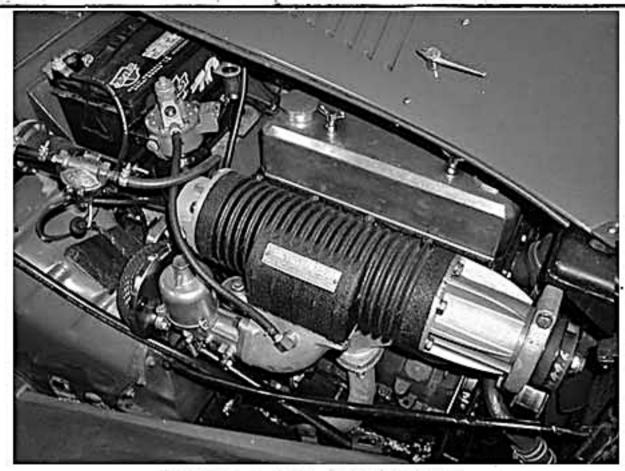
JUDSON SUPERCHARGER MODEL MG-26

INSTALLATION - DATA - SERVICE - PARTS LIST



MG Model TB-TC-TD-MK II

INSTALLATION

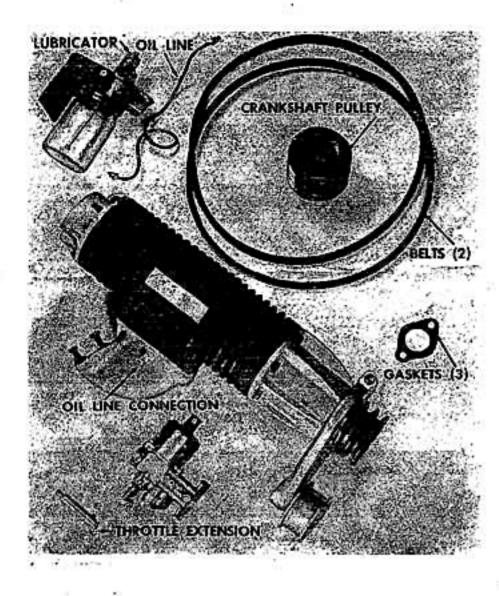
Read lastructions and information under data thoroughly before preceeding with the lestallation. Instructions are presented in a step by step sequence.

- Remove the hood by removing the rear bracket on spwl and sliding the hinge out of radiator bracket.
 Remove the air cleaner and carburetors from the engine.
- Disconnect the radiator brace on this side of the engine from the top of the radiator only and rest on the bottom of the fender.
- 3. Remove the bottom bolt holding the horn to the bracket. Loosen the top bolt and raise the horn to clear the supercharger and tighten the bolt. See illustration for approximate angle of horn. Lower bolt is not replaced and the one bolt is sufficient to hold the horn rigid.
- GO TO THE OTHER SIDE OF THE ENGINE.
 Loosen generator clamp, release tension on belt and remove belt from the engine.
- 5. Remove the crankshaft pulley from the engine in very few cases is it necessary to remove the radiator to accomplish this. The bolt on the end of the crankshaft holding on the crankshaft pulley can be removed with a standard 11/8" socket or any large adjustable wrench. Car should be in gear while this

be pried off by using two screw drivers, one on each side of the pulley. Place the Judson crankshaft pulley on the crankshaft making sure that the original key is lined up with the keyway in the pulley. Replace the original bolt and washers to hold on the crankshaft pulley. Tighten crankshaft bolt with the hand crank and car in gear. Care should be taken in removing the original pulley so that the crankshaft and key are not damaged. A small amount of oil should be placed around the bore of the Judson pulley before inserting it on the crankshaft. Make sure that the stamped steel washer on the crankshaft bolt is centered in the pulley before tightening bolt.

- 6. Replace the original belt on the crankshaft, fan and generator. Use first pulley groove or groove next to engine which is the same size as the original pulley. Tighten the generator clamp giving the belt the proper tension.
- 7. Mount supercharger on original manifold using bolts and lockwashers that formerly held on the carburetors. Use gaskets furnished. The top front bolt should be inserted first so that the supercharger can be rocked down or tilted and the drive balts placed around the pulley on the crankshaft and the drive pulley on the supercharger (see illustration).

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NOTE: The idler pulley on the front end of the supercharger runs on the back of the belts. This idler pulley should be pulled free from the belts while the installation is being made by loosening the bolt at the top of the idler bracket. When the two drive belts are in place, the other three bolts should be inserted in the supercharger and manifold and drawn up tightly. All connections must be tight and there should be no leaks at the manifold connection. Connection between manifold and block should also be checked.

- 8. Push the idler pulley against the back of the two drive belts (the flat side) until the proper tension is obtained (approximately 3/4" of slack on other side of belts) and tighten bolt holding the idler bracket on the supercharger. Do not tighten the belts too tightly as this will result in damage to the supercharger.
- Insert the throttle extension over the butterfly shaft of the carburetor and secure with the two screws furnished.
- 10. Fasten choke control wire and cable to carburetor before bolting to the supercharger. Bolt carburetor assembly to the supercharger as illustrated using two bolts, lockwasher and neoprene gasket furnished.
- 11. Fasten accelerator control to carburetor in same manner in which it was connected with the original carburetor. Use same rod between accelerator and throttle lever as was originally used. Accelerator pedal should be in proper position before tightening the throttle rod on the carburetor connection. (In some cases it may be necessary to beed the accelerator pedal lever slightly for proper height). Connect the fuel line to the carburetor.
- 12. Loosen the support bar (channel) holding the battery and insert the flat plate on the oiler bracket between the battery and support bar. Tighten bolt holding the battery support bar. Oiler bracket is now clamped between the battery and the battery support bar. (The battery on some TB and TC models was enclosed in a metal box and on these models the oiler bracket will have to be bolted to the battery container).
- Connect the oil line furnished to the oiler and fitting on the supercharger as illustrated.
- 14. Fasten turnbuckle on end of radiator brace to radiator shell. Use the second hole down from the top of the radiator with the "U" of the turnbuckle between the radiator shell. Rubber strip goes on outside of "U" clamp. Turnbuckle will have to be adjusted to get proper length of brace.
- 15. Remove one hose clamp from hose of air cleaner. Place this clamp on hose that is furnished and place hose on hose connection at top of valve cover. Place other end of hose in general area of carburetor throat so that the fumes coming out of the valve cover will be exausted through the engine as was done previously. Reinstall hood on car.
- Fill the automatic oiler with a good grade of number 10 motor oil.

INSTALLATION IS COMPLETE

Read Information Under Data Before Starting The Engine

DATA

IMPORTANT: Do not operate the engine prior to connecting the lubricator to the supercharger and having filled the jar with number 10 motor oil.

