

A Identification -----**See Also**

- A-1 Identifying the Four Basic King Midgets Built by Midget Motors.
- A-2 Estimated Midget Motors Production by Year and Model.
- A-3 Photographs of Model 2, 3, and 4 Frames Plus Super-Cycle.
- A-4 Golf Model.
- A-5 King Midget Junior.
- A-6 Corrections to a Model 1 Article in *Hemmings Classic Car*.
- A-7 Serial Number Locations. Model 2 & Model 3. ----- K-1
- A-8 How One Owner Found His Serial Number.
- A-9 Model 2 & Model 3 Serial Number Descriptions.
- A-10 Super-Cycle, M1, M2 and M3 Serial Number Details. ----- A-7, A-9
- A-11 Evolution of the Model 2 (AKA Series II). ----- L-13
- A-12 More Details on the M2 evolution. ----- L-13
- A-13 Evolution of the Model 3 (AKA Series III). ----- L-13
- A-14 Model 2 Owner's Manual
- A-15 Model 2 Owner's Manual Part 2

Plus _____

B Restoration -----**See Also**

- B-1 Which Direction and How Far Do You Go in Restoring your King Midget?
Planning Step Tips for your Restoration.
- B-2 Budgeting your Restoration.
- B-3 Repairing Dents, Tools, Filler, Sand Paper and Paint.
- B-4 Bodywork – Sheet Metal Reshaping with Heat, Body Filler and Painting.
- B-5 Dick Russ' Series, Part 1. The Search for a Restorable King Midget;
Work stand/Rotisserie. ----- B-13, B-14, B-15
- B-6 Part 2. Disassembly Procedure and Helpful Tools.
Inspect for Electrical. ----- H-1
Rust and Cracks that Need Repair. ----- C-2, M-2
Preparation for Reassembly. ----- C-8
- B-7 Part 3. Attaching Sheet Metal. Brake Assembly; Overhaul. ----- D-7
- B-8 Part 4. Rebuilding and Repairing Rear Spring Shocks. ----- C-16
- B-9 Part 5. Steering Column Bearing Repair. The "Rope Bearing." ----- B-12, I-11

B-10	Part 6. Wiring your King Midget. -----	H-3
B-11	Part 8 (There is no Part 7). Rusty Fuel Tank Repair. Adding Selector to Fuel Tank Alternator with Built-In Regulator. -----	H-4
	Relocation of Coil Bracket Engine Compartment Deck Lid Latch Modification. -----	C-7
B-12	Part 9. Tie Rod End Replacement. -----	B-9, I-1, I-11
	Steering Box. -----	I-18
	Alignment. -----	G-1, I-4, I-8,
B-13	Air Powered Work Stand. -----	B-5, B-14
B-14	Two Simple Work Stands. -----	B-5, B-13
B-15	Temporary Work Stands for King Midgets Only.	
B-16	Penetrating Oil.	
B-17	Rust Removal using Reverse Electrolysis.	
B-18	Rust Removal using Molasses.	
B-19	Cleaning Portawalls and Whitewalls.	
B-20	Dressing Up Wheels.	
B-21	Polishing Your King Midget.	
B-22	Fabricating a Replacement Dash Light Cover.	
Plus	_____	
	<i>Bumper Polishing Using Wet Sanding.</i> -----	J-2
	<i>Undercoating Used on King Midget.</i> -----	J-2

C Body & Frame ----- **See Also**

C-1	Midget Motors Efforts to Reduce Weight.	
C-2	Frame Theory and Practice; Resulting Cracks. -----	B-6, M-2
C-3	Bracing a Sagging Hood.	
C-4	Hood Stiffener Using Oak Strips.	
C-5	Deck Lid Hinges, Stiffening with Curtain Rods.	
C-6	Differing Deck Lids, Early Steel, Later Aluminum.	
C-7	Slipping Deck Latches. Brakes Relining with Wrong Material. -----	D-3
	Fuel Stabilizer. -----	G-2, L-12
C-8	Patching a Rusted Floor Pan with Plywood. -----	B-6

