

SHOP NOTES King Midget Maintenance and Restoration

MIDGET MOTORS CORPORATION

Athens, Ohio 45701

P.O. Box 460 Tel. 614-593-7786

In ordering be sure and give the serial number of your car. On 1957 and later cars, the serial number is located on the left frame in the rear of the car where the engine suspension frame attaches to the main frame. All parts prices are F.O.B. Athens, Ohio. If you wish to eliminate C.O.D. charges be certain and include enough for postage. There is a minimum order of \$1.00.

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CONGRATULATIONS

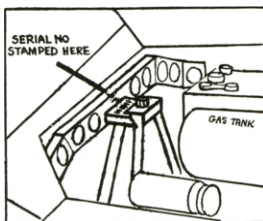
THE KING MIDGET IS A FINE LITTLE CAR. It is simple in design and operation, and should require very little in the way of adjustment or repair. Like any fine machine, adjustments or repairs, if required, should be made properly, and it is the purpose of this book to explain these in some detail.

Your car is shipped ready to run. It has been road tested, and serviced at the factory. It is only necessary to place gasoline in the tank, connect one battery cable and drive away. The cars generally have rather close tolerance and a brand new car will not handle as easy, ride nearly as well, or run as smoothly and quietly or have as much power and speed as when it has been broken in.

We suggest that during-the break-in period, any urge to "tinker" with the mechanism of the car be put aside until the King Midget shows you itself what a little considerate running will do for it. Do not hesitate to tighten a body bolt if a squeak should develop, as happens in all new cars, but do not take apart the transmission or other mechanical parts of the car to see "how it operates". It would be most unusual to find anything of a serious nature wrong with any new King Midget, or for a long time to come for that matter. It would be unreasonable to expect a new car to drive as easy or have the power and performance of one that has been broken in.

TAKING DELIVERY ON YOUR CAR. Most people prefer to accept delivery of their car at the freight terminal since it is shipped ready to run. You will usually find plenty of helping hands and interest in the car. Take a small amount of gasoline since there is none in the tank. We use an auxiliary tank in testing the cars so we are saved the time of draining the car tank.

DAMAGE IN SHIPMENT. When the car is shipped it is insured against damage by the motor freight company. If there should be damage of any kind to it, your agent will make notation of damage on your bill of lading and help you to have the damage taken care of, at the carriers expense.



SERIAL NUMBERS. If you wish to refer to the serial numbers at any time, the car serial number is on the left frame member in the rear of the car, where the engine suspension attaches to the frame. The engine serial number is stamped on the engine name plate. These serial numbers appear also on your title papers which come with car shipment.

PLACING THE CAR IN SERVICE— Is very simple. One battery cable has been disconnected for shipment and the keys to the car are taped to this battery cable. Place the battery cable on the terminal of the battery and place the key in the ignition switch lock on the instrument panel.

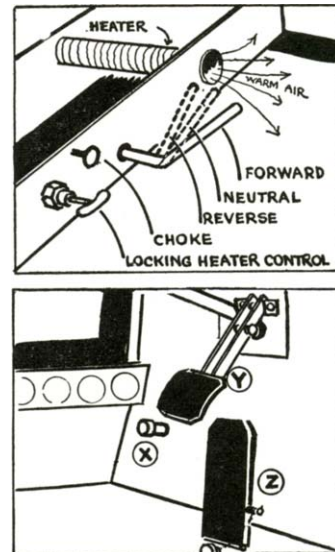
Car has been lubricated and engine is shipped with oil in the crankcase, ready to run. To check oil level, remove dip stick prominently located on rear of engine.

THE CONTROLS. The choke control, forward and reverse shift lever and heater controls are located just under the front edge of the seat. The choke is seldom used, except in cold weather, and usually only for an instant, over choking is not recommended, but even if it

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is done, the engine will rapidly clear itself if throttle pedal is held open. Easy starting under almost any condition is just one of the many fine features of this engine.

FOOT BRAKE Y and accelerator pedal Z consist of the controls operated by the feet. The dimmer switch X is also operated by foot. There is no foot clutch as transmission is automatic. The foot brake pedal applies the four wheel hydraulic brakes. It takes only very light pedal pressure, about the same or less than large cars with power brakes. The parking brake is the lever on the left hand side, and acts on the two rear wheels only. The operating mechanism which is mechanical is entirely separate from the hydraulic service brakes.



AUTOMATIC TRANSMISSION. The King Midget is equipped with an automatic transmission, with two speeds forward and reverse. Pressing the gear shift lever all the way down places the car in forward drive position. Pulling this lever all the way up places the car in reverse drive position. Between these two is the neutral position.

Do not force the shifting arm if it does not drop readily into gear but DO press lightly on the accelerator with the engine running while pressing lightly on the shift lever, which gives the gears a chance to drop readily into mesh. Generally, the car will not shift into the forward or reverse position with the engine stopped as the gears do not mesh and this is the same as in large cars with a direct shifting mechanism. If the car is parked on a grade and shift lever does not move easily, it is only necessary to step on the accelerator to move the car enough to relieve the bind on the gears, so that it shifts easily.

CARE OF THE TRANSMISSION. The transmission is very sturdy and requires little in the way of attention and nothing in the way of adjustment. The gear case which is just back of the seat under the car should be checked each time the car is lubricated and enough motor oil placed in the filler plug which is located on the front side of the case to maintain the level with the filler plug hole. Never use anything but No. 30 regular motor oil in this gear case.

The King Midget is simplicity itself to drive. To place the car in forward drive position, simply start the engine, then press down on the shift lever and step on the accelerator. The car immediately moves out in low gear, and shifts into high when the proper shifting speed is reached. Since under Midget Motors patents, the car does not have a tendency to creep at well above idling speeds, it is not necessary to shift the lever back to neutral position for starting.

STARTING THE ENGINE. To start the engine, turn the ignition key to the right. In cold weather, it may be necessary to choke the engine slightly, but care should be used not to overchoke the engine, and it is generally well to press lightly on the accelerator when starting the engine. When the accelerator is pressed down further, with the car in drive position, the car will Hove forward in low. It will continue in low gear until sufficient speed is reached (about 15 miles per hour) for it to go in high gear, when it will automatically shift into high. The car can be shifted into high at a slightly lower speed by releasing pressure on the accelerator just slightly to enable it to shift gears. When the car

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climbs a steep hill or a hard pull that it cannot pull in high, it will automatically shift back into low gear.

OPERATION. A great many people drive the King Midget that do not drive any other car as they are so very simple to drive. There is essentially a "Go" pedal (the accelerator pedal) and the "Stop" pedal (the brake pedal). The following is suggested as the best way of operating the car as to driving habits. It is not necessary to place the car in neutral position in order to start it as the type transmission used in the King Midget has no friction at or near idling speeds. The car can be started in either forward or reverse driving position if the accelerator is pressed only slightly. On models prior to July 1, 1967 a light pressure on the accelerator will engage the selector clutch into one of the four notches on the shaft to engage this clutch. (It is possible to make the cars jump somewhat in starting by stepping suddenly on the gas after shifting from forward or reverse. This is caused by the selector clutch making one-quarter turn on the shaft before engaging.) (On models after July 1, 1967 there are no notches in clutch.) If the gas is applied just slightly, the clutch will turn the selector slightly to engage it and then the gas pedal should be depressed well down to enable the engine to speed up and the low gear clutch to engage fully. This is better than pressing the pedal down gradually which causes the low gear linings to slip more. It is impossible to make a jerky start in the King Midget or to kill the engine because of the smooth operation of the clutches used.

On a hill that the car cannot pull in high, it is better to ease back slightly on the throttle to let it go on up in low without attempting to engage the high speed clutch as this would cause unnecessary wear on the high speed clutch.

This transmission is very smooth in shifting and will withstand rough treatment. You do not have to baby it. Sometimes when the clutch linings become glazed the transmission will have a tendency to jerk when dropping from high back into low and then slightly accelerating just at the critical point between high and low gear. If this occurs either let up on the accelerator and allow the car to drop back into low gear or press well down on the accelerator to make the car shift into high. This condition does not require any adjustment or repair as it usually will correct itself with wear on the clutch linings. Just remember, if this ever happens, either let up on the accelerator or press down hard on it.

If the shift lever does not go into drive or reverse position easily it means only that the gear teeth in the transmission case are not in meshing position. Stepping lightly on the accelerator will cause them to mesh and the gear to slip into position immediately. It is good practice when moving the shift lever into position to simply hold pressure up or down on the lever and while doing this step down on the accelerator to move the car out and it will always drop into gear easily. Never, of course, try to shift the gear lever with the engine already running fast as this would not allow the gears to slip into mesh and would "rake" the gears together.

TIRES. The tires are pumped up rather hard for shipment. These are of the very low pressure type, and should have the air let out of them until the front tires have 8 to 10 pounds pressure and the rear tires 20 to 22 pounds pressure. Because of the low pressure in the tires, and the light weight of the machine, ordinary obstacles that would puncture a large car tire, do not seem to puncture or damage the tires on the King Midget.

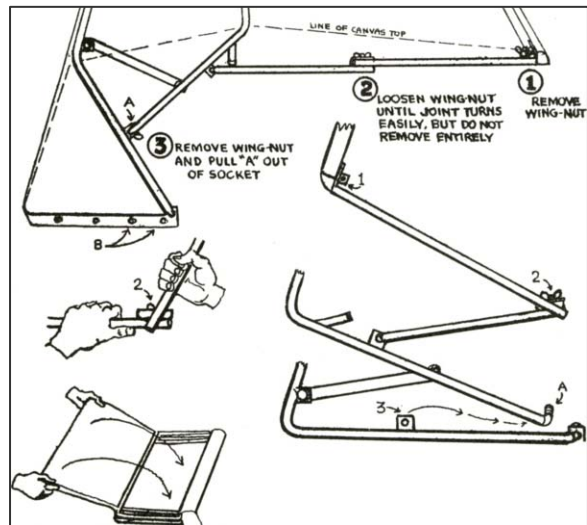
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GAS AND OIL. Use regular quality automobile gas in the King Midget. Do not use special or white stove gas, but regular quality automobile gasoline, as it comes from the filling station pump. Do not use gasoline from a can that has been setting for some time, as it may contain water, produced by repeated evaporation and condensation in the can, and would be most certain to have lost its volatility. When your King Midget is shipped, it has in the crankcase the finest quality light engine oil. This oil is to be drained at 300 miles and replaced with No. 10w30 high detergent motor oil. The dip stick is at the rear of the engine, and the oil level should be checked frequently and especially when new, as most new engines will use some oil, until rings are thoroughly seated. It takes only a minute to drain the oil, by removing the drain plug, located on rear of crankcase near bottom. Since the crankcase capacity is only 2 quarts, and it is so little trouble to drain the oil, it is recommended that the oil be changed whenever the car is greased. Do not allow the oil level to drop below the letters LOW on the dip stick.

CARE OF FINISH. The King Midget has a hard enamel finish on the car body. This should be washed with water or a small amount of detergent and water. We do not recommend waxing car for about 90 days from time of delivery to allow for maximum hardness of enamel.

FOLDING TOP. To fold top, simply remove wing nut, (1) and let top rise off of windshield frame; Loosen wing nut (2) until joint turns easily, but you do not need to remove wing nut entirely; Remove wing nut (3) and pull out of socket and the top is folded. Then pull top cover material back and fold over into compartment back of seat. To put top up, simply reverse the procedure. Adjusting nut on each side of top bows can be screwed down to always take up any stretch in top material and always keep top tight.

Pull canvas top back into fold, throw forward to fit in behind back of seat.



REPAIRS AND ADJUSTMENTS

Your King Midget should require very little repair or adjustment. All of the adjustments and repairs are very easy to make, once understood, due to the rugged and simplified design. Since it will probably be a long time before any repair or adjustment is needed, we suggest this book be filed away, where it can be referred to later.

BATTERY— Is 12 volt, same size as used on Ford Falcon. Car uses negative ground.

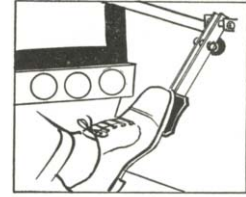
AMMETER— Is located on instrument panel and indicates accurately the charge or discharge rate of battery and generator.

AUTO-LITE— Electrical equipment is used on the King Midget, except for the Starter Generator, which is Delco. Replacement parts and available from Auto-Lite or United

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Motors Service dealers, and these are located in almost every city and town of any size in the U.S.A.

BRAKES— The foot brake pedal is of the suspended type, and operates on all four wheels. The master cylinder is located underneath the hood of the car and is accessible by removing the inspection cover plate just over the foot brake pedal. Easy adjustment of the brakes is provided by two nuts located on the brake anchor plates. It is not necessary to remove wheels in order to adjust these. To adjust: Place a wrench on the adjusting nut and with the wheel off the floor turn the nut so that the brake shoe drags slightly on the drum when the wheel is turned. Then back off adjusting nut just to the point where the lining will not contact the drum. Repeat the operation on the other adjusting nut and go over each of the four wheels in this manner.



This is the same procedure used on almost all cars having hydraulic brakes, but more easily accessible on the King Midget. The adjustment should be made so that lining is as close as possible to the drum without actually touching or dragging on the drum. The linings should not drag on the drum as it will cause friction and prevent the proper performance of the car. A valve for the purpose of bleeding air from the brake lines is located just in the center of the lower part of brake backing plate. To bleed air from lines, first be sure master cylinder is full of fluid. Have someone press on the brake pedal and while this is being pressed down, loosen the left front bleeder valve enough to allow the air and some of the fluid to escape. Close the bleeder valve before letting up pressure on the brake pedal. Repeat to be sure all air is expelled from this line. Repeat this next on the right front. Then on right rear. Then on left rear. Inspect lines to see that there is no leakage. This is standard brake procedure and is understood by all garage or brake mechanics. The Parking Brake is mechanical and operates on the two rear wheels. Controls and operating mechanism work entirely independent of the foot brakes. This is also easily adjusted by changing the clamps at the brake operating lever to pull the brakes on tighter. If at any time additional adjustment or tightening is needed, this may be obtained by taking the adjustment up at the clamps just back of seat. If in adjusting the foot brakes, the rear shoes still seem to drag after adjusting nut is backed off, check to see that parking brake adjustment is not too tight. These adjustments while seemingly lengthy, are easily accessible and rapidly and easily made. They are standard garage procedures understood by all garage mechanics.

