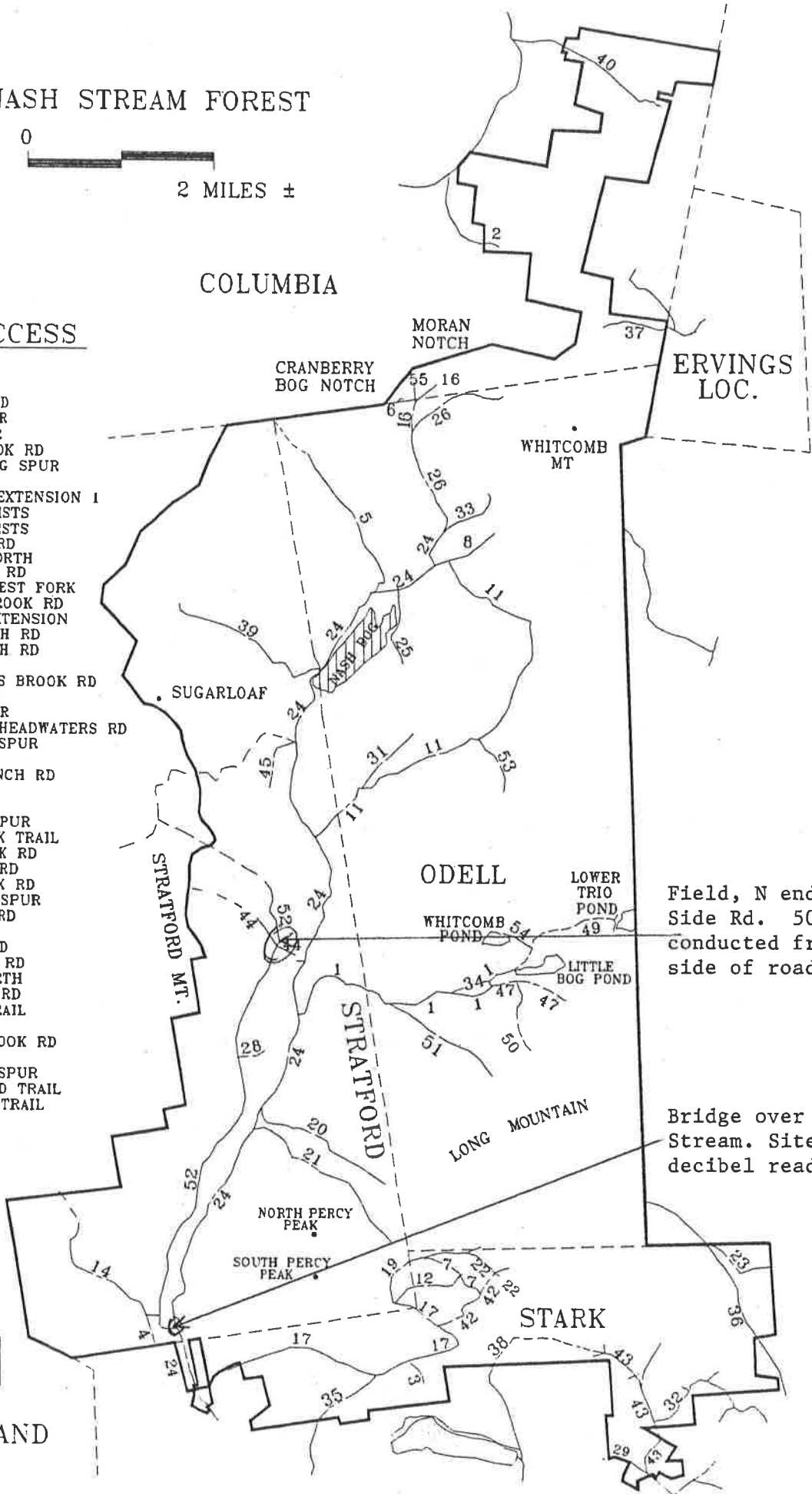
NASH STREAM FOREST



COLUMBIA

ROADS AND ACCESS

ID	MILES	NAME
1	3.3	14 1/2 ROAD
2	0.3	BUNGY SPUR RD
3	0.4	CHRISTINE SPUR
4	0.3	CLOUTIER SPUR
5	1.7	COLUMBIA BROOK RD
6	0.2	CRANBERRY BOG SPUR
7	0.7	CROSS RD
8	0.6	EAST BRANCH EXTENSION 1
9	—	NO LONGER EXISTS
10	—	NO LONGER EXISTS
11	4.8	EAST BRANCH RD
12	0.9	JIMMY COLE NORTH
14	1.6	FARRER BROOK RD
16	0.7	HEADWATERS WEST FORK
17	4.2	JIMMY COLE BROOK RD
19	1.2	JIMMY COLE EXTENSION
20	1.7	LONG MT NORTH RD
21	2.0	LONG MT SOUTH RD
22	0.9	LOW RD
23	0.6	LOWER PHILLIPS BROOK RD
24	11.1	MAIN RD
25	0.9	NASH BOG SPUR