C-9	Patching a Rusted Floor Pan, C-Channels and Pop-Rivets. -----	B-6
C-10	Two different Carrier Pans, the Tray Behind the Seat.	
C-11	Heater Funnel Shrouds for Model 2 and 3. C-12 Repairing Door Hinges.	
C-13	Repairing Striker Plates.	
C-14	Corrections to the Model 1 Plans.	
C-15	Model 1 Springs; where to Find or Make.	
C-16	Rear Shock Bushing, Replacement Part Tip. -----	B-8
C-17	Model 2 Top Frame Dimensions and Construction Tips.	
C-18	Model 2 Top Frame from Factory. How to Fold Model 3 Top.	
C-19	Side Curtain Rods; Early and Later M3 Styles.	
C-20	Top Snaps.	
C-21	Installing a Windshield Gasket.	
C-22	Windshield Removal and Installation. -----	C-23
	Wooden Doors	

Plus _____

	<i>Attaching new Model 3 Sheet Metal. -----</i>	<i>B-7</i>
	<i>Steering Column Bearing Repair. -----</i>	<i>B-9</i>
	<i>Plexiglas Windshields; Model Years Used. -----</i>	<i>A-12</i>
	<i>Engine Compartment Deck Lid Latch Modification. -----</i>	<i>B-11</i>
	<i>Seat Dimensions of Model 2 and Model 3. -----</i>	<i>L-13</i>
	<i>Widen the King Midget Frame. -----</i>	<i>L-13</i>

D Brakes ----- See Also

D-1	How Model 2 Mechanical Brakes Work. Broken Brake Problem.	
D-2	Brake Cable on a Model 2, an Unsatisfactory Adjustment.	
D-3	Model 2 Proper Brake Adjustment Lever Diagram. Proper Brake Linings, Relining and Adjustment. -----	J-11
	Correct Cables and Installation.	
D-4	Adding Hydraulic Brakes to Model 2 Front Wheels. D-5 Checking Master Cylinder Fluid Level. When to Change Brake Fluid. Brake Drag. Parking brake Cable and Routing Pulleys. Drive Chain Wear Measurement. -----	G-11
	Checking Model 2 Mechanical Brakes.	
D-6	Changing the Master Cylinder.	
D-7	Complete Model 3 Brake System Rebuild. -----	B-7 D-8
	Brake Lines, Cylinders and Fluid.	
D-9	Brake Drums for King Midgets; 1951 to 1970. Jig for Installing Drums on Wheel Rim.	
D-10	Adjusting M3 Brakes. Front End Adjustment.	

D-11	Neglect Leads to Broken Wheel.	
D-12	Filling Master Cylinder.-----	D-14
	Removing Lid for Access.	
D-13	M3 Parking Brake Cables.	
D-14	Filling Master Cylinder with a Pump.-----	D-12
Plus	_____	
	<i>Semi-Metallic Brake Lining.</i> -----	C-7
	<i>Brake Drag and Master Cylinder Check.</i> -----	J-4
	<i>Upgrading Brakes for Higher Powered Engines.</i> -----	M-5

E Clutches----- **See Also**

E-1	Low-Speed & High Speed Clutch Shoes—Differences. -----	G-1
E-2	Driven Pulleys; the Two Styles.	
E-3	Manual Clutch Adaptation.	
E-4	Fixing Clutch Slippage Due to Glazing.	
E-5	Overhauling KM Clutches; Detailed Instructions. -----	G-2
E-6	Bonding Clutch Linings -----	G-1
E-7	Maintaining Driven Clutches.	
	Lubrication of Bearings in the 10” Low Speed Pulley. -----	I-11
	Borg-Warner Clutch Preventive Maintenance.	
	Tightening Sprocket on Transmission Output.	
E-8	Detailed Clicker Clutch Description and Servicing.	
E-9	Slipping Drive Belts.	
E-10	Matched belts vs. Mismatched.	
E-11	Letters: Comet 40 Maintenance	
Plus	_____	

F Comet----- **See Also**

F-1	Determining Appropriate Engine and Drive System. -----	M-2, M-3, M-4, N-33
F-2	Comparison; Comet vs. Original KM Drive.	
F-3	Comparison of Comet Clutches.	
F-4	Challenges of the Comet 40 Clutch.	
F-5	Letters: Comet 40 Maintenance.	