LUBRICATOR ADJUSTMENT: To adjust the lubricator proceed as follows: Start the engine, remove the top of the oiler by unscrewing the small cap on the very top. Here you will find a small brass screw and this should be adjusted with your fingers until the oiler is putting out approximately one drop of oil every five to six seconds at idle. This can be timed through the small window on the lubricator. Screw clockwise to decrease the amount of oil consumption. Oil consumption should run one pint to every 350 to 500 miles and the oil level in the lubricator should be checked visually every time the oil in the crankcase is checked by your service station. Engine and lubricator should be warm while adjustments are being made. If the car is to be used for hard driving or competition, the oil consumption should be increased to one drop every three to four seconds. The oil from the automatic lubricator is to oil the bore of the supercharger case only, the two main rotor bearings are greased and sealed at the factory for life.

ADJUSTMENTS AND TUNING: The condition of the spark plugs is very important on a supercharged engine. They should be removed, examined and cleaned or replaced if necessary. Stock ignition settings are recommended and the carburetion should be adjusted in accordance with the MG instruction book. The engine should idle at a minimum of 800 to 1,000 RPM. The correct settings will have to be determined by the performance of the car on the road.

FUEL: Because of the higher overall compression ratio obtained with supercharging, a premium grade gasoline is recommended for best performance.

AIR CLEANER: An air cleaner restricts the breathing of any engine especially a supercharged engine and for this reason we do not recommend their use when performance is a factor. In some sections, however, it is necessary that an air cleaner be used and a unit can be purchased from your local foreign car dealer. Any mesh type air cleaner bolting directly to the intake flange of the 11/2" SU carburetor is satisfactory.

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DRIVE BELTS: Tension of the supercharger belts should be examined after approximately one hundred miles and an adjustment made on the idler bracket if the belts are too slack. In case of drive belt breakage the supercharger will cease functioning but the engine will continue to operate as a normally aspirated engine. The drive belts are standard and can be purchased locally.

FAST DRIVING: Under continued high speed operation such as a long trip on a super highway, it is advisable to release or reduce the pressure momentarily on the accelerator occasionally to increase the effectiveness of the oiler under this severe condition. The lubricator should also be adjusted in accordance to instructions prior to continued high speed running.

BREAK IN PERIOD: No breaking in period is required for the Judson Supercharger. We do however recommend that the engine be run slowly or at idle for at least fifteen minutes before placing the engine or supercharger under load. (So that the unit can be initially lubricated by the oiling device). When the engine is first started after the installation has been completed, a slight noise may be heard from the supercharger at idle or when the engine is placed under a heavy load. This noise is caused by the tightness of the blades in the rotor and the noise will disappear within a short time. The supercharger, like the engine makes more noise when it is cold than at operating temperature.

MG MODEL TF: The TF engine is also type XPAG and is the same as the TD. No alterations are required on the engine and the procedure for mounting the supercharger on the TF is the same as those required for the TB, TC and TD. It is necessary, however, because of body changes, to move the fender brace located behind the radiator and place a "bubble" on the side of the hood.

WARRANTY

The Judson Supercharger is warranted to be free from defects in material or workmanship under normal use and service. In case of failure of any part within three months from date of original purchase by user, due to defective material or workmanship, we will repair, replace the defective part or furnish a new supercharger free of charge, F.O.B. Conshohocken, Pa. Factory approval must be obtained before returning supercharger or parts for replacement. All transportation charges on supercharger or parts submitted for replacement must be borne by purchaser.

SERVICE DATA JUDSON SUPERCHARGER MG-26 MODEL

Supercharger Should Be Disassembled In The Following Manner

I. Remove supercharger (with carburetor removed) from the engine and place on a clean bench.

2. Remove idler pulley bracket from front housing of supercharger by loosening the single bolt and sliding over the pulley.

3. Remove the six bolts holding on the rear cover.

4. Use two 3/8" USS bolts and screw into threaded bosses on the rear cover. These act as jack screws to remove the rear cover from the shaft. These two bolts should be tightened slowly and the same amount on both sides. First one screw a few turns and then the other so that the cover will be pulled off straight.

5. After the rear cover has been removed the vanes can be pulled out of the rotor. IMPORTANT: Before removing the vanes take special notice that the slots on the vanes are on the pressure side of the supercharger. Blades must be replaced in this manner or supercharger will not function.

6. To remove the rotor assembly, remove the six bolts holding on the front cover and the front cover can be

removed from the case with the complete rotor assembly.

7. To remove the front cover from the shaft: Drive out the pin that holds the pulley on the shaft and remove pulley. Rotor shaft can then be driven out of the front bearing using a soft mallet or a hammer and a wooden block. The seals in the front cover will catch on the shaft snap ring destroying them. Continue to drive the shaft out of the bearing and in so doing the seals will have to be replaced with the snap ring.

8. To remove the bearing and seals from the front cover: Remove the snap ring, drive out the bearing from

inside end, drive seals out in same manner and discard. 9. In replacing the bearing and seals in the front cover, make sure that the seals are placed back to back. (So that one lip faces in and the other lip faces out). In replacing the end cover on shaft, seals should be carefully worked over the snap ring groove in the shaft to prevent damage. Assemble in following manner: Press seals in cover, place cover over shaft, insert snap ring on shaft, press bearing on shaft and in cover housing, insert snap ring in housing. NOTE: Snap ring cannot be inserted in housing groove unless there is approximately .015 clearance between the rotor and the face of the end cover.

10. To remove bearing from the rear cover: Push out cap from inside of housing, remove snap ring from housing, push out bearing from inside of cover. In reassembling, the cover cap is forced into the groove in the rear cover by striking in the center. Edge of cover cap should be coated with Permatex prior to

replacement.

VERY IMPORTANT

In reassembling the supercharger, make sure that the marks on the end covers (raised dots) and the "V" line on the end flanges of the main housing line up. The end covers must be bolted to the housing in this relationship.

PARTS

Mention serial number on name plate of supercharger in ordering parts and any correspondence.

Part No.	Description	Part No.	Description
Я	HOUSING	83	CRANKSHAFT PULLEY
13	FRONT COVER	218	OIL SEAL*
14	REAR COVER	. 316	OIL LINE*
1581	ROTOR ASSEMBLY	118	SHAFT SNAP RING*
206	BEARING*	224	HOUSING SNAP RING
19	IDLER BRACKET	683	OILER FITTING*
7	IDLER PULLEY WITH BEARING	. 84	EXHAUST GASKET
11	CARBURETOR MOUNT	848	INTAKE GASKET
82	-VANE	59	PULLEY PIN
15Q	LUBRICATOR	2470	DRIVE BELT*
85	LUBRICATOR BRACKET	258	END PLUG
87	DRIVE PULLEY	88	THROTTLE EXTENSION
STANDARD F	No. 206 KLL or New Departure No. C88506 Rewhide No. 21218 or National No. 50245	Drive Se	ng—1¼" External or Waldes No. 5108-118 It—Gates No. 2470 or Gilmer No. 4L470 unings are Standard ¾" USS

The Judson Supercharger is fully covered by Patent(s) and/or Patent(s) Panding

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JUDSON MG-26 SUPERCHARGER INSTALLATION

Screw 3/8" stud furnished in front bottom hole of manifold to act as guide and support for supercharger until first bolt is inserted as per paragraph number 7 of instructions. Discard stud on completion of installation. The original carburetor bolts which are used for mounting the supercharger on the manifold are of sufficient length to develop the full strength of the bolt and longer bolts are not required.