COLD WEATHER OPERATION— There is nothing to freeze up on the King Midget since it uses no water or any other liquid other than oil and gasoline and they are not damaged by extremely cold weather. The battery should of course be fully charged. These engines start readily in far below zero weather.

CARBURETOR— Idling adjusting valve is just below throttle lever. It is set for the fastest and smoothest idling. An adjusting screw also regulates the idling speed of the engine, and this is set for the lowest speed at which engine will run smoothly. These engines are smooth running and idle very slowly, and here again this adjustment is not critical.

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High speed adjusting valve is on right side of carburetor when facing front of car. It is opened two turns from closed position (never tighten down tight as it will damage valve) then by actual driving on the road at fairly high speed, stop and turn down one-eighth turn at a time until the position is found where the car goes fastest and at the same time not so lean that the engine hesitates when throttle is opened suddenly.

CHAIN— The chain is long wearing Diamond brand and adjustment is easily made by means of the adjusting mechanism, attached to the transmission gear case and the frame. Loosen the two locking nuts on this rod and adjust so that chain is not too tight, nor excessively loose. Best setting is where there is about 3/4 inches of play (up and down, not back and forth) on the lower slack side of chain. Never run the chain tight, as this would cause chain wear and loss of power.

AIR CLEANER— Carburetor, Point, Fuel Pump and oil drain are all on rear of engine, for easy access and checking or adjusting when required. The oil drain is also on the rear of the engine base. The oil may be drained in a few minutes with the car setting on the ground without soiling your "Sunday Best". The oil dip stick and filler pipe is located on top of engine for most convenience

ENGINE— Engine is Kohler, most famous maker of heavy duty air-cooled engines. It develops 12 brake horsepower at only 3600 r.p.m. This is a heavy duty, slow speed, air cooled engine. A complete service and repair manual is sent with each car. It also contains a list of the many thousands of Kohler distributors and service stations throughout the country. Parts, if ever needed, may be obtained from these distributors or from the King Midget factory.

ENGINE PERFORMANCE— The transmission will not operate properly unless the engine is developing sufficient power to properly engage the clutches. Engine performance is covered very thoroughly in the engine manual. Correct carburetor setting and timing are the principal points to check. A compression check on older engines that seem to have lost power might indicate a valve or ring job or other work, is needed.

ENGINE CAUTION— If bolts are ever removed from the cylinder head, be sure and see that the right bolts go back into the right holes as some of these bolts are long and some are short and if the long bolts are placed in the short holes and drawn down tightly, this could result in a cracked block when the heat expansion comes on it. It is important to see that the bolts go into the proper holes as noted by the thickness of the bosses on the head. Whenever the head has been removed always use a new head gasket.

GENERATOR— Generator is 12 volt Delco and is equipped with an automatic charging regulator. It has ample capacity for operating extra electrical accessories. To adjust the generator belt, loosen the nut holding the band around the generator and pull generator back to desired tightness of belt and re-tighten.

GASOLINE MILEAGE— Depends upon several factors. While even under the worst circumstances the mileage on the King Midget should be amazingly good, the car should be adjusted for best mileage, as this usually also carries with it best performance. Factors affecting mileage are the proper carburetor setting, proper timing, speed at which car is driven as well as terrain, whether it is level or hilly, or in traffic. It is generally recommended that a new car first be driven about 500 miles to break in before changing

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any adjustments to increase gasoline economy. In making the high speed adjustment on the carburetor, a point will be found where the engine will run satisfactory and then generally this adjustment can be leaned down from one-fourth to three-fourths of a turn and the car still operates satisfactorily, but with much greater mileage. Driving habits also effect gas mileage. The car will not get as good mileage at high speed as it will at lower speeds. Instructions under proper carburetor setting and timing should be referred to if it is felt desirable to change these adjustments at any time.

LOCKING SWITCH— The ignition switch, located on the instrument panel, is furnished with two keys. These keys fit only the lock for the particular car they are sent with and are not interchangeable with any other King Midget.

HORN— Is located outside, under front of car. It is a Sparton truck type and has an adjusting screw with lock nut for varying the loudness or tone.

LIGHTS— Headlights are standard 12 volt 7 inch sealed beam, interchangeable with almost all large cars. Parking light bulbs are 3 candle power, and when turn signals have been ordered this is a combination 3 and 15 candle power bulb. Tail lights are the same. License light bulb is 3 candle power, single contact bulb. Light fuse on bottom of light switch is 30 amp.

FRONT END ALIGNMENT— The King Midget front end is a very sturdy unit which will ordinarily require little attention. We give here complete alignment procedure. First, check adjustment on upper section of each shock absorber. This should be adjusted so that there is no excess motion, but also that it is not tight enough to cause any bind, when front is bounced up and down. Car must be setting with weight on wheels when checking or adjusting front end. The front shocks are fitted tightly on new cars and they will not have free motion or ride at their best until they have been driven for about 500 miles.

ADJUSTMENT FOR STEERING AND FRONT END— First check tie rod ends and steering drag link ends to make sure they are snug enough to prevent play in these connections. Be sure and see that these bolts are tight and secured if loosened. With front wheels exactly straight and the end nuts adjusted as above, measure across the center of the front tires at floor pan height at the front of tire and at the back. The toe-in should be 1/8", that is, the center of the tires should measure 1/8", closer at the front of the tires than at the rear. The drag link can be adjusted so that wheels turn to the same amount of extreme turning. This will usually just about let the tires touch the pan on either side.

There is an adjustment provided to compensate for wear on the shock. This is the adjusting nut on the lower side and to the rear of the top shock tube. It is important that this adjustment never be drawn up so tightly that it causes the shock to bind. It is important to draw up just enough to prevent excess play of clearance in the shocks. To draw it up so much that it would prevent free acting of the shock would impose a very great strain on the front end mechanism of the car. While it would be well to check the adjustment after the first 500 miles on the car, it will not then need any further adjusting for a long time as these tubes are subject to very little wear.

Do not fill the shocks full of oil. Add only enough each time the car is lubricated, using No. 90 hypoid transmission oil, to each shock to be sure the lower shock tube is full. If they are filled too full, they will drip the excess oil out slowly until the oil finds the

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proper level. As long as there is a wet film of oil between the two shock tubes, you may be sure they are receiving plenty of lubrication. A glance will show whether these tubes are moist with oil where they work together. If they are dry, oil should be added to the shocks at once.

When checking the front suspension do not forget to check the wheel bearing play. The bearings should be snug without excess play. It must be remembered that the left front wheel houses the speedometer drive and care should be exercised in removing the hub cap not to damage the speedometer drive spring. This spring can be removed from the hub cap. In tightening the left wheel bearing the two Allen set screws must be loosened first. After adjusting bearings do not fail to tighten Allen set screws.

SWAY BAR— Is mounted on rubber and steel bushings. No adjustment needed. Do not oil or lubricate.

STARTER— Is the 12 volt, starter-generator type, which is very quiet in operation. Generator has ample capacity for cars electrical system, and extras such as radio, or even two-way radio.

TWO SPEED AUTOMATIC TRANSMISSION— The transmission in the King Midget is a rugged and dependable unit. It requires only a little attention, lubrication and proper chain adjustment. The gear case of the unit should be kept filled with No. 30 regular motor oil. This will use little, if any, but should be checked each time car is lubricated. An alemite fitting on the main transmission shaft is also given a few shots of grease, at the same time. The three nuts and bolts on the power input end of this shaft are for the purpose of adjusting the Timken bearing only, and should not be moved, except at such time as transmission was being overhauled, and it was desired to change this adjustment. The clutches in the transmission are of the dry two shoe type, and require no adjustment.

The transmission consists of a low speed clutch mounted on the engine shaft (the one farthest away from the engine) and a high speed clutch (the one next to the engine) on the same shaft. On models prior to July 1, 1967 there is a centrifugal selector clutch which is an integral part of the two transmission pulleys. The latter is a steel ball and spring which allows the high gear clutch to override the low gear clutch and this is the mechanism that makes the clicking sound as you come to a stop from high gear or momentarily between low gear and high gear. It is possible to drive slow enough in high to also have this click but you would not normally do this. This sound is normal, but it is somewhat more pronounced in new cars as this has a tendency to diminish as this ball tends to seat itself and is less pronounced in cars with a great deal of mileage on them although there will be some noticeable clicking. The reason for using this type of selector clutch is that it is not subject to wear except when coming to a stop which means a comparatively trouble free, long wearing mechanism, as this throws out when running at normal speeds.

When removing the large 10" gully and the small 6" pulley, care should be taken in replacing the ball and spring in the 6" pulley. ***It is very important that the small end of the tapered spring be placed against the steel ball when reassembling the two pulleys.*** On models after July 1, 1967 an over-running clutch is used, which has no ball and spring and does not make a clicking sound.

The belts used on the transmission are specially made by Goodyear for Midget Motors

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Corporation. Do not try to substitute fan belts for these as they will not hold the power of the car nor will they be satisfactory in any manner. In replacing a belt from wear, both belts should be replaced as these come in matched sets.

Tension on the belts is caused by the rod which pushes back on the motor mounting frame. To remove the belts this rod has the tension removed from it by means of the nuts which adjust this and the rod is removed and the motor mount moved forward. Never try to remove belts by forcing them off of the pulleys as this most certainly will damage not only the belt but also the pulleys. In retightening the tension rod on old belts, care should be exercised not to over tighten the belts. They should be tightened so that they are taunt enough to present a firm feel. There should not be any appreciable up and down play on the belts with proper adjustment.

If the belts are suspected of slipping at any time, this can be very easily checked by the following procedure: Have someone sit in the car and start the engine, and with the car in forward drive position, hold the brake pedal down securely, and momentarily only step all the way down on the accelerator. While this is being done, stand at the back of the car with the engine compartment lid up and see whether or not the low gear clutch pulley is spinning in the belt. If it does spin in the belt, this would indicate that just slightly more pressure was needed on the tension rod.

When this is done, the low gear clutch, of course, will slip in the drum as this holds the engine down to the point where it cannot turn sufficiently to fully engage the clutch. These clutches will hold the full power of the engine until their lining is almost completely worn out. The car can, of course, be stalled, especially when starting out on a hard pull, as the engine will not turn fast enough to sufficiently engage the clutch, as the clutch is holding the power of the engine and consequently holding down the speed of the engine due to the load. If this clutch was of a mechanical nature that could be locked in, it would kill the engine as the engine develops less power at low speed. The King Midget transmission is similar in general principle and operation to that used in the latest large cars.

CLIMBING HILLS— In going up a steep hill, if the King Midget will not climb in high it will be easier on the clutches and the engine if the accelerator is eased up slightly in low gear so that the high gear clutch will not try to engage.

TO REMOVE TRANSMISSION CLUTCHES— We generally do not recommend removing the clutches unless the linings are worn out. To remove these clutches follow this procedure:

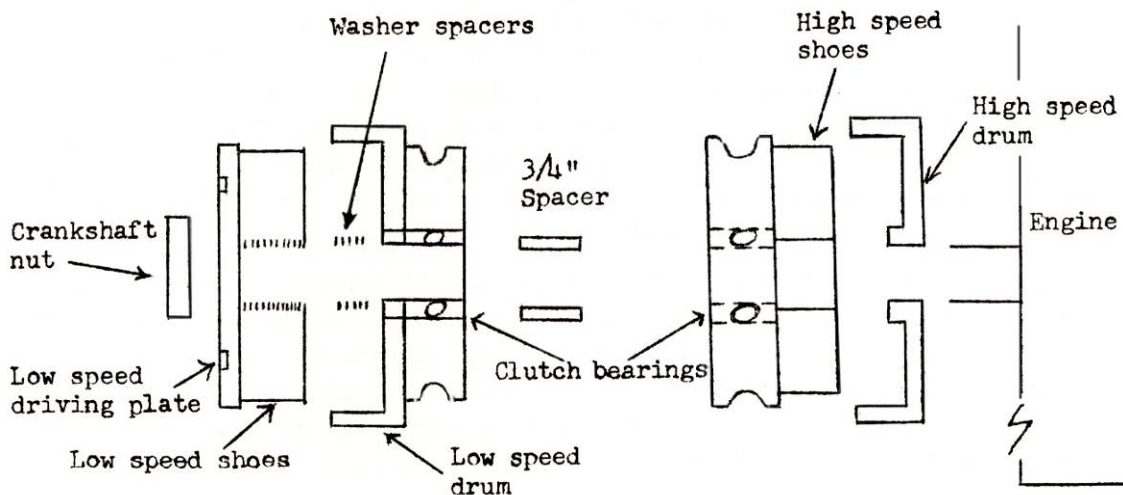
1. Utilize a small strap wrench, which is available from Midget Motors, to hold the high speed clutch drum (next to the engine) from moving. Remove the nut from the end of the crankshaft.
1. Take a punch and place end in the dimples on the low speed clutch shoes and tap punch lightly with hammer to unscrew shoes in counterclockwise direction when facing the clutch end of engine shaft. Note the washer-like spacers and save these for reassembling.
2. Take two large screwdrivers and by prying carefully on opposite sides of the low gear drum at different position, pry the drum off the shaft. Be careful not to exert so much

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pressure that the drum would be damaged. This is a careful fit at close tolerance and can usually be removed in this manner. It is sometimes necessary to use a wheel puller.

3. Remove the 3/4 wide spacer between the two clutch assemblies.
4. Remove the high speed clutch pulley mechanism by prying with two screwdrivers on back side of pulley and edge of drum. Care should be used not to force shoes off the rubber bushing. Here again, it could be necessary to use a gear puller.
5. Remove high speed clutch drum (if necessary because of being scored) by use of screwdriver as above, or wheel puller if necessary.

Care should be taken in removing all parts; do not force to the extent of damaging them. Notice their position on the shaft and reassemble in the same order.



CAUTION— Never put oil, belt dressing, or other material on the clutches or on the belts as this will cause excessive slipping or grabbing. The driving bars are mounted in rubber bushings and these should not be lubricated. The bearings in these clutches are precision bearings and have the grease sealed in them. They do not require lubrication.

CHANGING GEAR RATIOS— It is a simple matter to change the gear ratio on the King Midget for more pulling power in mountainous country or for higher speed in level country. These ratios correspond to the number of teeth in the sprocket in the shaft coming from the transmission case. In production we have utilized two types of chain— either a #40 chain or a #50 chain. When ordering sprockets it is imperative that the chain type be specified. Where there is doubt the proper chain identity can be ascertained from the original bill of sale or it will be found stamped on the small drive sprocket.