Plus _____

- Comet 94 setup.* ----- M-2
- Feedback on Engine, Transmission and Comet.* ----- M-5
- Comet vs. Peerless Differentials.* ----- M-5
- Comet Description and Part Numbers.* ----- N-33

G Drive Line----- **See Also**

- G-1 Bearings, Chain, Lubrication. ----- G-6
- Clutches ----- E-1
- Tire Rub. ----- N-5
- Toe-In. ----- B-12, I-4, I-8
- Clicker-Clutch. ----- E-8
- Lining Clutches or Brakes. ----- E-6
- G-2 Oil. ----- J-8, K-4
- Fuel.
- Clutches. ----- E-5
- Shifting. ----- G-5, G-6, M-2
- G-3 Stopping Transmission Gasket Leak.
- G-4 Stopping Transmission Leak around Output Shaft.
- G-5 Reducing Jumping Out of Gear. ----- G-2, M-2
- G-6 Details on Rebuilding '56 to '69 Transmission.
- G-7 Details on Rebuilding Older Transmission.
- G-8 Reducing Torque Steer.
- G-9 Trouble from Over-Tightened Drive Chain.
- G-10 Cracked Subframe Cause of Broken Chains.
- G-11 Chain Stretching and Tension Adjustment. ----- J-11 G-11
- Measuring Drive Chain Wear. ----- D-5
- G-12 Keeping Drive Key Locked in Place.

Plus _____

- Checking Sprocket on transmission output shaft.* ----- E-7
- Replacing a stretched chain.* ----- M-2

H Electrical----- **See Also**

- H-1 Electrical System Defined; Generalities. ----- B-6, B-10

H-2	Correction to KM Wiring Diagram. -----	H-12, H-13
H-3	Connectors and Wire.	
H-4	6 volt Autolite GAS-4190 Generator. Regulating Voltage; 6-volt System.	
H-5	Follow-up on 6-Volt Constant Speed Generator.	
H-6	Converting Model 2 from 6-Volts to 12-Volts.	
H-7	Details on Generators & Starter-Generators.	
H-8	Electric Fuel Pump/Carburetor. -----	L-11, L-12
H-9	Electric Horn.	
H-10	Sparton Signal Switch Wiring Diagram and Repair.	
H-11	Timing of Changes in King Midget Electricals. -----	A-13
H-12	6-Volt Wiring Diagram.	
H-13	12-Volt Wiring Diagram.	
H-14	Instrument Panel Lighting.	
Plus	-----	
	<i>Alternator with Built-In Regulator. -----</i>	<i>B-11</i>

I	Steering -----	See Also
I-1	Details on Suspension and Steering. -----	M-5
	Two Types of Tie Rod Ends. -----	B-12
	Adjustment of Suspension Tubes.	
	Adding of a Steering Stabilizer/Damper. -----	I-9
	Tie Rod Tubing/Threading Modification.	
	Steering Box Play. -----	B-12
I-2	Theory of KM Front End Design.	
I-3	Front Struts, Wear and Replacement Options. -----	M-5, N-2
I-4	Front End Tuning.	
	Tire Pressure. -----	N-5, N-7
	Wheel Balance. -----	I-4, J-11, N-2
	Camber.	
	Adjusting Toe-In. -----	B-12, I-8
	Lubrication.	
I-5	Steering Tune-Up.	
I-6	Follow-Up on King Midget Front Ends.	
	Adjusting Steering and Front End, Letter from Midget Motors.	
	Adding Shock Adjustment on Model 2s.	
I-7	Steering Adjustment and Rebuild.	
	Diagnosing Steering Symptoms; Suggested Fixes.	
I-8	Details on Adjusting Toe-In. -----	B-12, G-1, I-4
I-9	Stopping Bounce with Stabilizer/Damper. -----	I-1
I-10	Model 3 Front Shock Rebuild. -----	M-5
	New Upper and Lower Strut Components.	