26	2.3	NASH STREAM HEADWATERS RD
27	0.4	NASH STREAM SPUR
28	0.5	NORTH RD
29	0.8	OLD EAST BRANCH RD
32	1.0	PIKE POND RD
33	0.7	PIKE'S WORK
34	0.4	POND BROOK SPUR
35	0.9	ROARING BROOK TRAIL
36	1.2	ROBERTS BROOK RD
37	0.8	ROCKY BROOK RD
38	0.6	ROWELLS BROOK RD
39	2.0	SILVER BROOK SPUR
40	1.3	SIMMS BROOK RD
42	1.1	SOUTH RD
43	1.6	STARK DUMP RD
44	0.9	STRATFORD MT RD
45	0.7	WEST SIDE NORTH
47	0.9	TRACY'S CAMP RD
49	1.4	TRIO PONDS TRAIL
50	0.8	UPSOUTH RD
51	1.3	WATERHOLE BROOK RD
52	5.3	WEST SIDE RD
53	0.6	WHITCOMB MT SPUR
54	0.4	WHITCOMB POND TRAIL
55	0.2	MORAN NOTCH TRAIL



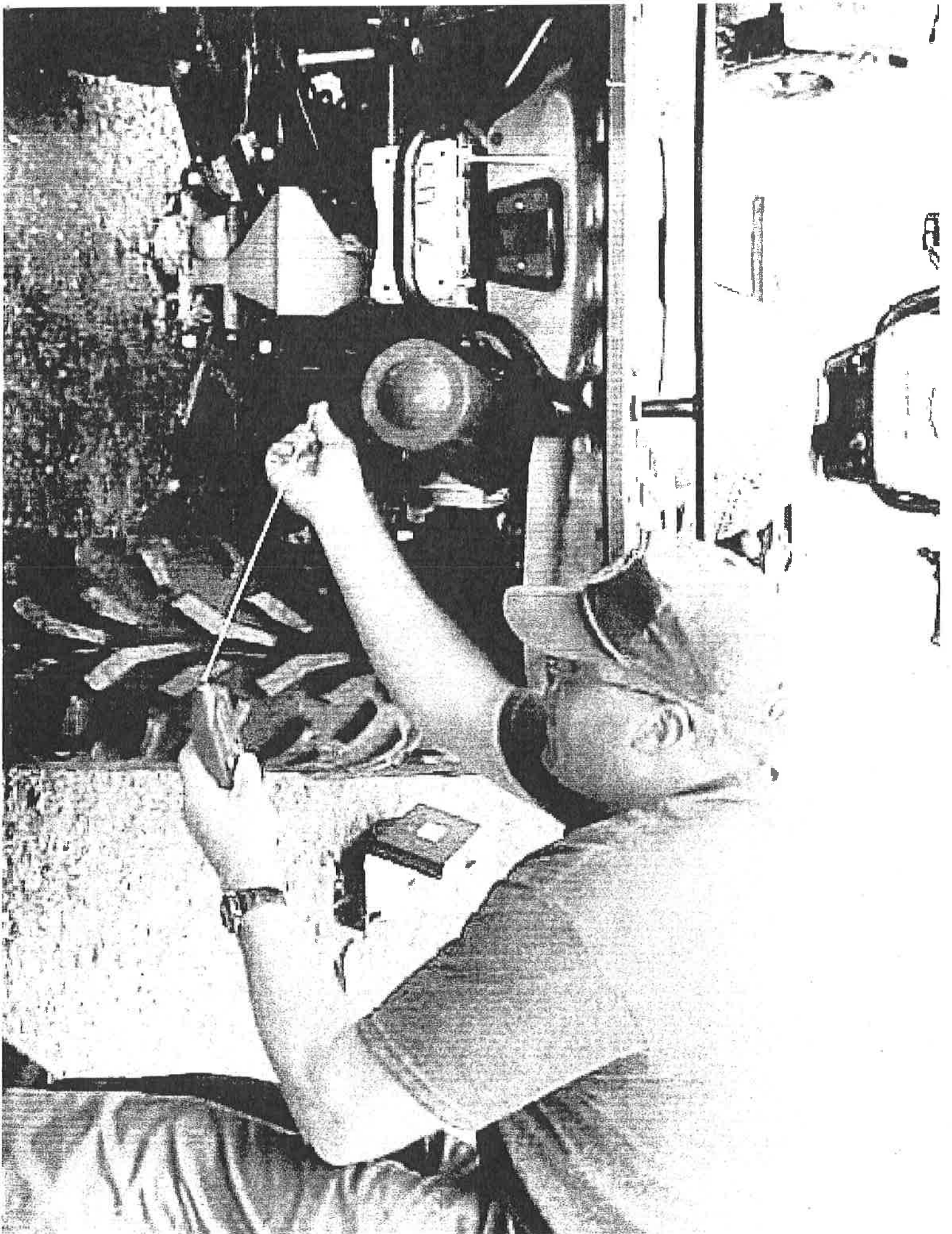
ERVINGS LOC.