For the #40 chain the ratios run from a #20 tooth sprocket to a #14 tooth sprocket. On the #50 chain the ratios run from a 16 tooth sprocket to a 13 tooth sprocket. The 20 tooth is the highest ratio: that is, the engine will drive the car faster at the same engine speed and the 14 tooth is the lowest. The cars are normally shipped with either a #40 chain and a 20-tooth sprocket or a #50 chain and a 16-tooth sprocket. Both of these drive systems have the same gear ratio. To change this, it is only necessary to remove the chain and loosen the four Allen set screws in the sprocket and slide this sprocket from its shaft. (Be

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sure to see that all Allen screws are removed from the sprocket. Sometimes one hole will have two screws in it.) The desired ratio is then placed on the shaft and slid on the proper distance to align with the sprocket on the rear wheel. The chain is then replaced and in doing this it will be necessary to change the tightness of the chain by means of the adjustment provided, as outlined above. With the #50 chain which is now standard, the 16-tooth sprocket is normally used in flat or level country and the 15-tooth sprocket where there are moderate hills or mountains. The 14-tooth is used in extremely mountainous country and the 13-tooth is used mostly where the cars are used for pulling trailers or on extremely hilly golf courses or for industrial use. You can determine the number of teeth on the sprocket by counting them without removing the sprocket.

PROPER CHAIN ADJUSTMENT— The chain adjustment is made by means of the turnbuckle, one end of which fastens to the bottom of the transmission case and the other end to the frame. To check this adjustment, roll the car forward enough to make one complete revolution of the rear wheel at the same time checking the slack on the under side of the chain. At the tightest point the slack side of the chain should be loose enough that you can move it about 3/4" straight up and down. This, of course, does not mean that the chain would have slack that you could move it back and forth.

In making the chain adjustment, roll the car slowly, at the same time feeling the chain to determine the position of the rear wheel where the chain is tightest. Make the chain adjustment for slackness at this tightest point.

To change the chain adjustment, loosen the locking nuts on the turnbuckle and turn the center of the turnbuckle to either tighten or loosen the chain as desired. This tightens or loosens the chain by moving the transmission case back and forth and it will be necessary to loosen slightly the U-bolts holding this transmission in position enough to let this case move sufficiently for the chain adjustment. The U-bolts should be again tightened after the chain is adjusted. The chain has a connecting link and if it is desired to remove the chain for towing the car or for replacing chain, you will find one link that is different from the rest and this link may be removed by carefully prying the outside locking bar from the link and removing link from chain. When reconnecting the chain place both ends over the small sprocket. This positions them properly to accept the chain link.

LUBRICATION OF CHAIN— The chain should be lubricated with regular chain lube and this is available from Midget Motors Corporation, or this lubricant can be obtained from most motorcycle dealers. The difference between this chain lube and regular oil is that the chain lube tends to penetrate into the linkage and the surface film evaporates which does not have a tendency to collect dust. The chain should be lubricated at least every time the car is lubricated and since it takes only a moment, it would be better to lubricate it each week, as it would increase the life of the chain and give the car slightly more power because of the easy action of the chain.

To lubricate the chain, raise the rear engine compartment lid, and apply the chain lube from the squirt can, while pushing the car ahead enough to make at least a complete revolution of the chain. Apply lubricant so that you are sure it penetrates inside the rollers, as chain wear occurs between the rollers and their pins, not on the outside of the chain. A worn chain should be replaced as it will rather rapidly wear the sprockets, since it allows the chain to pull on only one tooth of the sprocket at a time. To test chain for

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wear, it should be removed and stretched out on the floor full length. Then take each end and push chain lengths together. If it "shortens" together more than $\frac{3}{4}$ " it should by all means be replaced. It will take a great deal of running under normal conditions, if chain is kept lubricated, to cause this much wear.

REBUILDING TRANSMISSIONS— After a car has been in service for some years the transmission unit itself should need repair, you can, if you wish, return it to the factory by just removing this transmission unit assembly. This would also apply, of course, if you needed repair or adjustment to this after any time although the mechanism is not complicated and any mechanic should have little difficulty in making required repairs. The precision ball bearings in the larger pulley located on the transmission shaft are lubricated by alemite bearing grease being packed between the two bearings. It is necessary to remove the pulley and remove these bearings by pressing out to repack these.

GEAR CASE LUBRICATION— The plug in front side of the gear case is removed and regular No. 30 motor oil placed in this up to the level of the plug. Do not fill this case full of oil as this would leak out of the shaft and this actually would not give you as good lubrication as where the oil is carried just to the level of the filler plug and has a chance to circulate.

The filler plug can be removed to flush the oil with a flushing liquid available at filling stations if the oil has become thick from over-greasing the grease fitting on the transmission shaft housing, or from years of use. Be sure and refill before again driving the car.

THROTTLE CONTROL— Is aircraft type, stainless steel or galvanized. If control is removed at any time, check to make sure it opens throttle fully. Nuts at carburetor bracket may be adjusted to cause this to open fully.

TUNING FOR BEST PERFORMANCE— See that car rolls freely. Block each wheel off ground and check to see that there is no drag on either brakes or bearings on any of the wheels. Check carburetor adjustments. Check to see that throttle opens carburetor fully. Check ignition timing. Check tire pressure. Check toe-in of front wheels. Check chain adjustment. Check oil level in transmission gear box. Do not overfill either the gear box or the engine with oil.

WHEEL BEARING ADJUSTMENT— Bearings are Timken Roller and spindle nuts should be drawn up just to the point where there is no extra play in wheels but never tighten so there is pressure on bearings and wheels will not spin. In replacing left front wheel nut be sure Allen screws in spindle nut are tightened into spindle securely.

RELINING THE CLUTCH SHOES— We can reline and rebush clutch shoes sent in to us as long as they have not been worn down into the steel part which would make them out of balance. We also sell these shoes complete with lining for replacement on the clutch.

GREASING— Proper lubrication of your King Midget is the most inexpensive preventive maintenance that one can give your car. There are eight grease fittings. All are easily seen except one. The fitting behind the steering box is often over looked. In lubricating the fitting on the transmission shaft, use only a few shots of grease and this

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need not be done more often than every 2,000 miles.

The rear shocks do not require lubrication as often as the front shocks, As stated on lube chart the filler holes are exposed by jacking up the car with the rear bumper. It should be noted that it will be necessary to disconnect the sway bar so that the under carriage will drop down enough to expose the oil holes.

Your King Midget should seldom require adjustment or repair BUT be sure that adjustments or repair work when needed is properly made.

Take good care of your King Midget and it will take good care of you.

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PARTS AND ASSEMBLIES

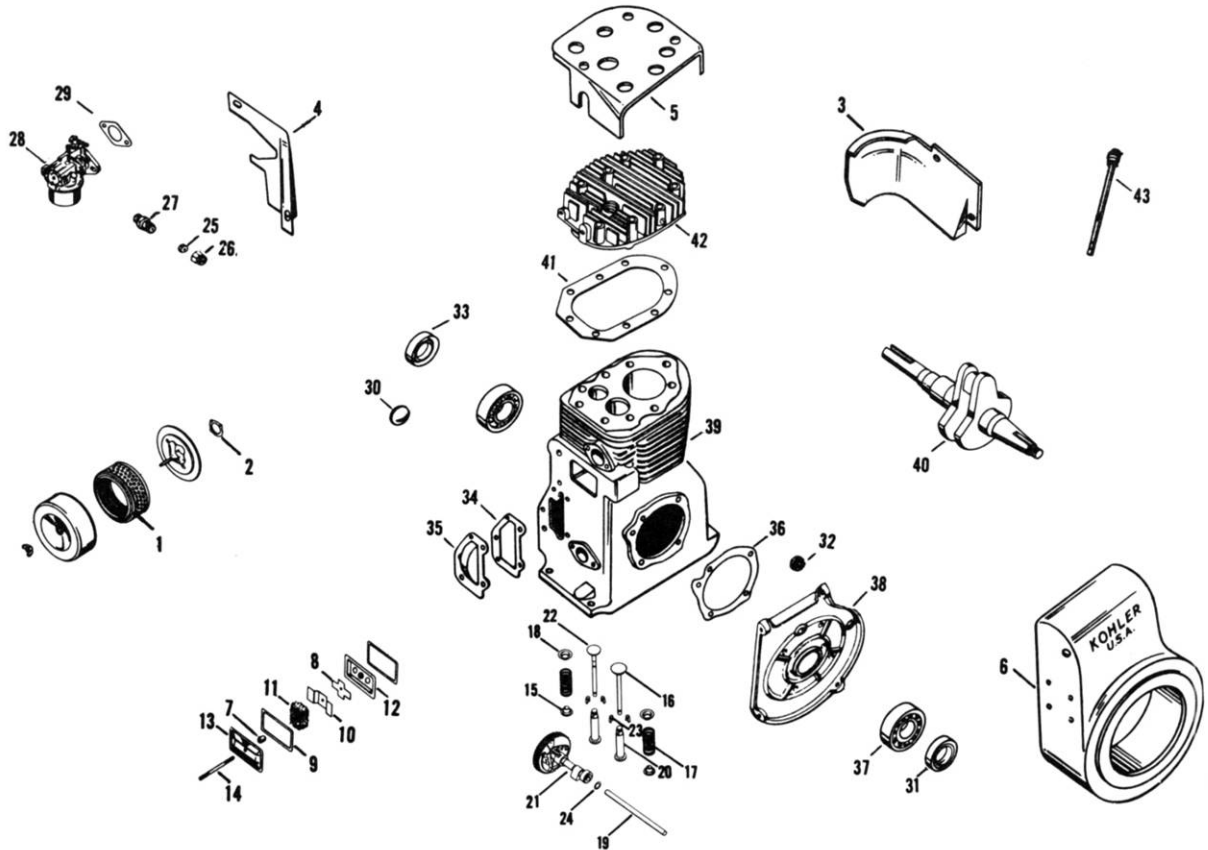
Group No. 1 — Engine

Parts Not Illustrated

Part No.	Description	List
1-1	Muffler — for Kohler Engine	\$13.15
1-2	Generator Belt for Kohler Engine	2.75
1-3	Kohler Engine — 12 H.P. (Complete	(Write for factory quote)
1-4	Spring — Throttle Cable	.70
1-5	Clamp — for Kohler Manifold	.70
1-6	U-Bolt — for Kohler Muffler Support	.95
1-7	Clamp — Tail Pipe & Exhaust Pipe (2 required)	.30 ea.
1-8	Engine Cradle Mount — Upper	2.50
1-9	Engine Cradle Mount — Lower	1.00
11-350	Hex Cap Screw — For Cradle Mount — L. Side — 5/8x18x21/2"	.41
11-351	Hex Cap Screw — For Cradle Mount — R. Side — 5/8x18x3"	.41
11-540	Lock Nut Cradle Bolt	.25
1-10	Tail Pipe — for Kohler Engine	3.50
1-11	Exhaust Pipe—for Kohler Engine	5.50
1-12	Manifold Pipe—for Kohler Engine	5.35
1-13	Generator Belt—for Wisconsin Engine	2.75
1-14	Muffler — for Wisconsin Engine	13.70
1-16	Engine Cradle — Kohler Engine	27.45
1-24	Tail Pipe — for Wisconsin Engine	6.80

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ENGINE PARTS LIST



Item No.	Quantity	Part No.	Description	Item No.	Quantity	Part No.	Description	Item No.	Quantity	Part No.	Description
AIR INTAKE GROUP											
3		X-15-3	Screw, F.H.M. 10-32x3/8	15	2	230011	Retainer, valve spring	30	1	X-230-11	Plug, expansion
3		X-19-1	Washer, lock #10	16	1	235008	Valve, intake	31	1	X-271-30	Seal, front oil
3		X-25-79	Washer	17	2	235010	Spring, valve	32	1	X-301-1	Button, plug
1	1	A-235100	Cleaner, air - assembly	18	2	235011	Retainer, spring upper	33	1	X-379-6	Seal, rear oil
1	1	235116	Element	19	1	235053	Pin, camshaft	34	1	235025	Gasket, camshaft cover
2	1	275341	Gasket, air horn	20	2	A-235327	Tappet, assembly	35	1	235026	Cover, camshaft
BAFFLES & SHROUD GROUP											
4		X-132-2	Screw, H.C. 1/4-20x3/4	21	1	A-235646	Camshaft, assembly	36	6	235070	Gasket, bear, plate.010
2		X-132-6	Screw, H.C. 1/4-20x1/2	22	1	235838	Valve, exhaust	37	2	235376	Bearing, ball
3	1	235054	Baffle, cylinder	23	4	240013	Keeper, valve	38	1	235815	Plate, bearing
4	1	235368	Baffle, side air	24	A.R.	275066	Spacer, camshaft.005	39		A-235925	Block, cylinder-assem.
5	1	235049	Baffle, head		A.R.	275067	Spacer, camshaft.010			230170-S	Insert, exhaust valve
6	1	235772	Housing, blower			230020	Rotator			235007-S	Guide, valve
BREATHER & VENT GROUP											
1		X-20-1	Washer, lock 1/4	25	2	X-160-1	Screw, sltd. hd.	40		A-235920	Crankshaft
1		X-81-1	Nut, hex. 1/4-20	26	1	220547	Sleeve				CYLINDER HEAD GROUP
7	1	231032	Seal, breather	27	1	220786	Nut	41	2	235175	Screw, H.C. 3/8-16x2 1/2
8	1	235047	Reed, breather	28	1	231509	Connector	42	1	235810	Gasket, cylinder head
9	2	235048	Gasket, valve cover	29	1	E-235058	Carburetor - assembly		1	235820	Head, cylinder
10	1	235117	Baffle, breather			235031	Repair kit	9	270889	270889	Washer
11	1	235118	Filter, breather			275167	Gasket, carburetor	7	271077	271077	Screw, H.C. 3/8-16x2 1/4
12	1	235631	Plate, breather - assem.	CRANKCASE GROUP							
13	1	275143	Cover, valve	4		X-132-6	Screw, H.C. 1/4-20x1/2	DIPSTICK GROUP			
14	1	275220	Stud, valve cover	4		X-159-2	Screw, H.C. 3/8-16x1	43		A-235068	Dipstick

A.R. As required Indented part numbers and descriptions are components of preceding assembly.