I-11	Lubrication of the Steering Column Bearing.-----	B-9, B-12 I-12
	Front End Tune-Up.	
I-13	Adding Spacers to Front Springs.	
I-14	Adding a Tie-Bar Between Front End Shock Tubes. I-15	
	Steering Wheel Removal and Repair.	
I-16	More on Stuck Steering Wheels.	
I-17	Model 2 and 3, Steering Wheels.	
I-18	Maintaining and Repairing the Steering Box.- - - - -	B-12
I-19	Tie Rod Ball Joint Replacement on KM M3 - - - - -	I-25
I-20	Steering Wheel Restoration - - - - -	I-15, I-16, I-17
I-21	Alternate Front Strut Repair - - - - -	I-3
I-22	Camber Details - - - - -	I-1, I-4, I-6, I-8
I-23	Letters: Camber	
I-24	Letters: Tire Rub	
I-25	Tightening a Front End - - - - -	I-19
Plus		
	<i>Front End Adjustment.</i> - - - - -	<i>D-10</i>
	<i>Richard Pryer's Front End Upgrade.</i> - - - - -	<i>M-5</i>

J Engine Accessories-----See Also

J-1	Increasing the Power of Small Gasoline Engines; Midget Motors' Booklet.	
J-2	Tuning Basics that Govern the Top Speed of a King Midget.	
	Bumper Polishing with Wet Body Sanding Paper.	
	Undercoating Used on King Midget.	
J-3	Engine Tuning, Better fuel.	
J-4	More on Tuning.	
	Brake Drag and Master Cylinder Check.	
J-5	Tuning Engine, Some Finer Points.	
J-6	Proper Octane.	
J-7	Oil, Zinc and Detergent vs. Non-Detergent.	
J-8	Proper Oil for King Midgets. - - - - -	G-2, K-4
J-9	Accelerator, Lubrication and Diagram of Setup.	
J-10	State Emissions Test, a Personal Experience.	
J-11	Tuning for Efficiency.	
	Wheel Balancing. - - - - -	I-4, N-2
	Brakes.-----	D-3
	Chain.-----	G-9, G-10
J-12	Modifying a Muffler to Fit.	
J-13	Dead Speedometer?-----	J-15
J-14	Measuring Speedometer & Odometer Accuracy	
J-15	Dead Speedometer Update-----	J-13

J-16 M-3 Engine Cradle
Plus _____
Kohler Upgrading-----L-3 to L-9

K **Wisconsin**----- **See Also**

K-1 Wisconsin Engines Sold to MM, Serial Numbers and
Build Date. K-2 ----- Wisconsin Owners Ma
Zenith 161 Series Carburetors.
K-3 Removing Starting Pulley on Wisconsin engine.
K-4 Wisconsin & Oil, Straight-Weight and Synthetic. ----- G-
2, J-7, J-8 Regrinding Cam.
K-5 Parts and Plugs for
Wisconsin. K-6----- Reproduced Data Plate
K-7 Minimizing Oil Seepage.
Plus _____
Relocating Wisconsin Engine Coil. ----- B-11
Wisconsin and Kohler Vibration. ----- L-13

L **Kohler**----- **See Also**

L-1 Determining when Your Kohler
was built. L-2 ----- Kohler Owner's Manu
L-3 The Dave Kirk Series on Improving the
Kohler K-301. L-4 ----- Engine Design Basics.
L-5 Breathing
Improvements. L-6----- Muffler Tuning.
Billet Breather Cover to Dress Up the Engine.
Transistorized Ignition .
Oil Change and Marvel Mystery Oil.
Fuel, Running Different types
(Octane). Change of Exhaust Valve
Diameter.
Crankshaft Re-Balancing for Smoother Running.
L-7 Computer Simulation of Engine Performance.

Engine Build Summary.

L-8 Preliminary Report of Improvement by

KM Owner. L-9 ----- Singh Grooves Improve Engine

L-10 Fuel Pump – Broken Diaphragm.

L-11 Kohler Fuel Pump Replacement. ----- H-8

L-12 Fuel Pump Failure, Ethanol, Sta-Bil, Electric Pumps. -----

--C-7 L-13 Replacing Original with Higher HP Kohlers.