Refer to paragraphs 2 and 14 re radiator brace. Radiator brace on manifold side of engine can be removed completely and not replaced.

The throttle lever ball is used from the original carburetor throttle arm. In the event that the throttle will not return to idle properly or if the pedal pressure is sufficient, the throttle spring should be shortened approximately 1".

We do not recommend increasing the compression ratio beyond MKII specifications. If the head has been removed from the engine it is essential that the nuts be tightened with a torque wrench in accordance with factory specifications (50 ft. lbs.)

IDENTIFICATION PLATE: An identification plate for fastening to the side of the hood is included with the installation.

CARBURETION: The carburetor should be adjusted on the rich side for best performance and the proper setting will have to be determined by the performance of the car on the road. If an exhaust gas analyzer is used for tuning, the carburetich should be set between 70 to 75% of combustion efficiency.

IGNITION: The complete ignition system must be in good condition and properly set on a supercharged engine. Timing and points must be set in accordance with the MG factory specifications (top dead center, dwell 49 degrees on dwell indicator). The crankshaft pulley furnished with the installation is marked fall timing.

LUBRICATION: Remove screw and place a few drops of cil in the top of front housing every time lubricator is serviced or every 300 to 500 miles.

NOISE: The supercharger may be very noisy when it is first started or within the first half hour of operation. This noise is nothing to be concerned about and will disappear completly within the first 20 to 40 miles of driving. A slight clicking noise will be heard from the supercharger on de-celeration after a long hard run on the engine. This same noise is also sometimes apparent when the engine is first started or when the engine is cold.

COMPETITION: The drive ratio used on the standard Judson MG-26 Supercharger installation gives a 6 to 6% p.s.i. boost pressure in the manifold and is recommended when the car is to be used for every day driving. In the event that the car is to be used in competition, a larger pulley for the crankshaft is available, which increases the manifold boost to 8 p.s.i. Larger pulley is not recommended for MKII and TF models or where compression ratio has been increased beyond 7.25:1. Order competition pulley No. 8335. Price is \$4.75 postpaid.

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MANIFOLD PRESSURE: A supercharger replaces the vacuum in the manifold with a pressure in proportion to the load placed on the engine. A correct pressure reading cannot be made without a load being placed on the engine.

INSTALLATION DATA, MITTELS TF-TC AND TB

IF MODEL ONLY: It is not necessary to remove the side panel to make the installation. The procedure for mounting the Judson Supercharger on the TF engine is the same as that required for the TD (both engines are type KPAG). Because of body changes however, the following additional steps are required:

- Bend up or remove the corner of right angle radiator stiffner on back of radiator water tank. Approximately 3/4" in on corner is sufficient.
- Notch out angle section on side panel of hood for pulley clearance.
 Notch is 3-1/2" long and starts 4-3/4" from rear of radiator shell.
- Remove one bolt from fender brace bracket and rotate bracket to a vertical position to allow for belt clearance. Turn bracket so that fender brace just clears the fan.
- 4. Remove front hood latch from side panel and catch bracket from the hood.
- Use four bolts included with installation to replace stude in the manifold. Insulators located between carburetors and manifold are not used on the supercharged engine.

TB AND TC MODELS ONLY: In order to install the Supercharger on these models the following additional steps are required:

- 1. To remove and install the pulley on the crankshaft it is necessary to loosen the engine mounts and jack up the engine approximately 2".
- Discard the radiator brace on the side of the engine that the supercharger is mounted.
- 3. Remove a small section of the radiator web near the top of the radiator where the brace was fastened to clear the idler bracket.
- 4. Bolt a spacer between the fan and fan pulley using longer fan bolts so that the fan will clear the belts. This spacer and bolts are standard on the MG-TD.
- 5. Slightly notch opposite corners of the fan blades to clear the radiator cross bracket which attaches to the headlam; brackets.
- 6. On right hand drive models, the fuel line has to be replaced with one 3" longer or an extension and fitting used.

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INSTALLATION DATA

JUDSON SUPERCHARGER GAUGE

Installation consists of following; supercharger gauge, length of hose, two fittings.

INSTALLATION ON MODEL MG-26 SUPERCHARGES

- For dash mounting cut a hole in dash panel in lower left hand side of panel next to clock. Hole should be approximately the same size as the outside diameter of gauge and smaller than bezel ring on gauge.
- 2. On superchargers with a specification number 13050 and later, simply remove the pipe plug located in the rear exhaust port of the supercharger. On superchargers with a specification number of 1304C it is necessary to remove the manifold from the engine, drill a 11/32" or "h" hole and tap 1/8" pipe.
- 3. Screw fitting with tube connection into supercharger exhaust port or manifold,
- 4. Screw female fitting into back of gauge.
- 5. Connect hose over tube on fittings to gauge and manifold connection.
- 6. For dash mounting, press gauge into dash panel and secure with clamp on back of gauge.

INSTALLATION ON B-210 SUPERCHARGER

Remove exhaust manifold from side of supercharger, drill and tap 1/8" pipe for fitting. Follow steps three to six as outlined above.

INSTALLATION ON M-178 SUPERCLANGER

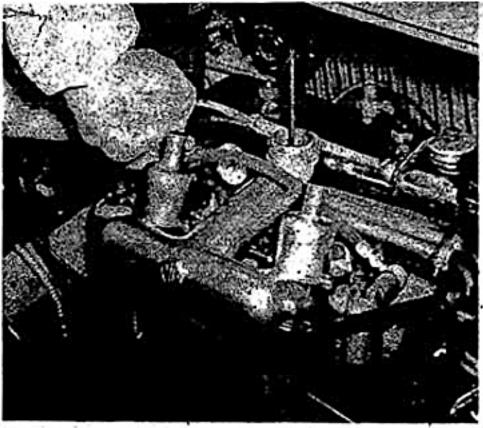
Follow steps as outlined above. For supercharger connection, remove pipe plug from rear of adaptor bolted to engine manifold.

DALL

A supercharger replaces the vacuum in the manifold with a pressure in proportion to the load placed on the engine. A correct pressure reading cannot be made without an actual load being placed on the engine. There will always be a vacuum reading when the engine is at idle or when the engine is not under load. Righer boost pressures are obtained under full throttle operation when accelerating or gring up an incline. Gauge readings will vary according to altitude, speed and engine load.

Under full throttle acceleration, the indicator hand on the gauge will go to "O" and if acceleration is continued a pressure will be placed in the manifold which will increase as the speed and the load of the engine increases. You will note that the supercharger has to produce a sufficient volume of air to overcome the vacuum in the manifold before it pressurizes the manifold. Even though you are not operating with a manifold pressure on a supercharged engine, the horsepower has still been increased due to the improvement in the volumetric efficiency of the engine.

There is a direct relationship between fuel consumption and manifold the test as the horsepower available increases with the boost pressure. When you do not use the additional horsepower afforded by the supercharger through manifold pressure, you do not pay for it through increased tuel consumption.