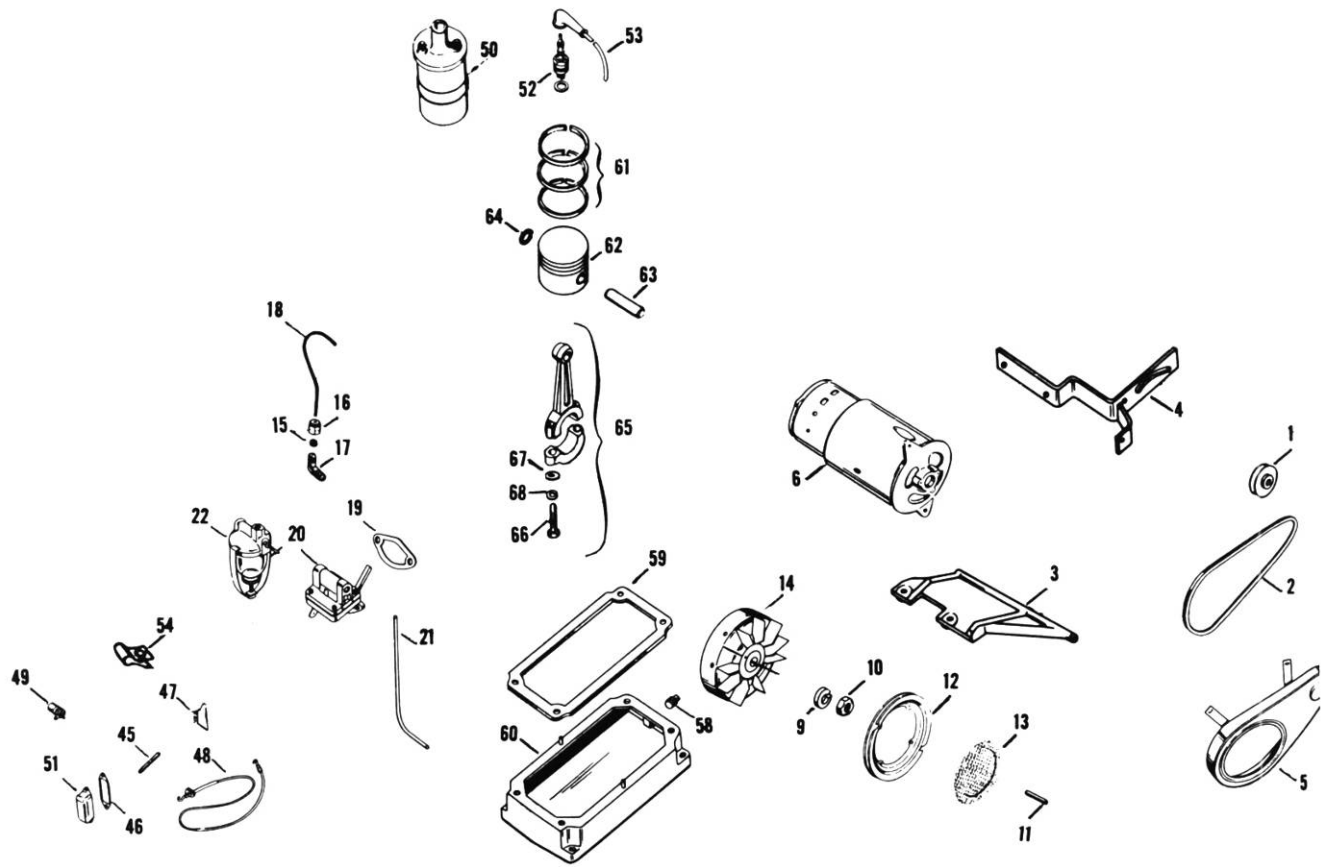
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Group No. 1 — Engine

Parts as Illustrated (Previous Page)

Ref. No.	Part No.	Description	List
1	1-3314	Element — Air Filter — No. 235116	\$ 4.55
6	1-3356	Housing — Blower — No. 235772	6.40
14	1-3367	Flywheel No. 235806	14.90
16	1-3310	Valve — In. — No. 235008	2.55
21	1-3315	Camshaft Assembly — No. A235646	13.75
22	1-3309	Valve-Ex. (Stellite) — No. 235838	11.15
28	1-3320	Carburetor Assembly — No. E235058	29.20
29	1-3342	Gasket Carburetor — No. 275167	.15
31	1-3311	Oil Seal—Front—No. X271-30	1.30
33	1-3312	Oil Seal—Rear—No. X379-6	1.55
37	1-3313	Bearing, Ball — No. 235376	10.55
38	1-3351	Bearing End Plate — No. 235815	13.10
39	1-3350	Engine — Block — No. 235925	69.30
NS	1-3322	Repair Kit-Carburetor — No. 231555	3.00
40	1-3348	Crank Shaft — No. A-235920	41.85
41	1-3303	Gasket — Cylinder Head — No. 235810	.60
42	1-3325	Cylinder Head — No. 235820	26.90
NS	1-3360	Choke Cable Clip — No. 235603	.20
NS	1-3364	Oil Fill Tube — No. 27875	1.80
NS	1-3333	Spring Idle Adjust—No. 200381	.15
NS	1-3335	Clip Choke Cable—No. 235603	.20
NS	1-3336	Screw — Idle Adjust	1.30
NS	1-3341	Engine Paint — Blue Green — Spray Can — No. D484	3.30
NS	1-3359	Choke Cable Bracket No. 235680	.40

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Item No.	Quantity	Part No.	Description	Item No.	Quantity	Part No.	Description	Item No.	Quantity	Part No.	Description
ELECTRIC START GROUP											
1	1	X-21-1	Washer, 5/16	21	1	X-217-7	Nipple	46	1	220174	Gasket, breaker
1	1	X-25-75	Washer, 5/16	22	1	X-294-5	Line, fuel	47	1	A-220474	Breaker, assembly
1	1	X-51-24	Screw, R.H.M. 5/16-18x $\frac{3}{4}$	23	1	A-210101	Filter, fuel			220475	Points, breaker
3	3	X-154-2	Screw, H.C. 5/16-18-1	24	1	220547	Sleeve	48	1	A-231839	Lead, breaker
1	1	235260	Pulley, generator	24	1	220786	Nut	49	1	230722	Condenser
2	1	235261	Belt, drive	25	1	231510	Elbow	50	1	231281	Coil, ignition
3	1	235716	Support, starter lower	1	1	A-235229	Tank - assembly	51	1	232535	Cover, breaker
4	1	235717	Support, starter upper	26	4	X-295-20	Webbing, tank	52	1	235050-S	Plug, spark
5	1	235530	Guard, belt	27	2	235228	Strap	53	1	A-235334	Cable, hi-tension
6	1	B-275703	Motor-Generator - assembly	28	2	235158	Bracket, tank lower	54	1	275183	Clip, cable
1	1	X-25-35	Washer, $\frac{1}{4}$	29	1	235159	Bracket, tank upper	1	1	275303	Clip, cable
1	1	X-132-1	Screw, H.C. $\frac{1}{4}$ -20x3/8	30	1	235164	Tank, fuel	OIL PAN GROUP			
FLYWHEEL GROUP											
4	4	X-20-1	Washer, lock	2	2	X-161-1	Screw, F.H.M. $\frac{1}{4}$ -20x5/8	58	1	X-75-24	Plug, pipe $\frac{1}{4}$
4	4	X-25-63	Washer, $\frac{1}{4}$	15	2	220547	Sleeve	2	2	X-159-3	Screw, H.C. 3/8-16x1 $\frac{1}{4}$
9	1	X-25-71	Washer, $\frac{3}{4}$	16	2	220786	Nut	59	1	235057	Gasket, pan
10	1	X-119-16	Nut, lock $\frac{3}{4}$ -16	17	2	231510	Elbow	60	1	235115	Base, oil pan
4	4	X-153-2	Screw, trusshd. $\frac{1}{4}$ -20x5/8	18	1	235097	Line, fuel	2	2	270721	Screw, H.C. 3/8-16x1 $\frac{1}{4}$
11	1	X-366-1	Key	19	1	240281	Gasket, fuel pump	PISTON & ROD GROUP			
12	1	235207	Pulley, electric start	20	1	A-235807	Pump, fuel	61	1	235889	Ring set
13	1	235208	Screen, grass								
14	1	235806	Flywheel								
		X-400-35	Spacer								
		231988	Cylinder Scr.								
		231989	Screen cover								
FUEL TANK & FITTINGS											
2	2	X-22-1	Washer, lock 3/8	4	4	X-25-73	Washer, $\frac{1}{4}$				
2	2	X-129-7	Screw, H.C. 3/8-16x1 $\frac{1}{4}$	4	4	X-131-1	Screw, F.H.M. 10-24x3/8				
				45	1	X-132-6	Screw, H.C. $\frac{1}{4}$ -20x $\frac{1}{2}$				
				1	1	X-389-1	Rod, breaker				
										235165	Gasket set

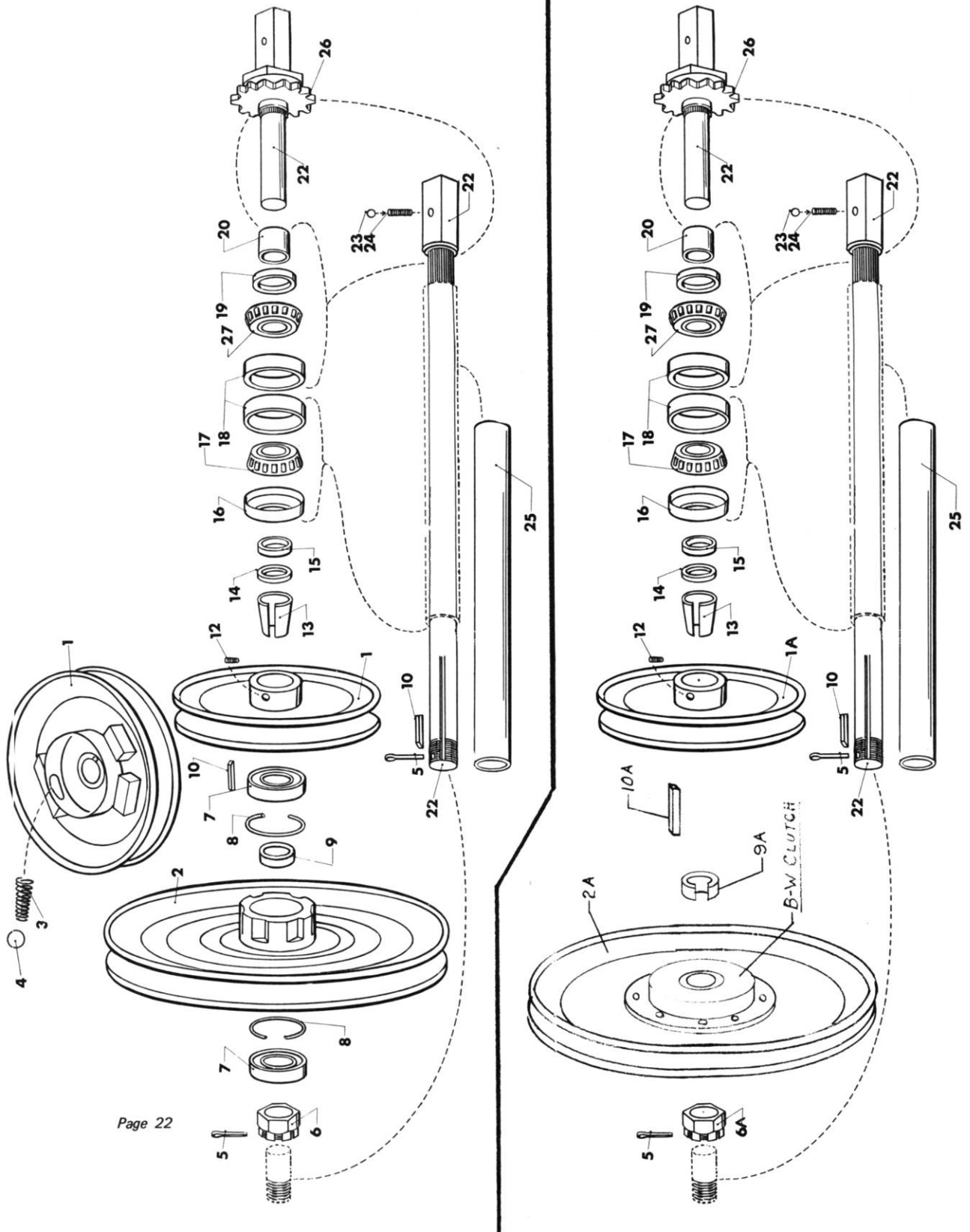
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Group No. 1A – Engine

Parts As Illustrated

Ref. No.	Part No.	Description	List
1	4-26	Generator Pulley No. 235260	\$ 2.60
2	1-2	Starter Generator Belt	2.75
3	4-47	Generator Support – Middle No. 235449	7.20
NS	4.48	Generator Support – Lower	3.00
4	4-49	Generator Support – Upper No. 236556	4.80
20	1-3321	Fuel Pump – No. A235807	11.20
NS	1-3323	Repair Kit – Fuel Pump – No. 230675	2.05
NS	1-3352	Piston – .010 Oversize – No. A235865	20.45
NS	1-3353	Ring Set – .010 Oversize – No. 235890	5.70
43	1-3363	Dipstick No. A235068	1.25
45	1-3344	Breaker Rod – No. X389-1	.25
47A	1-3306	Points – No. 220475	1.50
49	1-3307	Condensor – No. 230722	.60
50	1-3308	Coil – Ignition – No. 231281	8.45
52	1-3328	Spark Plug – (H-10) – No. 235040-S	1.55
61	1-3300	Ring Set – Std. Size – No. 253889	5.05
62	1-3302	Piston – Stock Bore – No. A235827	10.35
65	1-3301	Connecting Rod – No. A235828	6.55
69	1-3304	Overhaul Gasket Kit – No. 235165	5.45

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ILLUSTRATION NO. 3 — DRIVE PULLEYS

SHOP NOTES King Midget Maintenance and Restoration

GROUP 2 — TRANSMISSION & CLUTCH

Illustration No. 3 — Drive Pulleys

Ref. No.	Parts No.	Description	List	Ref. No.	Parts No.	Description	List
1	2-36	6" H.S. Pulley	\$10.95	10	2-97	Key	.40
1A	2-168	Special 6" (L.S.) Pulley for B-W Clutch (See NOTE 1)	8.75	12	11-151	Allen Set Screw 5/16x18x5/16	.20
2	2-35	10" Low Speed Pulley	8.75	13	2-116	Cup Point	1.60
NS	2-167	Special 10" (H.S.) Pulley for B-W Clutch (See NOTE 1)	NSS	14	2-109	Tapered Sleeve	.55
NS	2-166	B-W Clutch	NSS	15	2-108	Spacer — Thin	.55
2A	2-170	B-W Clutch and 10" Pulley Ass.	30.67	16	2-21	Grease Seal	1.45
10A	2-172	Key-Similar to Ref. 10 but Special for B-W Clutch	.35	17	2-7	Bearing — Cone	3.05
6A	2-173	Nut-Similar to Ref. 6 but Special for B-W Clutch	.50	18	2-8	Bearing — Race	1.40
NS	2-169	B-W Clutch Ass. Includes one each of the following with Installation Instructions (See NOTE 1)		19	2-88	Spacer — Bronze	NSS
				20	2-92	Bushing — Bronze	NSS
				22	2-89	Input Shaft — Transmission	NSS
				23	2-24	Steel Ball	.40
				24	2-26	Spring	.50
				25	2-107	Spacer	1.85
				26	2-9	Sprocket — Heat Treated	NSS
				27	2-7	Bearing — Cone	NSS
				NS	2-91	Shaft — Transmission Input Sprocket Assembly with No.: 2-88, 2-89, 2-9, 2-7, 2-92	
3	2-27	Tapered Spring	1.20			Sprocket pressed on and ready for installation	17.80
4	2-25	Steel Ball — 1/2"	.65				
5	11-703	Cotter Pin	.15				
6	11-546	Castle Nut	.35				
7	2-4	Bearing (2 req'd) •	3.72 ea.				
8	2-118	Retainer Clip (2 req'd)	.40 ea.				
9	2-117	Spacer	.55				
2,7,8,9,	2-40	10" Pulley Assembly	16.08				

NOTE 1: Borg Warner (B-W) clutch is standard equipment on vehicles manufactured after July 1, 1967. If your car does not have a sharp clicking noise in the transmission when stopping, it is equipped with a B-W clutch. For conversion kit order part No. 2-169 shown above.