Evolving Changes of the Model 2 and 3. ----- A-11, A-12, A-13 6

and 12-volt Systems per Wisconsin and Kohler engines. ----- A-11, A-12, A-13

Plexiglas Windshields. ----- A-11, A-12, A-13

Widening and Lengthening the Car

Wisconsin and Kohler Vibration. ----- M-6, M-7 L-

14 Oil Leaks

Plus _____

M Modifications ----- *See Also*

M-1 Installing a Vanguard about Two Decades

Ago. M-2 Trailing Arm Suspension Adaptation.

Comet 94 Setup.

Replacing a Stretching Chain. ----- G-9, G-10, G-11

Transmission Jumping out of Gear. ----- G-5, G-6

Transmission Designs and Operation. ----- Section F M-

3 Part One, Several Options for Engine/Transmission Conversions. -F-1

M-4 Part Two, Utilizing the Vanguard engine, Some Details. -----

--F-1 M-5 Part Three, Other Upgrades to Handle More Power.

Adding Gussets to the Front Shock Towers. ----- I-3

Common Sense Power Upgrading.

Richard Pryer's Front End Upgrade.

Upgrade Brakes for Higher Powered Engines.

Comet vs. Peerless Differentials.

Feedback on Engine Installation, Transmission and Comet. ----- Section F

M-6 Chinese Engine Vibration. ----- L-

13

M-7 Follow-up, Engine Vibration. ----- N-14

M-8 Body and Interior Modifications. ----- L-13

M-9 More Body and Interior Modifications. -----

L-13 M-10 Model 3 Taillight Innovation

M-11 Model 2 Folding Tops

M-12 The Chonda Revolution

Plus _____

Steering Column Bearing Repair. -----B-9,
Adding Selector Valve to Fuel Tank. -----B-11
Engine Compartment Deck Lid Latch Modification. -----B-11
Size Engine Needed. -----F-1
HP vs. Tire Spin. -----F-1
Maximum Load, #40 and #50 Chain. -----F-1
6 and 12-volt Systems per AEN Wisconsin and Kohler Engines.-----L-13
Lengthening the Car. -----L-13
Widening the Frame. -----L-13
Dressing Up Wheels-----B-20

N Parts----- **See Also**

N-1 King Midget Specialists. Other Useful Vendors.
 Belts for Stock Clutches.
 Brake Parts. ----- B-7, B-8, D-3, D-6, D-13, D-14
 Generator Brushes.
 N-2 Spare Parts to Carry in KM.
 Strut Damage Potential. ----- I-3
 Wheel Balancing. ----- I-4, J-11, N-5
 N-3 The Challenge of Supplying King
 Midget Parts. N-4 ----- Supplier Survey.
 N-5 Tires; Best for KMs.----- G-1, I-4, N-7, N-12, N-19
 Balancing. ----- N-2
 Inner Tubes. ----- N-8
 N-6 White Porta Walls.
 N-7 Tire Brand, Pressure, Size and Ply. ----- I-4
 N-8 Valve Stem Grommets. ----- N-5
 N-9 Dust caps, Hubcaps.
 N-10 Improvised Model 2
 Dust Caps. N-11 ----- Hub Caps, aka Dust C
 N-12 Dressing
 Up Wheels. N-13 ----- Wheel Discs.
 N-14 Motor Mounts.
 N-15 KM Colors for Body, Frame,
 Seats, etc. N-16 ----- KM Body Colors by Y
 N-17 Rust Preventative Paint.
 N-18 Scott Olene’s Parts and Sources.
 Wisconsin Starter.
 Zenith Carburetor Kit.
 Wisconsin Engine Parts. ----- K-2, K-5, K-6
 M2 Steering Wheel. ----- N-20
 Turn Signal Lights.