Field, N end of W. Side Rd. 50' test conducted from west side of road

Bridge over Nash Stream. Site of River decibel reading.

THIS PLAN HAS BEEN UPDATED BY THE STATE OF NEW HAMPSHIRE DEPT. OF RESOURCES AND ECONOMIC DEV. 1996

NORTHUMBERLAND



RN TEST



7-11 N. in. of West Side Rd. - Fortius South



Model Off-Highway Sound Test RPM Data Update

Supplement to MIC Stationary Sound Test Manual for Off-Highway Motorcycles and ATVs

ARCTIC CAT ATVs					BOMBARDIER ATVs				
Engine Size (in cc)	Model	Engine Prefix	Test RPM		Engine Size (in cc)	Model	Engine Prefix	Test RPM	
			2001	2002				2001	2002
90	90 2x4	JA90		3500	500	Traxter Models - All	Rotax 511	3125	3125
250	250 2x4	J432	3750	3750	500	Quest 500	Rotax 514		3700
	250 4x4	J433	3750	3750	650	DS Model - All	Rotax 654	3250	3250
300	300 2x4	K411	3500	3500	650	Quest 650, XT	Rotax 610		3525
	300 4x4	K412	3500	3500					
375	375A 2x4	K424		3250					
	375A 4x4	K425		3250					
400	400 2x4	K408	3500	3500					
	400 4x4	K413	3500	3500					
500	500A 4x4	M408	3000	3000					
	500M 4x4	M406	3000	3000					

HONDA MOTORCYCLES					HONDA ATVs				
Engine Size (in cc)	Model	Engine Prefix	Test RPM		Engine Size (in cc)	Model	Engine Prefix	Test RPM	
			2001	2002				2001	2002
50	XR50R	AE03E	4250	4250	90	TRX90	TE18E	3750	3750
70	XR70R	DE02E	4000	4000	250	TRX250	TE06E	3250	
80	CR80R*	HE04E	6250	6250		TRX250EX	TE27E		3500
	CR80RB*	HE04E	6250	6250		TRX250TM/TE	TE21E		3250
	XR80R	HE01E	5000	5000	300	TRX300EX	TE19E	3500	3500
100	XR100R	HE03E	4750	4750	350	TRX350FM/FE	TE25E	3250	3250
125	CR125R*	JE01E	5750	5750		TRX350TE/TM	TE24E	3250	3250
200	XR200R	ME04E	4000	4000	400	TRX400EX	TE23E	3500	3500
	CR250R*	ME03E	4000	4000		TRX400FW	TE20E	3000	3000
	XR250R 49S	ME06E	3500	3500	450	TRX450ES	TE22E	3125	
	XR250R CA	ME06E	4000	4000		TRX450FM/FE	TE22E		3125
400	XR400R	NE03E	3750	3750		TRX450S	TE22E	3125	
450	CRF450R*	PE053		4500	500	TRX500FA	TE26E	3250	3250
650	XR650L	RD06E	3000	3000					
	XR650R	RE01E	3250	3250					