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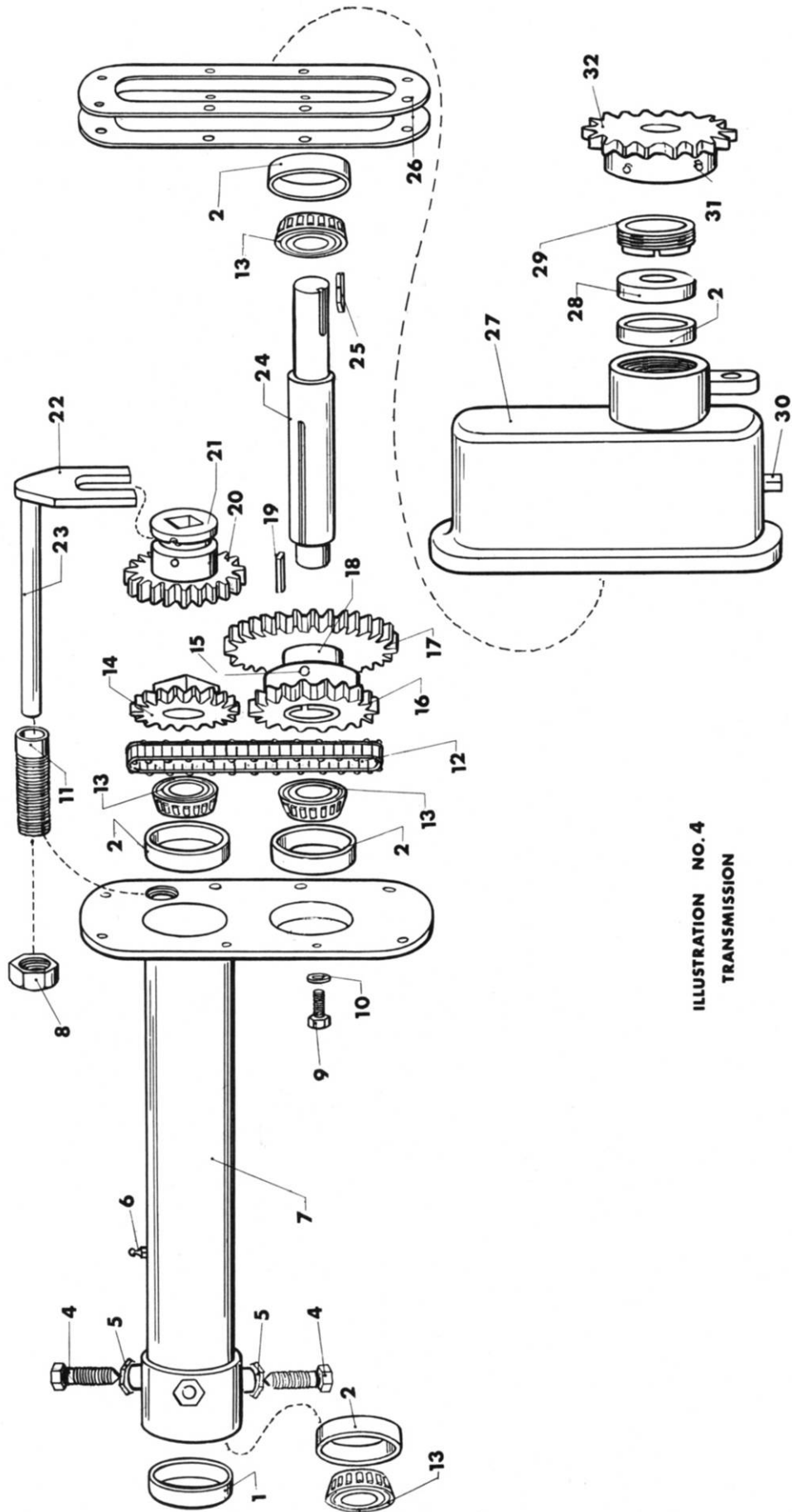


ILLUSTRATION NO. 4
TRANSMISSION

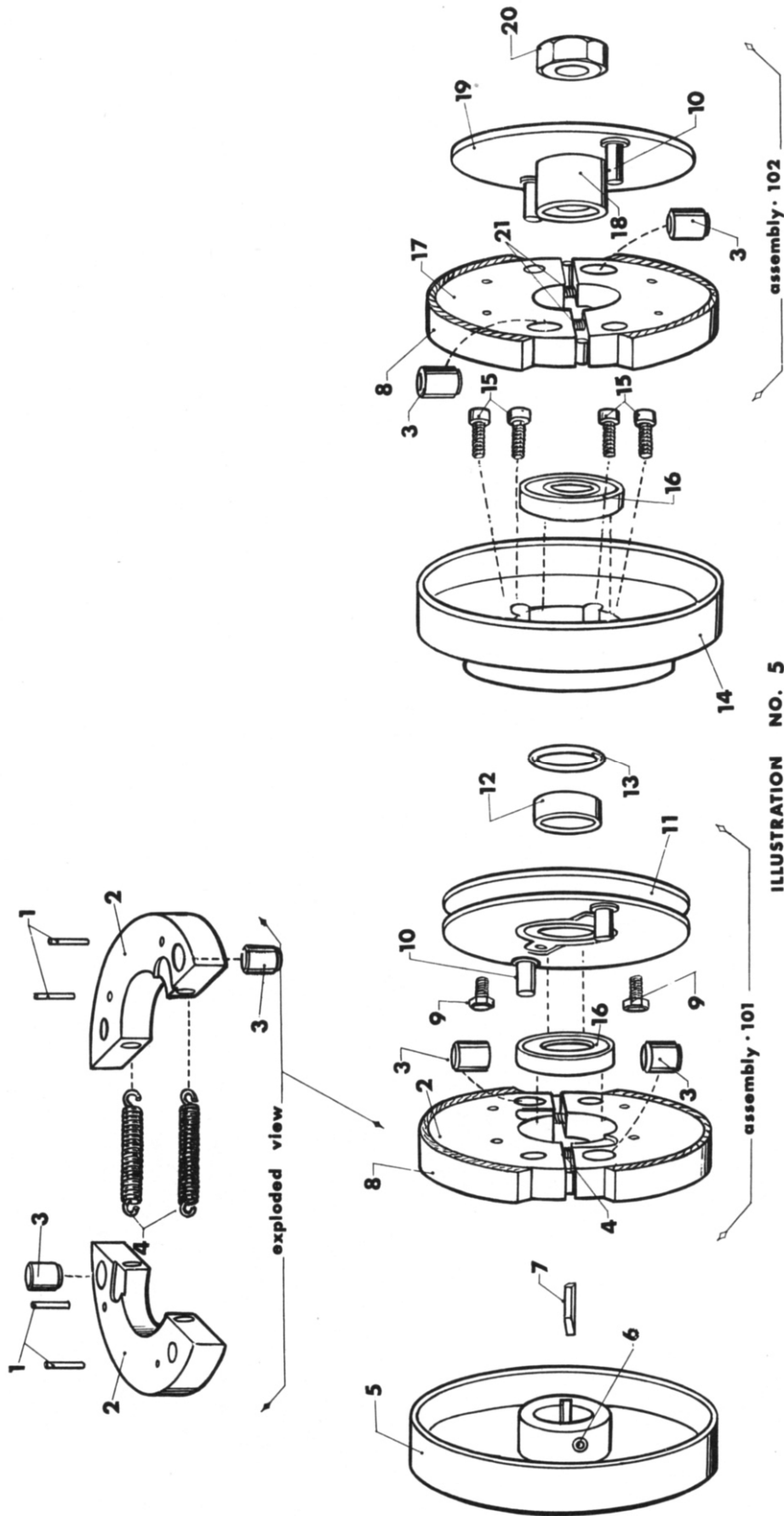
SHOP NOTES King Midget Maintenance and Restoration

GROUP NO. 2 — TRANSMISSION & CLUTCH

Illustration No. 4 — Transmission

Ref. No.	Part No.	Description	List	Ref. No.	Part No.	Description	List
1	2-21	Grease Seal — Felt	\$ 1.45	23	2-132	Shifting Fork Rod	NSS
2	2-8	Bearing Race	1.40	24	2-90	Output Shaft — Transmission	\$ 5.25
4	11-204	Allen Set Screw — 3/8x16x1 Cone Point	.30 ea.	25	2-147	Key — Transmission Drive Sprocket	.35
5	11-520	Lock Nut — 3/8 x 16	.15	26	2-22	Gasket — Used also for spacers (1 or 2 req'd)	.45
6	10-10	Zerk Grease Fitting	.20	27	2-6	Aluminum Transmission Housing	19.75
7	2-82	Steel Gear Box Cover	21.95	28	2-23	Grease Seal — Neoprene	2.05
NS	2-80	Steel Gear Box Cover — w/three Races (2-8) installed	27.15	29	2-96	Race Lock Nut	1.20
8	11-548	Jam Nut — 3/4 x 16	.40	30	10-11	Oil Plug (2 req'd)	.40
9	11-75	Cap Screw — 1/4x20x3/4 (8 req'd)	.15 ea.	31	11-77	Allen Set Screws (cup point — 4 req'd) 1/4x20x3/4	.20
10	11-607	Shake Proof Washer — 1/4" (8 req'd)	.10 ea.	32		Heat Treated Transmission Drive Sprockets w/set Screws	
11	2-131	Fork Bushing	2.75			21 Teeth — No. 40 Chain	6.45
12	2-11	Endless Chain	4.00			20 Teeth — No. 40 Chain	6.45
13	2-7	Bearing Cone	3.05			19 Teeth — No. 40 Chain	6.45
14	2-9	Sprocket	NSS			18 Teeth — No. 40 Chain	6.45
15	11-150	Allen Set Screw — 5/16x24x5/16	.20			17 Teeth — No. 40 Chain	6.45
16,17,18	2-100	Reverse Cluster Gear Assembly	16.45			16 Teeth — No. 40 Chain	6.45
16	2-10	Sprocket — Cluster Gear (18 Teeth)	NSS			15 Teeth — No. 40 Chain	6.45
17	2-101	Gear — Cluster Gear (28 Teeth)	NSS			14 Teeth — No. 40 Chain	6.45
18	2-102	Hub — Cluster Gear	NSS			12 Teeth — No. 40 Chain	6.45
19	2-147	Key — For Reverse Cluster Assembly	.35			17 Teeth — No. 50 Chain	7.65
20,21	2-95	Reverse Sliding Gear Assembly	10.95			16 Teeth — No. 50 Chain	6.45
20	2-94	Reverse Sliding Gear (20 Teeth)	NSS			15 Teeth — No. 50 Chain	6.45
21	2-93	Hub — Reverse Sliding Gear	NSS			14 Teeth — No. 50 Chain	6.45
22,23	2-133	Shifting Fork Assembly	3.25			13 Teeth — No. 50 Chain	6.45
22	2-130	Fork — Shifting — Heat Treated	NSS				6.45

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**ILLUSTRATION NO. 5
DRIVE CLUTCHES**