The radiator brace on the right side is removed from the top of the radiator only and is placed against the bottom of the fender.

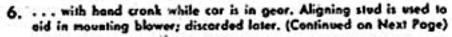


cleaner, fuel lines and carburetor linkage are first removed.
 The stock carburetors are then unbalted and removed as a unit.



4. On left-side of engine: generator is loosened and belt removed.

Crankshaft pulley balt is removed and pulley is replaced with . . .





BOLT-ON POWER

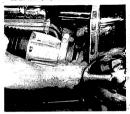
INSTALLATION STEP-BY-STEP



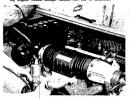
8. The supercharger is asset into position on the manifold using the aligning stud or guide. Use new postets between blower-manifold

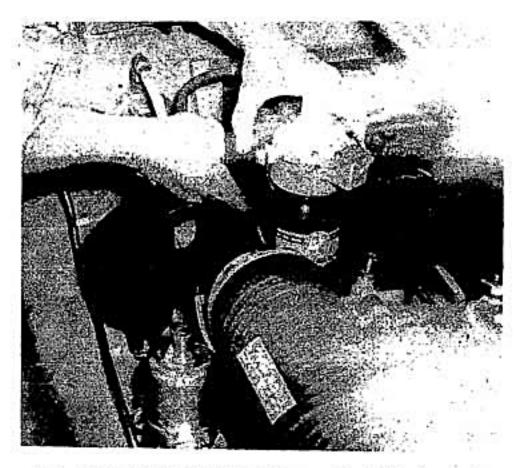


Remove all paper seeks from the supercharger parts. Unbalt right-

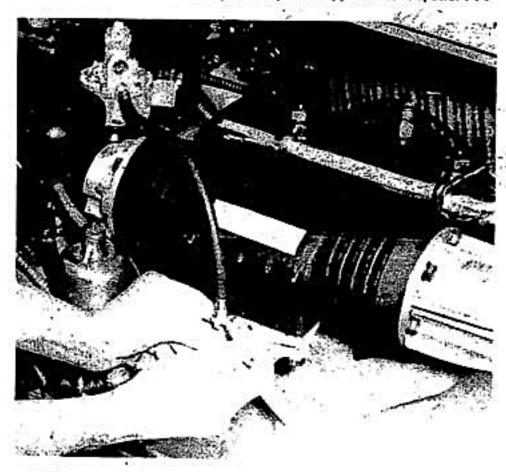


 Supercharger is filted forward on stud to permit installation of blower drive belts. Idler pulley bracket is leasened; swang . . .

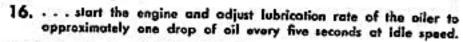


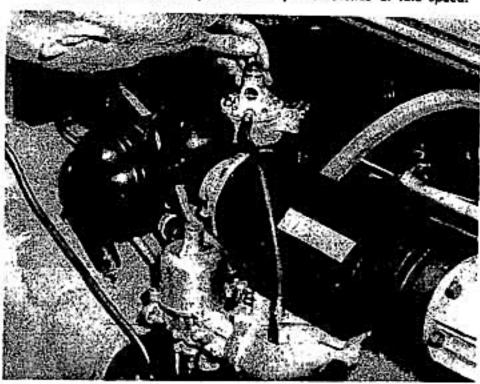


 Loosen support bar holding battery and insert flat plate on the oiler bracker between the battery and support bar. A special . . .



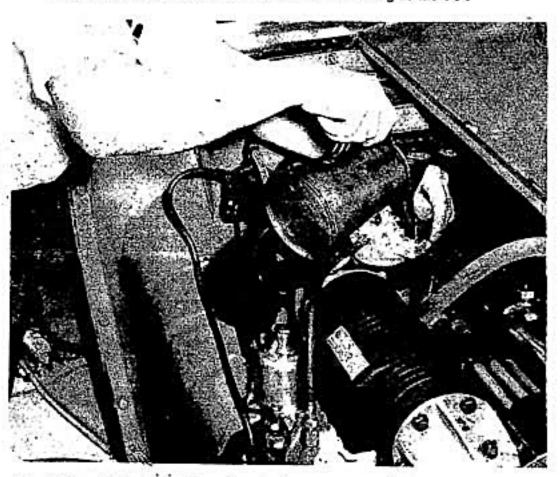
14. . . . supercharger, providing lubrication to the bore of the case. The main rotor bearings are greased and sealed at the factory.



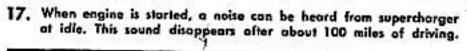


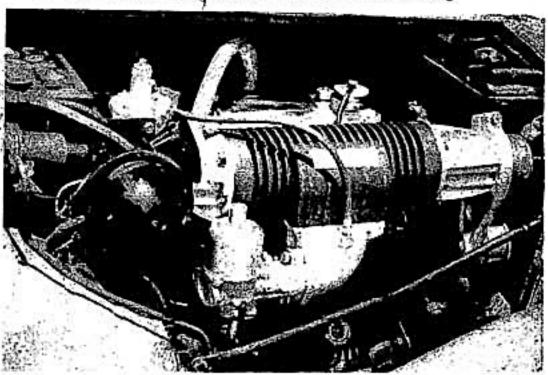


13. . . . flex hose, also supplied with the supercharger installation kit, is next mounted between the oiler and the fitting in the . . .