*Denotes closed course competition.

May 31, 2002

***** Cut on line above and fold in half. Attach to back of Sound Test Manual. *****

KAWASAKI MOTORCYCLES					KAWASAKI ATVs				
Engine Size (In cc)	Model	Engine Prefix	Test RPM		Engine Size (In cc)	Model	Engine Prefix	Test RPM	
			Model Year	2002				Model Year	2002
60	KX60-B16, B18*	KX060BE	6000	6000	220	KLF220-A14/L, A15/L	LF220AE	3750	3750
65	KX65-A2, A3*	KX065AE	6000	6250	250	KSF250-A15/L, A16/L	SF250AE	4000	4000
85	KX85-A1, A2*	KX085AE	6000	6000		KLF250-A1/L	LF250AE		3500
100	KE100-B20	G5E21	3750		300	KEF300-B1, B2	EF300AE	3500	3500
	KX100-D1, D2*	KX100CE	5750	5750		KLF300-B14/L, B15/L	LF300AE	3250	3250
110	KLX110-A1	LX110AE		3500		KLF300-C13/L, C14/L	LF300AE	3250	3250
125	KX125-L3, L4*	KX125LE	5750	5625		KVF300-A3, A4	VF300AE	3500	3500
200	KDX200-H7, H8	DX200HE	4000	4000		KVF300-B3, B4	VF300AE	3500	3500
220	KDX220-A8, A9	DX220AE	3750	3750	360	KVF360-A1	VF360AE		3500
250	KL250-D18/L, D19/L	KL250DE	4250	4250	400	KVF400-C3, C4	VF400AE	3250	3250
	KL250-G5, G6	KL250GE	4000	4000		KVF400-D3, D4	VF400AE	3250	3250
	KX250-L3, L4*	KX250LE	4250	4250	650	KVF650-A1	VF650AE		3250
300	KLX300-A6/L, A7/L	LX300AE	3500	3500	POLARIS ATVs				
500	KX500-E13, E14*	KX500BE	3500	3500	Engine Size (In cc)	Model	Engine Prefix	Test RPM Model Year	
650	KL650-A15/L, A16/L	KL650AE	3250	3250	50	Scrambler 50	AR03-01	3750	3750
KTM ATVs					90	Scrambler 90	AR07-01	3750	3750
Engine Size (In cc)	Model	Engine Prefix	Test RPM Model Year			Sportsman 90	AR07-01	3750	3750
50	50 Mini Adventure*	450	4800	4800	250	Trail Blazer	EC25PFE15	3000	3000
	50 Jr/Sr Adventure*	450	4800	4800		Xplorer 4x4	EC25PFE15	3000	3000
	50 SX Pro Junior*	450	4800	5100	325	Magnum 325 2x4	ES32PFE08	3000	3000
	50 SX Pro Senior*	451	5100	5100		Magnum 325 4x4	ES32PFE08	3000	3000
65	65 SX*	460	4750	4750		Trail Boss	ES32PFE09	3000	3000
125	125 SX*	503	5600	5600		Xpedition 325	ES32PFE03	3000	3000
	125 EXC*	503	5200		400	Xplorer 400	EC38PLE10	2750	2750
200	200 EXC*/MXC*	523	4000	4000		Scrambler 400 2x4	EC38PLE09	3000	3000
250	250 SX*/EXC*	546	3750	3750		Scrambler 400 4x4	EC38PLE09		3000
	250 MXC*	546	3750		425	Sportsman 400	EH42PLE05	3000	3000
300	300 EXC*/MXC*	547	3550	3550		Xpedition 425	EH42PLE04	3000	3000
380	380 SX*/MXC*	547	3550	3550	500	Magnum 500	EH50PLE08	3000	3000
	380 EXC*	547	3550			Magnum 500 RMK	EH50PLE08	3000	3000
400	400 SX*/EXC* Racing	595	4625	4625		Scrambler 500 2x4	EH50PLE12	3250	3250
	400 MXC* Racing	595	4625	4625		Scrambler 500 4x4	EH50PLE12	3250	3250
	400 LC4	575	3500		Sportsman 500 HO	EH50PLE13	3150	3150	
520	520 SX*/EXC*/MXC*	590	4600	4600		Sportsman 6x6	EH50PLE10	3000	3000
640	LC4/LC4 ADV R	584	3450	3450		Diesel	DW46PLE02	2000	2000
	LC4 Supermoto*	584	3450	3450	700	Sportsman 700	EH68ALOE1		3000