SHOP NOTES King Midget Maintenance and Restoration

GROUP NO. 2 – TRANSMISSION & CLUTCH

RELATED ITEMS NOT ILLUSTRATED

ILLUSTRATION NO. 5 – DRIVE CLUTCHES

Ref. No.	Part No.	Description	List	Part No.	Description	List
1	2-39	Pins – Roller Spring	\$.45 doz.	2-2	Drive Belts (matched) pairs only	\$10.55
2	2-158	Clutch Shoes – H.S. w/o Lining	NSS	2-41	Cushion – Belt Tightener	3.25
3	10-8	Bushing	.80	2-1	Belt Tightener Rod w/nuts, cotter key and washer	2.60
4	2-33	Spring – H.S. (2 req'd)	.70 ea.	2-19	Drive Chain #40 w/Master Link	10.95
1,2,3,4,8	* 2-38	H.S. Clutch Shoe Ass. Complete	13.70	2-55	Drive Chain #50 w/Master Link	13.15
5	2-31	Drum, H.S. w/Set Screw	15.35	2-66	Master Link – #40	.50
6	11-151	Allen Set Screw	.20	2-67	Master Link – #50	.50
7	2-97	Key – H.S. Drum	.40	2-45	Chain Adjusting Turnbuckle Assembly w/clevis pins	6.55
8	2-34	Clutch Lining	NSS	2-46	Threaded Rod – Chain Turnbuckle	2.45
9	11-74	Cap Screw – 1/4x20x5/8 – (2 req'd)	.15	2-47	Clevis Yoke for Chain Tightener – L.H. Thread	2.85
10	2-146	Pins – H.S. Driving Pulley	NSS	2-48	Clevis Yoke for Chain Tightener – R.H. Thread	2.85
11	2-143	Pulley – H.S. Driving w/o pins	NSS	2-49	Clevis Pin	.60
9,10,11,16	2-144	H.S. Clutch Pulley w/Bearing Assembly	12.80	11-537	Jam Nut – Chain Turnbuckle – L.H. Thread	.20
9,10,11	2-145	H.S. Clutch Pulley w/o Bearing	8.95	11-536	Jam Nut – Chain Turnbuckle – R. H. Thread	.20
12	2-68	Spacer – Thick	.55	2-18	Wheel Drive Sprocket – No. 40 Chain—60 Teeth	9.30
13	2-69	Spacer – Thin --	.40	2-56	Wheel Drive Sprocket – No. 50 Chain—48 Teeth	9.30
14	2-30	Drum – L.S. w/o Bearing	15.80	2-20	Transmission Mounting U Bolts w/nuts (2 req'd)	1.00
14,15,16	2-29	Drum – L.S. w/Bearing	20.75	7-17	Red Handle Grip – Shifting Lever	.30
15	11-77	Allen Cap Screws	.20	2-134	Gear Shift – Shifting Handle	1.00
16	2-5	Bearing	3.85	2-135	Gear Shift – Rod	1.00
17	2-157	Clutch Shoes – L.S. w/o Lining	NSS	2-136	Linkage Lever – Gear Shift Rod to Gear Box	.55
1,3,8,17,21	* 2-37	L.S. Clutch Shoe Ass. Complete	13.70	10-12	Rubber Washer – Linkage Lever (2 req'd)	.15
18	2-74	Threaded Hubs, Driving Plate	NSS	2-42	Single Speed H.D. Drum	18.05
19	2-123	Driving Plate – w/o Pins & Hub	NSS	2-44	Single Speed H.D. Shoes	15.95
10,18,19	2-73	Driving Plate – L.S. Complete	7.60	2-5	Single Speed H.D. Bearing	3.85
20	11-552	Jam Nut – 7/8 x 14	.30			
21	2-32	Spring – L.S. (2 req'd)	.80 ea.			
		ASSEMBLIES				
101	2-111	H.S. Clutch – Shoes & Driving Pulley w/o Drum	28.70			
	2-71	H.S. Clutch Complete – Drum, Shoes and Pulley	43.95			
102	2-112	L.S. Clutch – Shoes & Driving Plate w/o Drum	23.50			
	2-72	L.S. Clutch Complete – Drum, Bearing, Shoes and Plate	43.95			

* Clutch Shoes – Low Speed (2-37) or High Speed (2-38) may be obtained on a remanufactured basis for \$7.40 exchange. Be sure to give serial No. of car when ordering.

SHOP NOTES King Midget Maintenance and Restoration

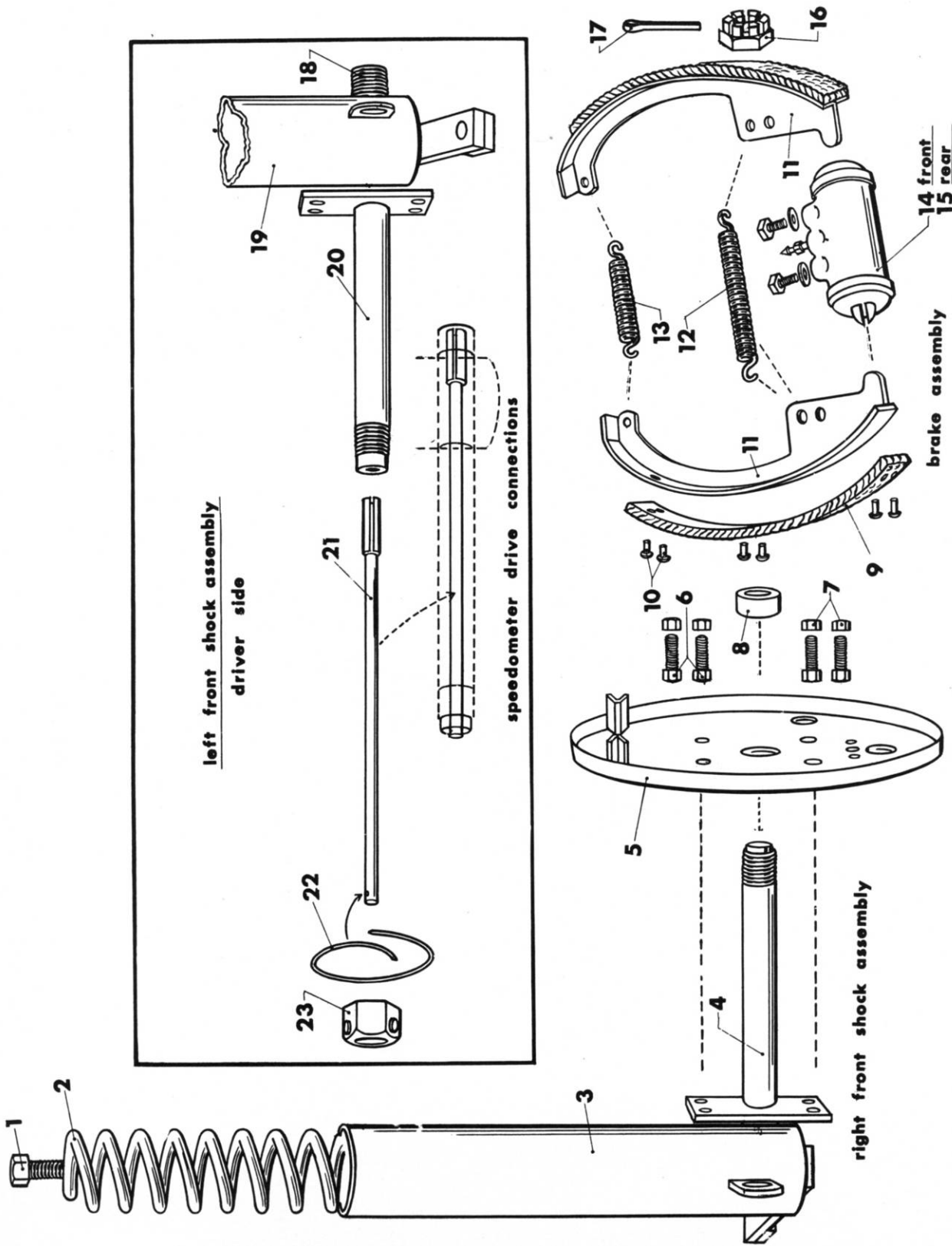


ILLUSTRATION NO. 6

SHOP NOTES King Midget Maintenance and Restoration

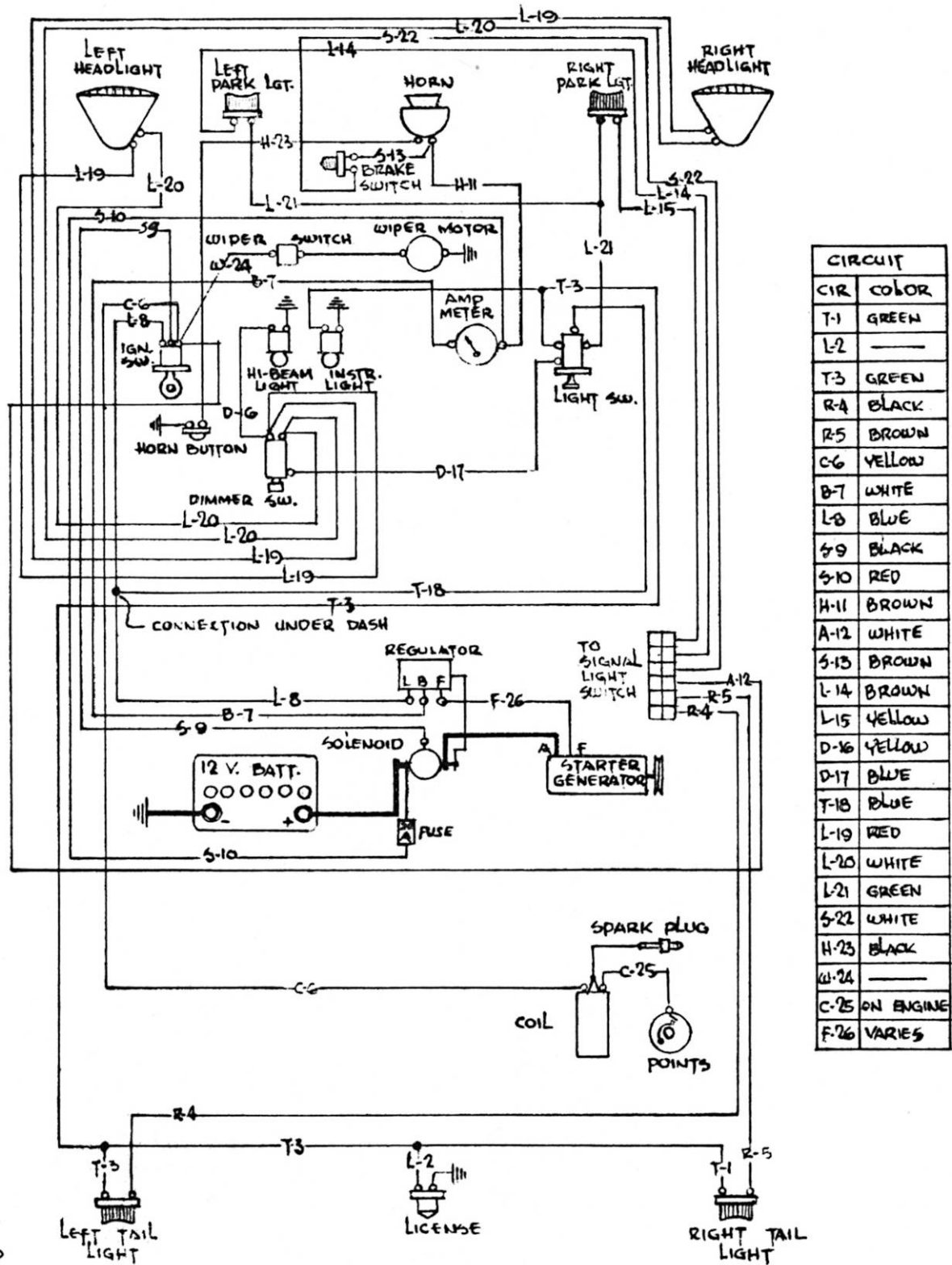
GROUP 3 – BRAKE & GROUP 8 – SUSPENSION

Illustration No. 6 – Brake

Ref. No.	Parts No.	Description	List	Ref. No.	Parts No.	Description	List
1	11-522	Nut – 3/8 x 24	\$.15	12	3-17	Lower Spring – Brake Shoe (3½")	\$.65
2	8-2	Front Spring	NSS	13	3-18	Upper Spring – Brake Shoe (2½")	.65
3	8-32	Inside Shocktube – R. Front	NSS	14	3-3	Brake Cylinder – Front Wheel	5.45
4	8-45	Axle – R. Front	NSS	15	3-2	Brake Cylinder – Rear Wheel	5.45
1,2,3,4	8-5	Shock Assembly – R. Front	18.65	16	6-106	Castle Nut	.75
5	3-31	Brake Backing Plate – Front	2.15	17	11-703	Cotter Key	.15
NS	3-32	Brake Backing Plate – R. Rear	2.50	18	8-15	Speedometer Cable Bushing	NSS
NS	3-33	Brake Backing Plate – L. Rear	2.50	19	8-32	Inside Shocktube – L. Front	NSS
6	11-152	Hex Cap Screw – 5/16 x 24 x 1/2	.15	20	8-16	Axle – L. Front	NSS
7	11-515	Elastic Stop Nut – 5/16 x 24	.30	2,18,19,20	8-6	Shock Assembly – L. Front	19.75
8	2-109	Spacer	.55	21	7-14	Speedometer Drive Shaft	1.40
9	3-16	Brake Linings – Set for Two		22	7-13	Speedometer Drive Spring	.40
10	3-20	Wheels Complete w/Rivets	4.35	23	6-105	Wheel Nut w/set Screws	1.60
11	3-46	Rivets for Brake Lining	NSS		3-14	Emergency Brake Cable	2.05
9,10,11	3-47	Brake Shoes w/o Linings	NSS		3-6	Rubber Brake Line (Long)	3.20
		Brake Shoes w/Lining – Set for - Two Wheels	8.35		3-5	Rubber Brake Line (Short)	2.90
		Brake Shoes with Lining may be purchased on a remanufactured basis. A credit of \$2.40 will be allowed after receipt and inspection on return of four shoes.			3-4	Master Cylinder	12.85
					8-1	Rear Springs	3.50
					8-10	Rear Shocks w/o Springs	10.85
					8-7	Long Rear Sway Bar	7.55
					8-8	Stabilizer Link Bar	5.25

SHOP NOTES King Midget Maintenance and Restoration

ILLUSTRATION NO. 7



CIRCUIT	
CIR	COLOR
T-1	GREEN
L-2	---
T-3	GREEN
R-4	BLACK
R-5	BROWN
C-6	YELLOW
B-7	WHITE
L-8	BLUE
S-9	BLACK
S-10	RED
H-11	BROWN
A-12	WHITE
S-13	BROWN
L-14	BROWN
L-15	YELLOW
D-16	YELLOW
D-17	BLUE
T-18	BLUE
L-19	RED
L-20	WHITE
L-21	GREEN
S-22	WHITE
H-23	BLACK
W-24	---
C-25	ON ENGINE
F-26	VARIES

LEGEND
 + WIRES CROSS - NO. CONNECTION
 + WIRES ARE CONNECTED
 RED, WHITE, BLUE - 14 GA.
 OTHER COLORS - 16 GA.