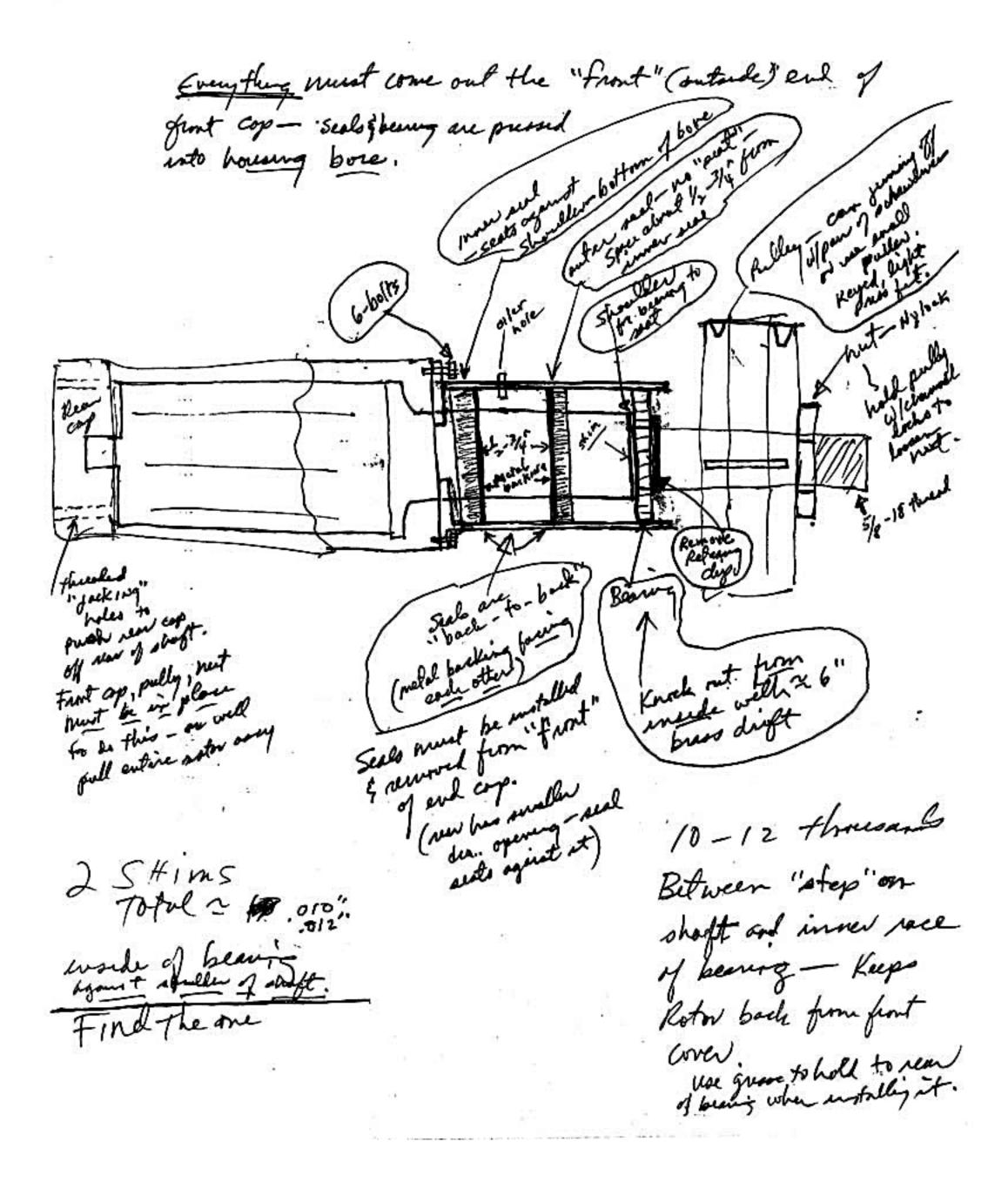


 Before starting the MG engine, it is necessary to fill the automatic oiler with a good grade of number 10 motor oil. Now . . .



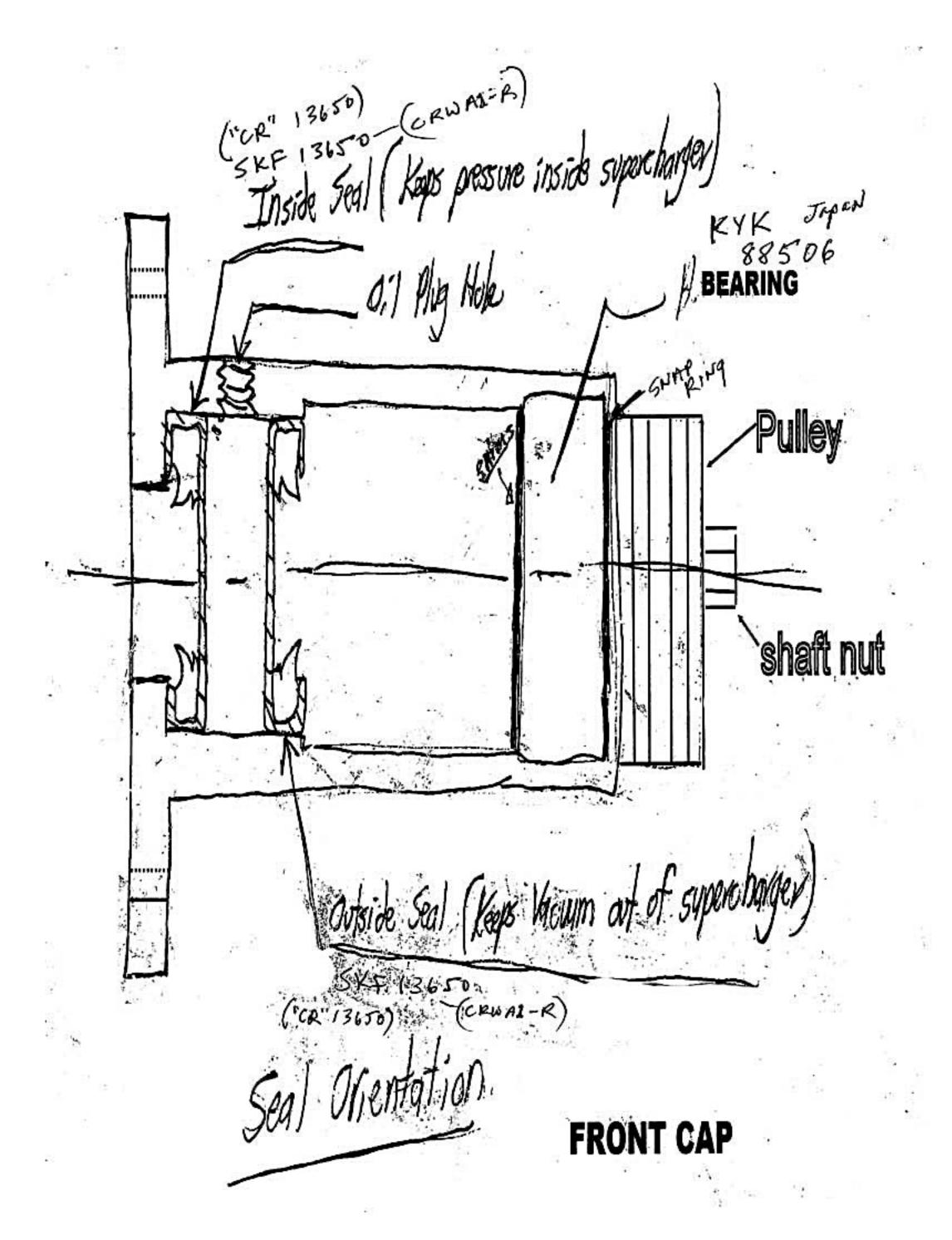


Spin gulley by hand - should hear "clube-click." To Hold fullers while lovening mut wrop pully if tarry cloth towel & hold w/channel When pully is offer remove 6-bolts - cap should come 16 easily will have beaus & 2 nel in housing. lewire retaining clip that, holds bearing, - out in bearing in order to get to the seed - bredio. of forward notor in sewelle so seals must come out the front. - they've present unto goes "all the way in" - stopes of first howing) word, friend pully, etal backing freign vel metal bouling other seal is 2 1/2 - 3/4" in fant of other seals four found noton. I were seed to keep preserve for bing drawn mi (?)



To get rear cop of not body: must have front cap & pully w/ nut in place there were the 2 "facting" threated below to food new cap foully easit on, entere note will come out I near still attached to rear end cap (can knock at of w/ plashe hammer), there's a single seal at rear of rotor (in end cap?) — defenit size than first reals.

There's a 22" "freeze play" in certain from cap.