Headlights. -----	N-20
Windshield Wiper Arms. -----	N-20
Brake Lights. -----	N-20, N-25
Flexible Tube to the Heater.	
Model 3 Bumpers.	
N-19 More Olene Sources.	
Belts for Stock Clutches. -----	N-1
M2 Steering Wheel. -----	N-18
Tires. -----	N-5
N-20 Scott Olene Finds More Pieces.	
Turn Signal Switch.	
Tail Lamp. -----	N-18, N-25
6-volt Cutout. 6-volt	
Flasher. Amp	
Gauge. Starter	
Button.	
Headlight Switch. Ignition	
Switch. Dimmer Switch.	
Starter Solenoid. Brake light	
switch. Flex Tubing.	
Muffler. -----	J-12
Cowl Lamp.	
N-21 Wheel Spinner Source.	
N-22 Source for Super-Cycle	
decals. N-23-----	Model 1 Headlights.
N-24 King Midget vs. Jeep	
Parts. N-25 Lenses and Lights.	
Signal Light Assembly # 440. Replacement	
Lens.	
Taillight Lens.	
N-26 Cowl Gasket Rubber.	
N-27 Wheel Cylinders. -----	D-6, N-1
N-28 Deck Lid Luggage Rack.	
N-29 Harbor Freight Source for Tools and Engines. -----	
B-6 N-30 Towing King Midgets.	
N-31 Trailers: Open vs.	
Closed. N-32 -----	Trailer Shopping in 2011.
N-33 Comet Description and Part Numbers. -----	F-1,
M-4 N-34 More Parts	
N-35 Gas Caps	

Plus _____

These Parts Noted in Other Sections:

<i>Spot Weld Cutter.</i> -----	B-6
<i>Wheel Cylinder Hone.</i> -----	B-7
<i>Metal Brake Lines and Flex Lines.</i> -----	B-7, D-8, N-1
<i>Fuel Line.</i> -----	B-7
<i>Rear Shock Rubber Mounts.</i> -----	B-8, B-16
<i>Spools of Copper Wire.</i> -----	B-10
<i>Crimp Connectors and a Crimping Tool.</i> -----	B-10

<i>Stick-On Wiring Numbers.</i>	B-10
<i>Hirsch Rusty Fuel Tank Repair Kit.</i>	B-11
<i>Fuel Level Shut Off Valve.</i>	B-11
<i>Steel Ball Joint Rod End.</i>	B-12, I-1
<i>Close Tolerance Bolts.</i>	B-12
<i>Air Operated Motorcycle Lift.</i>	B-13
<i>Rust Stripping.</i>	B-17, B-18
<i>Fuel Stabilizer.</i>	C-7, G-2, L-12
<i>Model 1 Plans.</i>	C-14
<i>M1 Springs.</i>	C-15
<i>Brake Cable and Fittings for M2.</i>	D-3, D-13
<i>Brake Lines, Double Flare Kit and DOT 5 Brake Fluid.</i>	D-8
<i>Parking Brake Cables.</i>	D-3, D-13
<i>Pump to Fill Master Cylinder.</i>	D-14
<i>Bearing for High and Low Speed Clutch.</i>	E-5
<i>Clutch/Brake Lining Adhesive.</i>	E-6
<i>Bearings for 10" Clicker Clutch.</i>	E-8
<i>Loctite.</i>	F-4, G-7, G-12
<i>Wiring Harness.</i>	G-2
<i>Bearing and Seal for Transmission.</i>	G-6
<i>Transmission Input Shaft Sprocket Bronze Bushing.</i>	G-6, G-7
<i>Chain Inside Transmission.</i>	G-7
<i>Voltage Regulator.</i>	H-7
<i>Kohler Electric Fuel Pump.</i>	H-8, L-11, L-12, N-2
<i>LED Strip Lighting.</i>	H-14
<i>Front End Damper/Stabilizer.</i>	I-1, I-9
<i>Steering Wheel Repair Kit.</i>	I-15
<i>Muffler & Mandrel Bent Pipes.</i>	J-12
<i>Exhaust Gasket Material.</i>	J-12
<i>Exhaust Pipe Flange.</i>	J-12
<i>Speedometer Drive Spring.</i>	J-13
<i>Kohler Solid State Ignition.</i>	L-6
<i>Drive Chain.</i>	M-4
<i>Dayco Belt for Use with Comet.</i>	M-4
<i>Pryer/Gerhardt Front End Struts.</i>	M-5

Plus _____