SHOP NOTES King Midget Maintenance and Restoration

GROUP NO. 4 – ELECTRICAL & INSTRUMENTATION

Illustration No. 7 – Wiring Diagram

Part No.	Description	List	Part No.	Description	List
4-1	Battery, Delco – Remy G-55	\$28.45	4-21	Battery Cable – Position	\$ 2.10
4-4	Dimmer Switch	3.07	4-22	Ground Strap, Chassis – Two Hole	.80
4-5	Ammeter	4.18	4-23	High Beam Indicator Light	1.35
4-6	Starter – Generator – Delco – Remy	73.70	4-24	Dash Panel Light	3.80
4-7	Motor – Windshield Wiper	28.60	4-25	License Panel Light	4.20
4-8	Taillight 12V Complete	4.00	4-27	Stop Light Switch	1.50
4-9	Headlight, less sealed beam lamp	8.70 ea.	4-28	Parking Light (Amber)	4.35
4-10	Horn	7.95	4-29	Horn Button – Complete Assembly	3.75
4-11	Switch, Windshield Wiper	1.65	4-34	Wiring Harness	15.35
4-12	* Solenoid Switch Old Style	6.20	4-36	Solenoid – Delco – Remy	6.20
4-13	Headlight Switch	2.05	4-37	Ignition Switch (key start) – Delco – Remy	6.70
4-14	* Starter Button Old Style	1.45	4-38	Bulb, Headlight	2.75
4-15	* Ignition Switch Old Style	3.25	4-39	Bulb, Taillight	.45
4-16	Cable, Starter/Solenoid	.95	4-40	Bulb, Instrument Panel	.20
4-17	Voltage Regulator – Delco – Remy	17.25	4-42	Lens, Red Taillight	1.55
4-18	Flasher, Turn Signal-4 Way Type 12V	2.15	4-43	Lens, Amber Parking Light	.38
4-19	Turn Signal Switch w/o Flasher	15.35	4-81	Horn Button Cap – Rubber	.37
4-20	Ground Strap, Battery – One hole	1.50	4-82	Horn Contact Washer	.25
			4-83	Steering Wheel Nut	.63

* These parts for use in cars not having key start.

SHOP NOTES King Midget Maintenance and Restoration

GROUP NO. 6 – CHASSIS & WHEELS

GROUP NO. 5 – STEERING

Part No.	Description	List	Parts No.	Description	List
5-1	Steering Wheel	\$ 9.70	6-1	Chassis Assembly	\$107.30
5-2	Steering Shaft	6.85	6-50	Tire – Standard Tread	17.55
5-4	Housing – Steering Shaft	4.58	6-51	Tire – Cloverleaf Tread	18.40
5-11	Washer – Rubber (Tie Rod End)	.25	6-52	Tire – Mud and Snow	20.85
5-12	Tie Rod End (Assembly) L.H. Thread	4.40	6-60	Tube	3.05
5-13	Tie Rod End (Assembly) R.H. Thread	4.40	6-76	* Wheel Only – Front with Brake Drum	15.85
5-15	Tie Rod – Long	4.45	6-77	* Wheel Only – R. Rear with Brake Drum	17.80
5-16	Tie Rod – Short	3.45	6-78	* Wheel Only – L. Rear with Brake Drum	17.80
5-18	Washer – Asbestos, Graphited One Side	.15	6-83	Bearing, Cone – Wheel	2.55
5-20	Pinion Gear – Steering	6.35	6-84	Bearing, Race – Wheel	1.80
5-26	Backing Plate Assembly – Steering Box	6.75	6-85	Seal, Wheel	2.10
5-23	Steering Box Cover Assembly	31.80	6-99	Hub Cap – Chrome (Flat)	1.10
	Includes: Sector gear, steering arm, and shaft bushing.		6-105	Nut Axle, L. Front with Set Screws	1.60
5-25	Steering Box Complete	37.35	6-106	Nut Axle, Accept Left Front	1.85

* Without bearing, race, or cone.

SHOP NOTES King Midget Maintenance and Restoration

GROUP NO. 21 – ACCESSORIES

Parts No.	Description	List	Parts No.	Description	List
21-1	Windshield Washer	\$10.45	21-1	Windshield Washer	\$10.45
21-2	Tow Bar	21.95	21-2	Tow Bar	21.95
21-8	Chain Lube – Applicator Can	1.40	21-8	Chain Lube – Applicator Can	1.40
21-9	Aerial – Radio	3.65	21-9	Aerial – Radio	3.65
21-10	Radio – Transistor – 12V Neg. Gnd.	42.05	21-10	Radio – Transistor – 12V Neg. Gnd.	42.05
21-12	Seat Belts – per pair	9.85	21-12	Seat Belts – per pair	9.85
21-14	Defroster	9.05	21-14	Defroster	9.05
4-11	Defroster Switch	1.65	4-11	Defroster Switch	1.65
21-15	Luggage Rack – Aluminum	21.95	21-15	Luggage Rack – Aluminum	21.95
21-21	Clutch Removal Wrench	5.45	21-21	Clutch Removal Wrench	5.45
21-23	Paint – Spray Can – White	2.08	21-23	Paint – Spray Can – White	2.08
21-24	Paint – Spray Can – Red	2.08	21-24	Paint – Spray Can – Red	2.08
21-44	Golf Heel Plates – pair – w/fasteners	11.68	21-44	Golf Heel Plates – pair – w/fasteners	11.68
21-51	Golf Rack – per set	42.40	21-51	Golf Rack – per set	42.40
7-16	Dash Board – For Radio	5.45	7-16	Dash Board – For Radio	5.45
21-6	White Side Wall Tire	16.50	21-6	White Side Wall Tire	16.50

GROUP NO. 9 – FUEL

Parts No.	Description	List
9-1	Gas Tank Strap (2 req'd)	\$ 1.77 ea.
9-3	Choke Cable	1.40
9-4	Gas Tank with Cap	25.40
9-5	Fuel Bowl Filter	1.60
9-6	Fuel Line	2.18
9-7	Brass Nipple	.35
9-8	Gas Tank Support Saddle – Front	2.55
9-9	Gas Tank Support Saddle – Rear	2.55
9-10	Throttle Pedal	4.58
9-11	Throttle Cable – Wisconsin Engine	6.30
9-12	Throttle Cable – Kohler Engine	6.30
9-13	Gas Tank Cap	1.50

SHOP NOTES King Midget Maintenance and Restoration

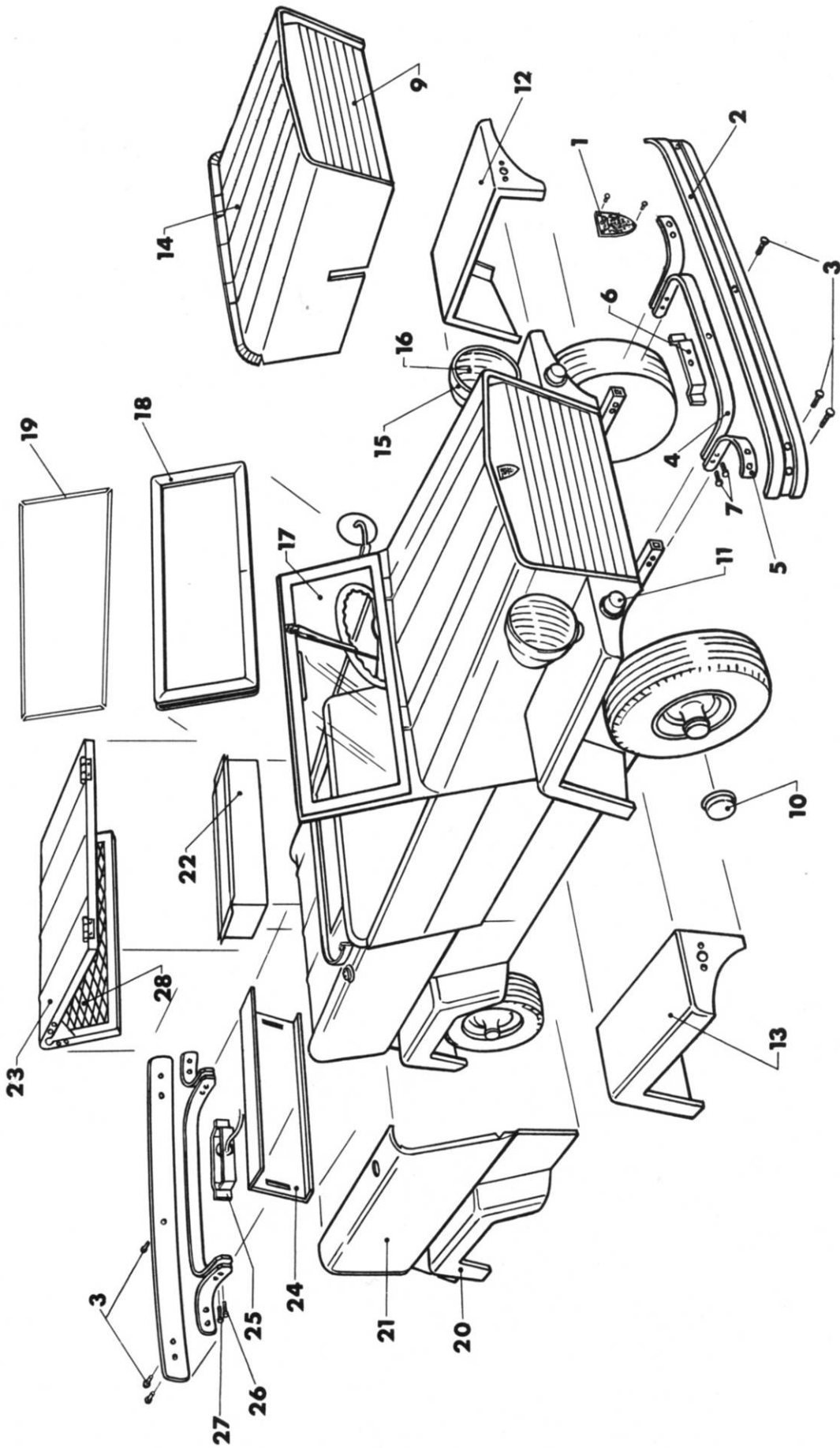


ILLUSTRATION NO. 8

GROUP NO. 7 — BODY

Illustration No. 8 — Body

SHOP NOTES King Midget Maintenance and Restoration

Ref. No.	Part No.	Description	List	Ref. No.	Part No.	Description	List
1	7-512	King Midget Name Plate	\$ 1.65	18	7-29	Windshield Weather Strip	\$ 8.25
2	7-750	Bumper	12.35	19	7-30	Windshield Weather Strip Insert	1.16
3	11-155	Hex Bolt 5/16-24x3/4	.15	20	7-535	Fender — Right Rear	16.45
NS	11-515	Hex Nut — Plastic Stop 5/16-24	.30	NS	7-534	Fender — Left Rear	16.45
4	7-751	Bumper Bracket — Inside	2.60	21	7-533	Quarter Panel — Right	NSS
5	7-752	Bumper Bracket — Outside	1.25	NS	7-532	Quarter Panel — Left	NSS
6	7-681	Bracket — Front License Plate	1.95	20,21	7-531	R. Rear Qtr. Panel Assembly (Complete with Fender)	32.95
7	11-162	Hex Bolt 5/16-24x 1 5/8"	.15	NS	7-530	L. Rear Qtr. Panel Assembly (Complete with Fender)	32.95
9	7-502	Grill	NSS	22	7-580	Carrier Pan Assembly	7.25
10	6-99	Hub Cap — Flat Chrome	1.10	23	7-520	Rear Deck Lid Assembly (Complete with Hinges)	24.30
11	4-28	Parking Light	4.35	24	7-700	Lower Rear Panel Bridge	3.20
NS	4-43	Parking Light Lens (Amber)	.38	25	7-680	Bracket Ass. — Rear License Plate	3.70
12	7-504	Fender — Left Front	16.45	NS	4-25	Rear License Plate Light	4.18
13	7-503	Fender — Right Front	16.45	26	11-156	Hex Bolt 5/16-24x1"	.15
14	7-501	Hood	NSS	NS	11-523	Hex Nut — Elastic Stop 3/8-24	.35
9,12,13,14	7-500	Front End Assembly	65.95	27	11-203	Hex Bolt 3/8-24x1"	.18
15	4-9	Head Light Shroud	8.70	28	7-523	Rear Deck Vent Screen	6.55
16	4-38	Sealed Beam Headlight #6012	2.75	NS	4-42	Tail Light — Lens Red	1.55
17	7-10	Windshield Glass	18.45				
NS	4-8	Tail Light — Complete	4.00				