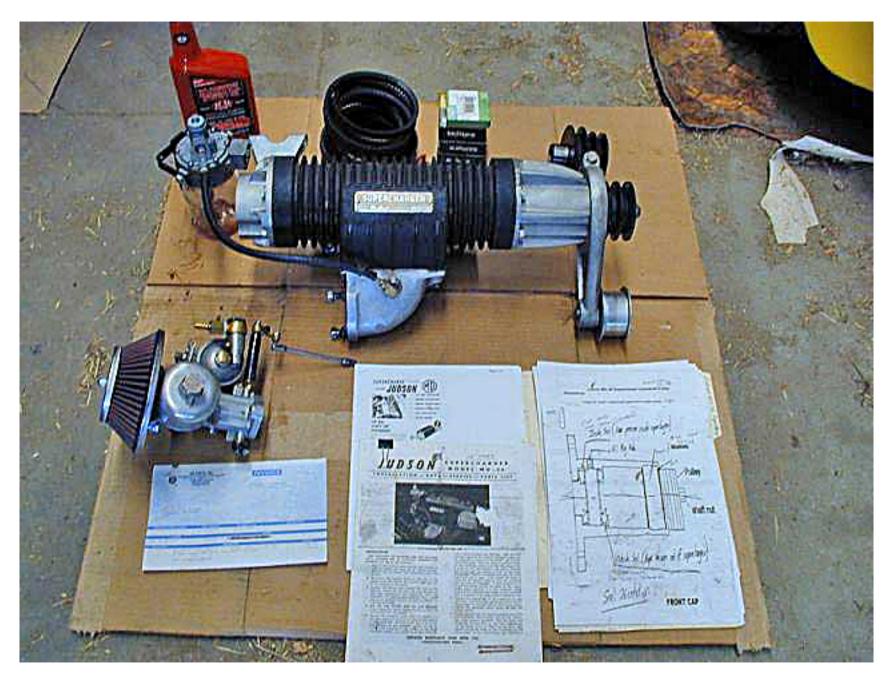
Original Rolling 44

Judson MG-26 Supercharger Crankshaft Pulley Dimensions

Pulley for "stock" components (generator & water pump): 3.765 +-.005" O.D.

Pulley (2-tracks) for blower belts:

3 Sizes: 3.312" O.D. - 5 lb boost 3 1/2 3.450" O.D. - 7 lb boost 3 1/2 3.625" O.D. - 8 lb boost 3 1/2



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OLYMPUS DIGITAL CAMERA



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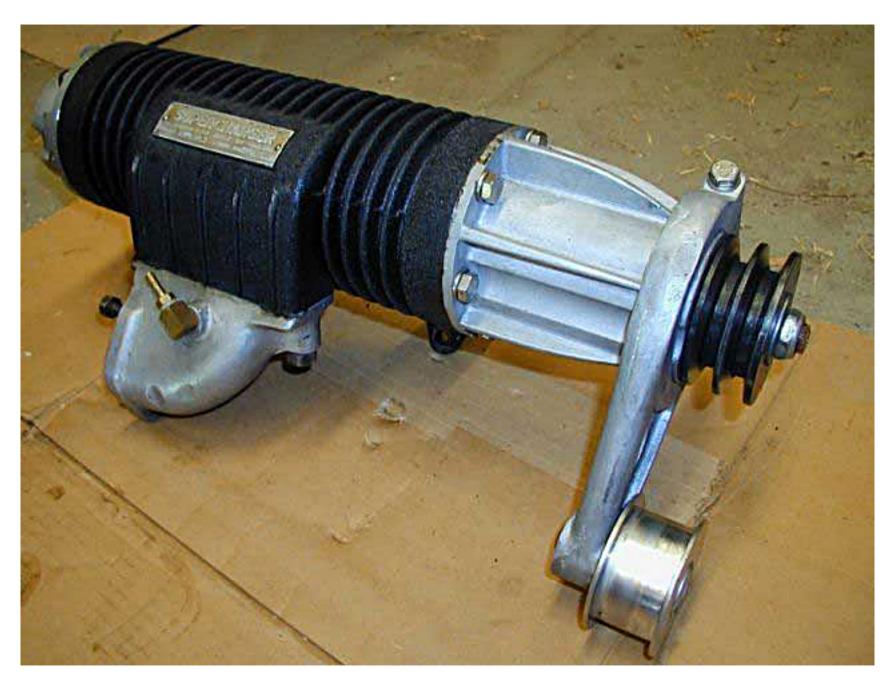
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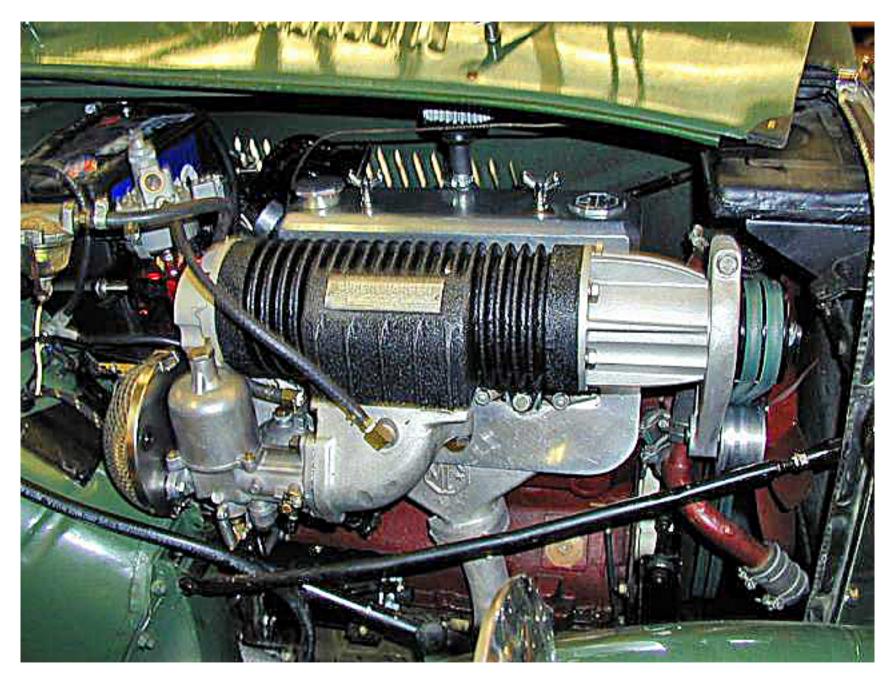
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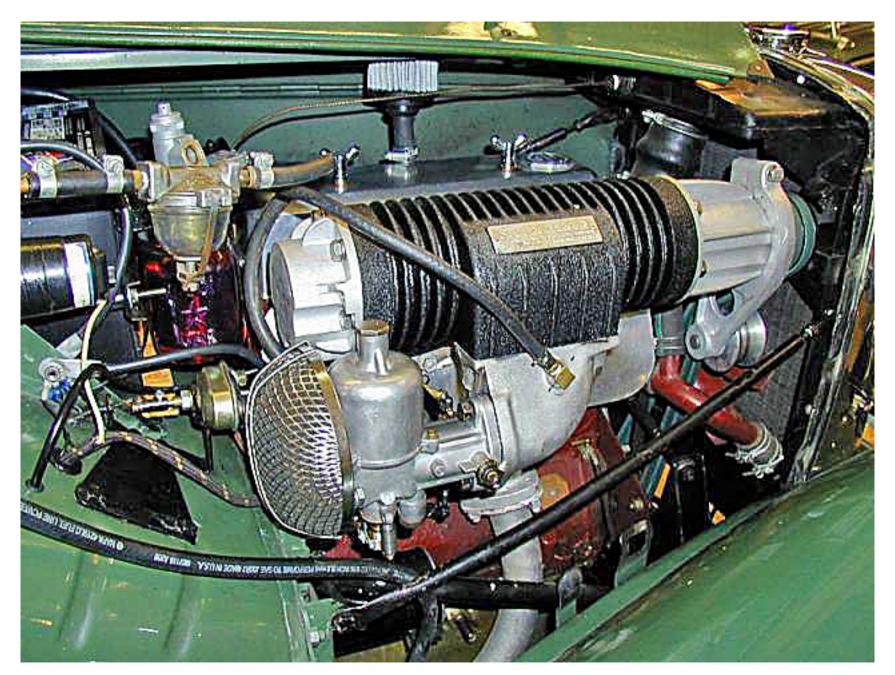
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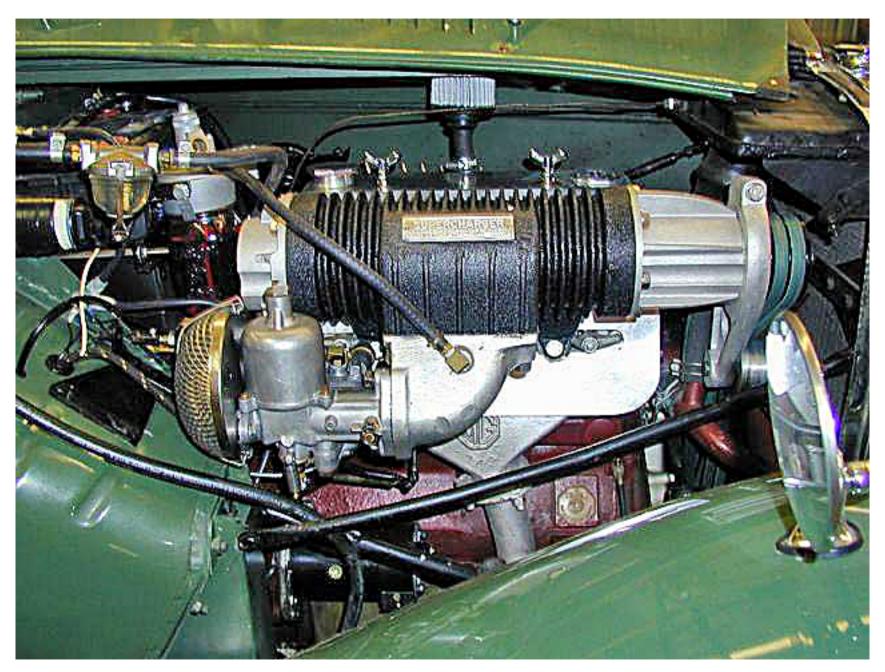