*Denotes closed course competition.

May 31, 2002

***** Cut on line above and fold in half. Attach to back of Sound Test Manual. *****

SUZUKI MOTORCYCLES				
Engine Size (in cc)	Model	Engine Prefix	Test RPM	
			Model Year 2001	Model Year 2002
50	JR50	A102	2500	2500
80	DS80/JR80	C106	3750	3750
	RM80*	D106	6125	
85	RM85*	D107		6000
125	RM125*	F113/F114/F134	5750	5750
200	DR200/DR200SE	H401/H402	4250	4250
250	DR-Z250K	J428	4000	4000
	RM250*	J115/J119	4000	4000
400	DRZ400/E	K416/K417	4000	4000
	DRZ400S/E	K419	3750	3750
650	DR650SE	P403/P407/P409	3250	3250

YAMAHA MOTORCYCLES				
Engine Size (in cc)	Model	Engine Prefix	Test RPM	
			Model Year 2001	Model Year 2002
50	PW50	3PT	3750	3750
80	PW80	3RV	3750	3750
	YZ80*	4ES	6000	6000
85	YZ85*	B111E	6000	6000
90	TTR90	B301E	3500	3500
125	TTR125	E309E	4000	4000
	YZ125*	E112E	5750	5750
200	TW200	3AW	3500	3500
225	TTR225	G304E	3750	3750
	XT225	4BE	4000	4000
250	TTR250	G307E	3750	3750
	WR250F	G322E	6500	6500
	YZ250*	G106E	4250	4250
	YZ250F*	G321E	5250	5250
426	WR426F	H309E	4250	4250
	YZ426F*	J308E	4500	4500

SUZUKI ATVs				
Size (in cc)	Model	Engine Prefix	Test RPM	
			Model Year 2001	Model Year 2002
50	LT-A50	A110		2500
80	LT80	C113		3500
160	LTF160	G402	4000	
250	LT-F250F	J413	3750	3750
	LT-F250	J417/J434	3500	3500
300	LT-F300F KING QUAD	K403	3500	3500
400	LT-A400/F EIGER	K420/K421		3250
	LT-F400/F EIGER	K422/K423		3500
500	LT-F500F	M405/M407	3000	3000
	LT-A500F VINSON	M409		3000

YAMAHA ATVs				
Engine Size (in cc)	Model	Engine Prefix	Test RPM	
			Model Year 2001	Model Year 2002
80	YFM80	4EM/B302E	3750	3750
125	YFA1	3FA/E307E	3750	3750
200	YFS200	3JM	3500	3500
250	YFB250FW	4KD	3500	3500
	YFM250	G302E	3500	3500
350	YFM350FX	H306E	3500	3500
	YFM350X	3GD	3500	3500
	YFZ350	3GG	3750	3750
400	YFM400FWA	J304E	3500	3500
	YFM400A	J305E	3500	3500
	YFM400N	H312E	3500	3500
	YFM400FWN	H310E	3500	3500
600	YFM600FWA	J303E	3500	3500
660	YFM660R	M301E	3250	3250
	YFM660FWA	M302E	3125	3125

*Denotes closed course competition.

May 31, 2002

***** Cut on line above and fold in half. Attach to back of Sound Test Manual. *****