SHOP NOTES King Midget Maintenance and Restoration

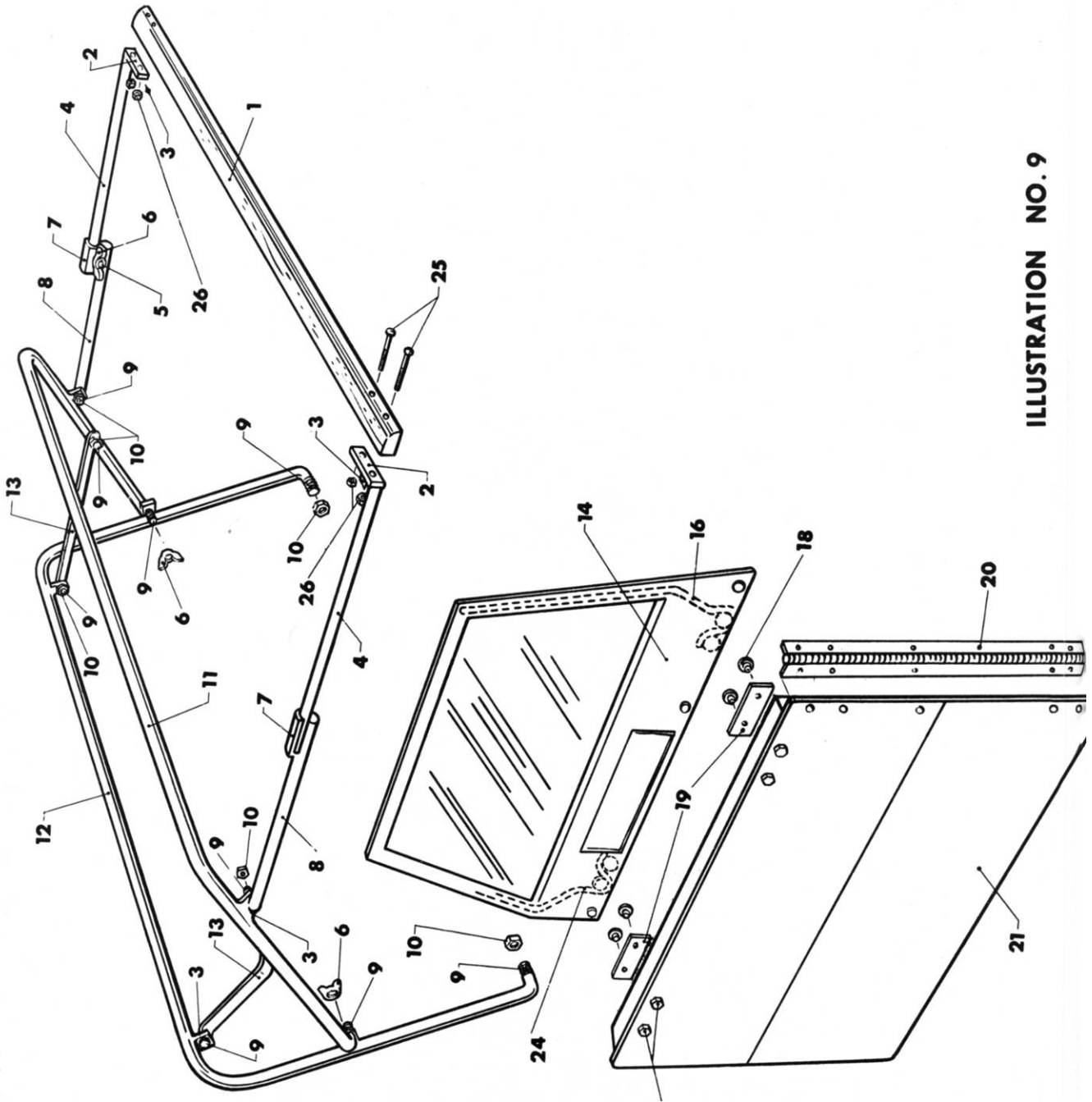


ILLUSTRATION NO. 9

SHOP NOTES King Midget Maintenance and Restoration

GROUP 7 - BODY

Illustration No. 9 - Top Frame & Door Assembly

Ref. No.	Part No.	Description	List	Ref. No.	Part No.	Description	List
	7-620	Complete Top Frame Assembly (Cadmium Chromate Plated)	\$19.75	3,6,9,11	7-641	Top Bow Assembly - Forward	\$ 5.45
1	7-621	Header Bar	5.80	3,9,10,12	7-640	Top Bow Assembly - Rear	5.45
2	7-625	Flange - Side Rail to Header Bar	NSS	13	7-650	Brace Straps	1.65
3	7-626	Tab - Bolt Support	NSS	14	7-90	Side Curtain - Right Nylon	10.95
4	7-624	Pipe - Front Side Rails	NSS	NS	7-91	Side Curtain - Left Nylon	10.95
5	7-627	Threaded Stud - Front Rail	NSS	18	7-86	Threaded Spool	.80
2,3,4,5	7-622	Side Rail Ass. - R. Front	2.18	19	7-87	Backing Plate - Curtain Support	.49
2,3,4,5	7-623	Side Rail Ass. - L. Front	2.18	20	7-606	Hinge - Door	.82
6	11-512	Wing Nut 5/16-18	.30	NS	7-600	Door Assembly - Left	21.95
7	7-633	L. Flange - Rear Side Rail	NSS	20,21	7-601	Door Assembly - Right	21.95
8	7-632	Pipe - Rear Side Rails	NSS	22	11-162	Hex Cap Screw	.20
9	7-634	Threaded End Stud	NSS	16	7-82	Side Curtain Rod - Right Front	3.25
10	11-513	Lock Nut	.17	24	7-83	Side Curtain Rod - Right Rear	3.25
7,8,9,10	7-630	Side Rail Ass. - L. Rear	2.18	NS	7-84	Side Curtain Rod - Left Front	3.25
7,8,9,10	7-631	Side Rail Ass. - R. Rear	2.18	NS	7-85	Side Curtain Rod - Left Rear	3.25
11	7-642	Pipe - Top Bow - Forward	NSS	25	11-37	Bolt	.15
12	7-643	Pipe - Top Bow - Rear	NSS	26	11-501	Nut	.15

SHOP NOTES King Midget Maintenance and Restoration

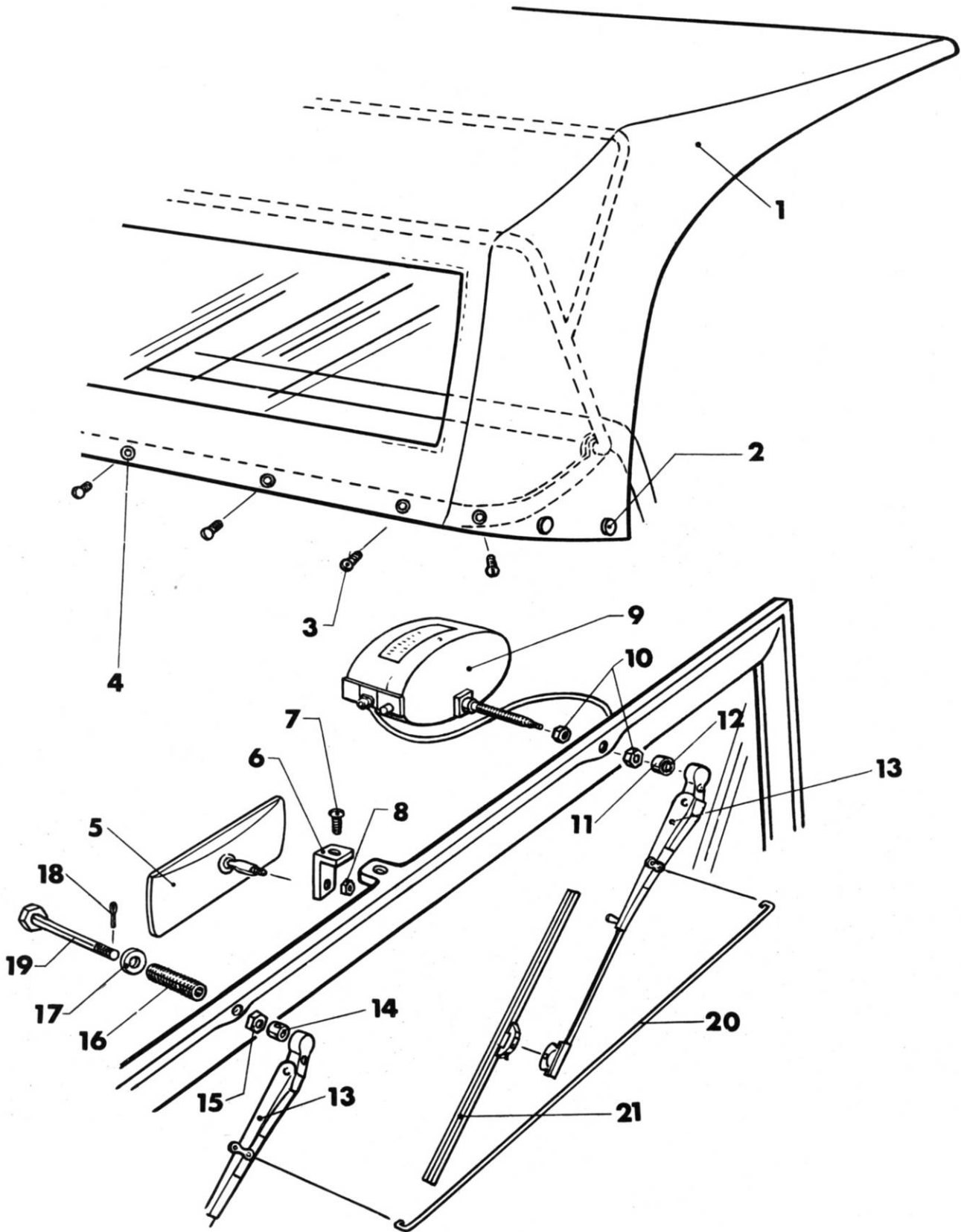


ILLUSTRATION NO. 10

SHOP NOTES King Midget Maintenance and Restoration

GROUP NO. 7 - BODY

Illustration No. 10 - Top, Fasteners, Windshield Frame

Ref. No.	Part No.	Description	List	Ref. No.	Part No.	Description	List
1	7-77	Top - Nylon	\$32.95	5	7-19	Rear View Mirror	\$ 1.60
2	7-93	Polished Button	NSS	6	7-25	Bracket - Rear View Mirror	.30
NS	7-94	Socket	NSS	7	11-74	Hex Cap Screw 1/4-28x5/8	.15
2	7-96	Button & Socket Set	.25	8	11-506	Hex Nut - 1/4-28 (2 req'd)	.15
NS	7-95	Snap w/Screw	.25	9	4-7	Motor - Windshield	28.60
3	11-31	Oval Head Machine Screw 10-24x5/8"	.15	NS	7-2	Single Windshield Wiper Arm	2.70
4	11-603	Polished Counter Sink	.15	10	11-530	Nut (7/16-20)	.15
NS	11-501	Washers - #10 Hex Nut - #10-24	.15 .15	11,14	7-3	Shaft Cap (Lead)	.30
		<u>NOT SHOWN</u>		12	7-4	Shaft Cap Screw	.30
				13	7-5	Dual Wiper Arm	3.05
				15,10	11-530	Nut	.15
				16		Bushing	.55
				17	11-605	Washer - 1/4" Plated	.15
	7-46	Trim Panels (Ozite)	29.65	18	7-6	Pin	.15
	7-65	Black Seat Cover	6.55	19	11-87	Bolt - 1/4-28x2	.20
	7-66	Black Back Cover	6.55	20	7-9	Dual Wiper Linkage	.86
	7-28	Floor Mat (Vinyl)	4.35	21	7-7	Windshield Wiper Blade	2.05

SHOP NOTES King Midget Maintenance and Restoration

RECOMMENDED MAINTENANCE SERVICE

250 Miles or Weekly

Check Tire Pressure

Lube Drive Chain

Check Engine Oil

1,000 Miles or 3 Months (More Often in Dusty Conditions)

Change Oil — Summer SAE 30 or SAE 10w-30
Winter SAE 5w-20

Inspect Fluid Level in Brake Reservoir

Clean Engine Cooling Intake Screen

Check Fluid Level in Battery

2,500 Miles or 12 Months

Adjust Brakes

Replace Air Cleaner

Clean Fuel Filter Screen

Change Transmission Oil (30 w N/D)

Evaluate Engine Performance

Inspect and Repack All Wheel Bearings

Check Valve Tappet Clearance

Remove Head and Clean Out Carbon

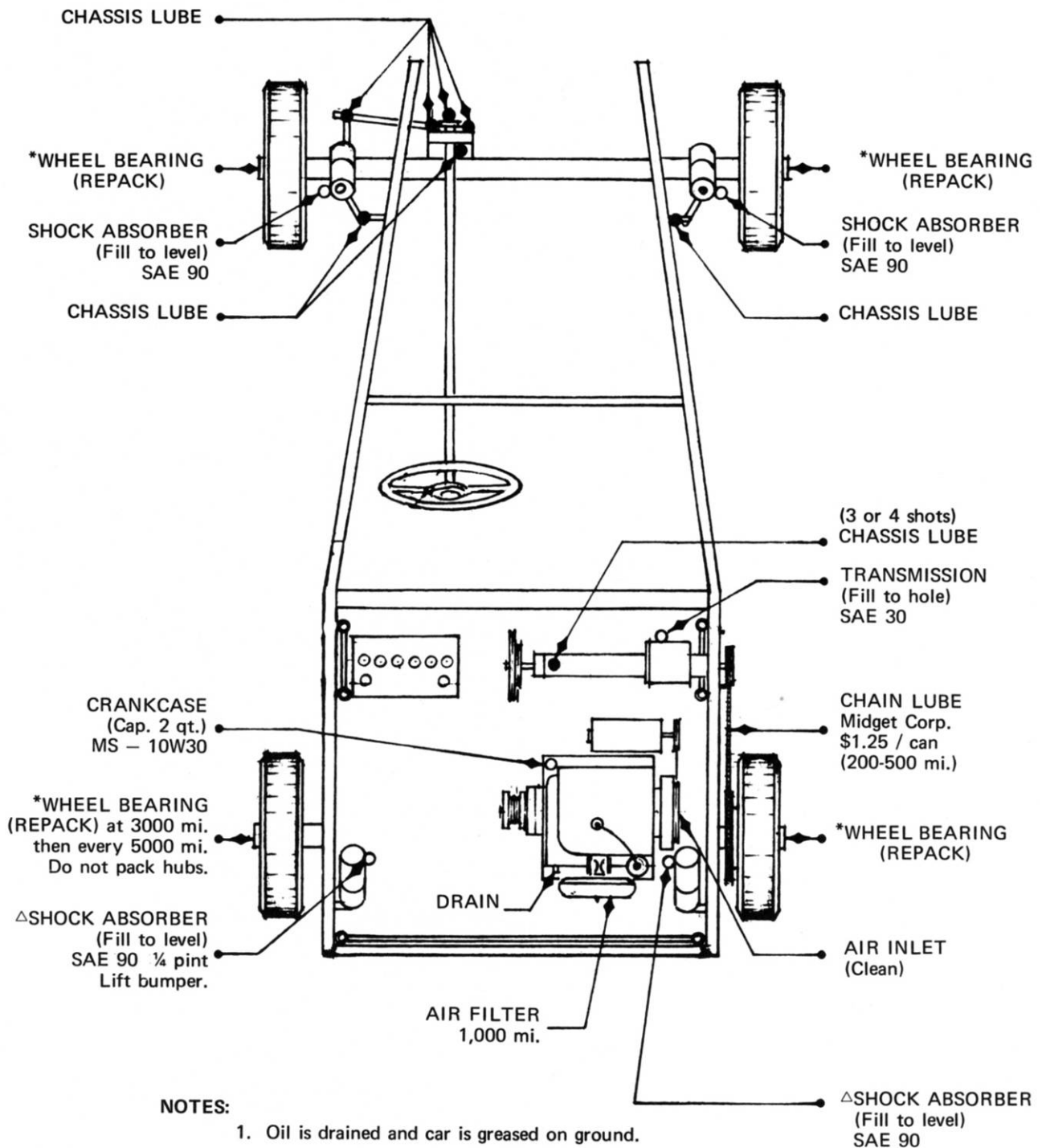
Front Wheel Toe-End Alignment

Fill Front Shock Tubes

SHOP NOTES King Midget Maintenance and Restoration

KING MIDGET LUBE CHART

MIDGET MOTORS CORP.
Athens, Ohio



NOTES:

1. Oil is drained and car is greased on ground.
2. Recommended lubrication interval;
oil ----- 1,000 miles at normal conditions.
grease --- 1,000 miles at normal conditions.
3. Tire pressure; Front—8 to 10 pounds
Rear—16 to 18 pounds

SHOP NOTES King Midget Maintenance and Restoration