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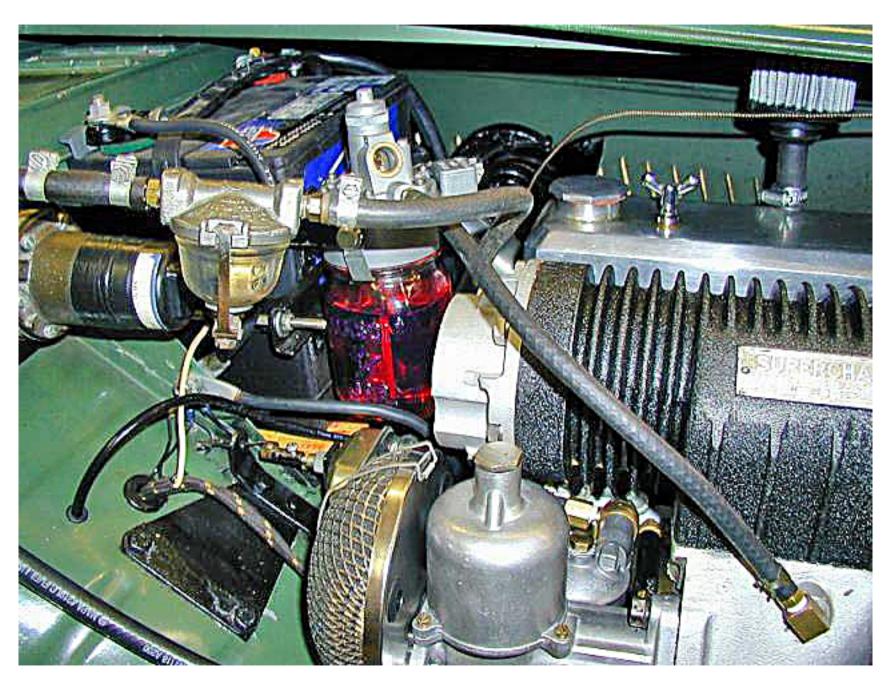
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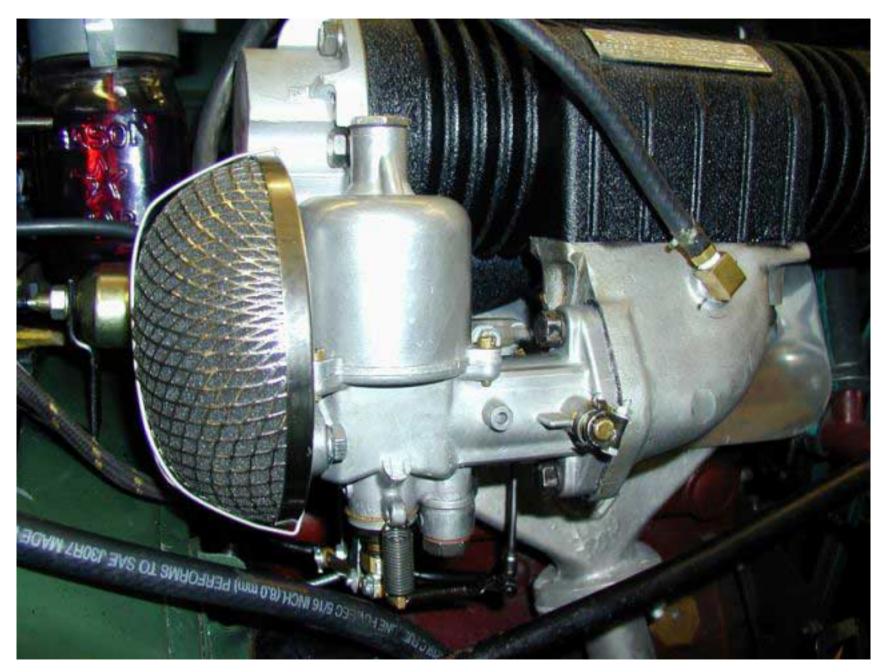
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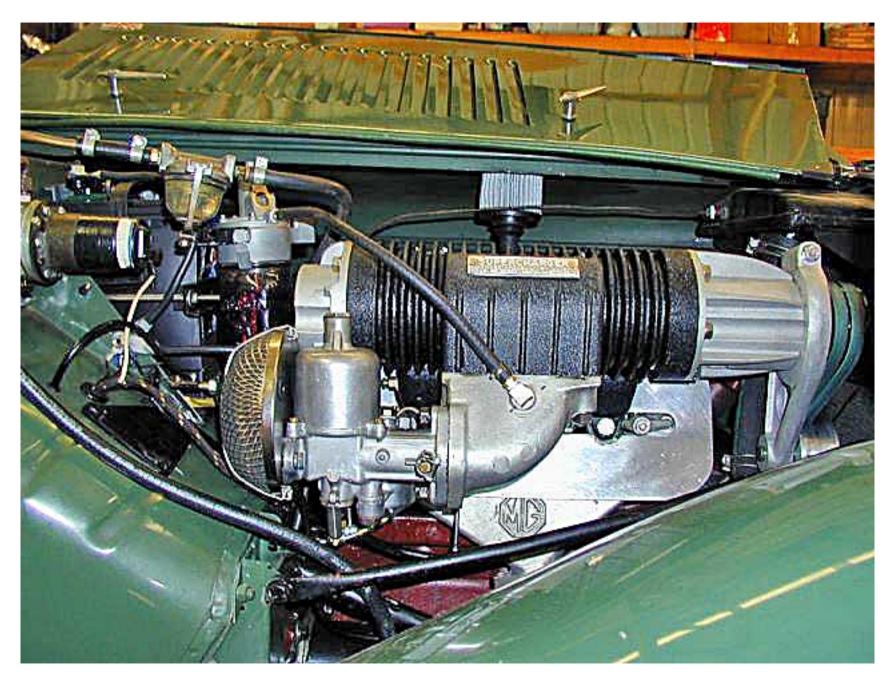
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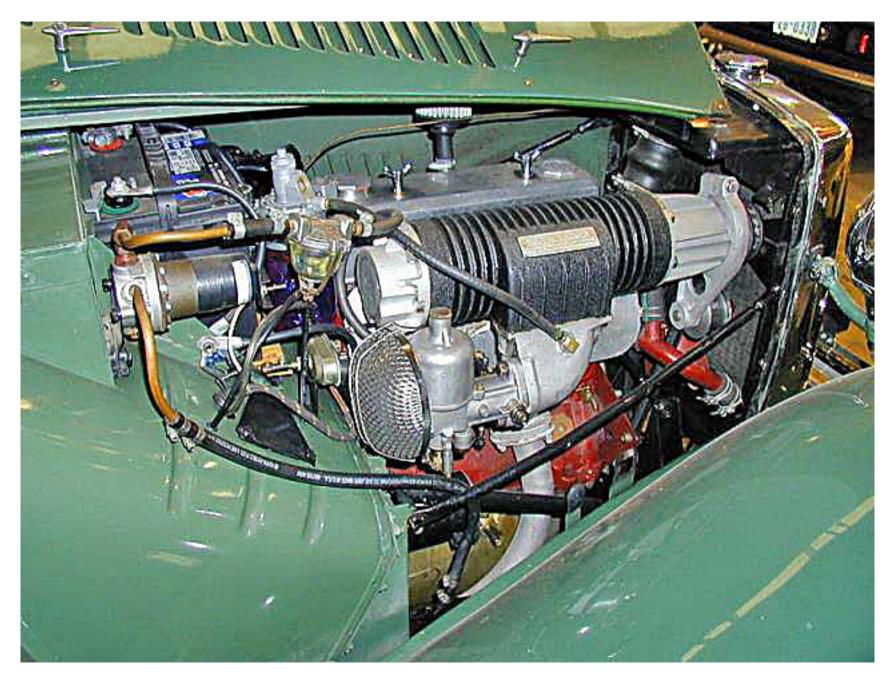
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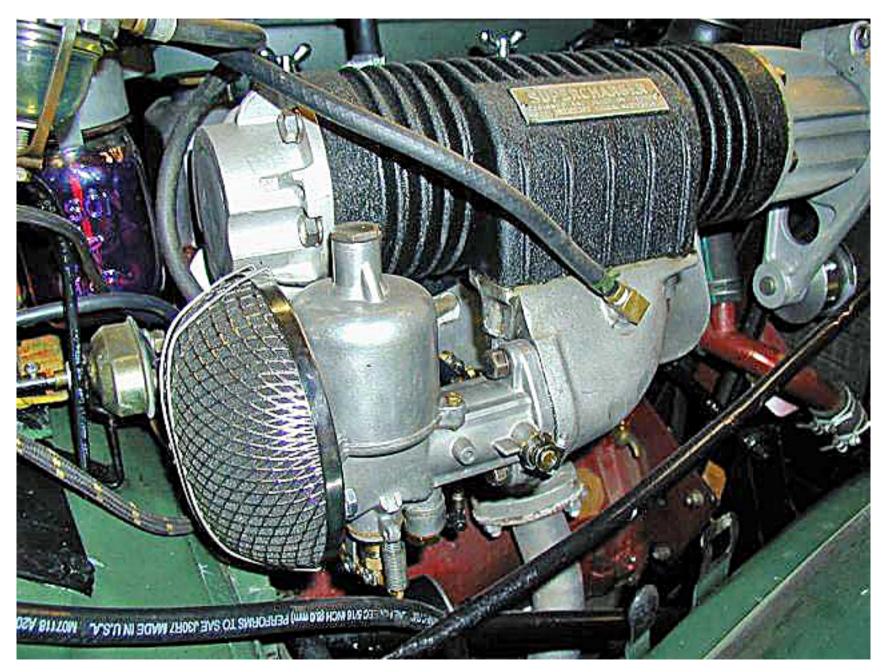
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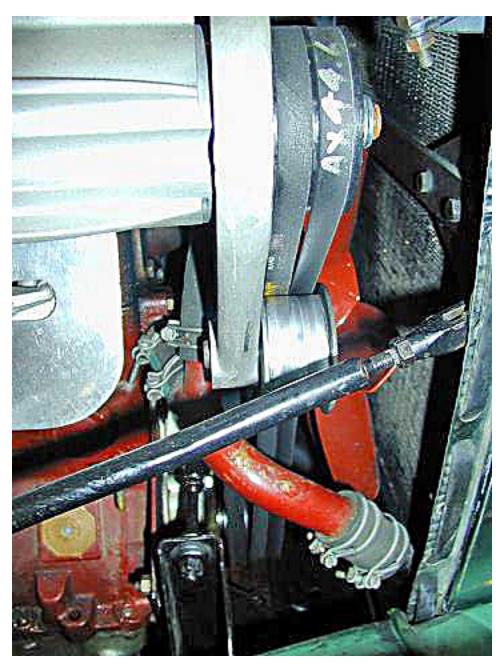
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