gauge to the brake backing plate is the same on each side.

When this is done it will then be necessary to readjust the toe-in. Use Toe-In Gauge ST 128 and adjust by turning each cross tube an equal amount so that the total toe-in will be as equally divided as possible between the two wheels.

It is important that the total toe-in be kept within the recommended limits of 1/32" to 1/16". If necessary to secure an accurate adjustment it is permissible to lengthen or shorten one cross tube ½ turn more or less than the other.

After the toe-in has been set, the length of the cross tubes should be checked. The distance between the centers of the ball sockets should be the same within ½". The Shop Manuals and previous adjustment data give a ⅛" limit for the length of these rods. Recent tests have shown however that as much as ½" difference in length may be permitted without ill effect. Please correct your Shop Manuals accordingly.

If there is more than ½" difference in the length of the cross tubes when the steering gear is on the high spot and the wheels in the straight-ahead position with the toe-in properly adjusted it indicates that a knuckle or other steering part is bent and should be replaced.

CARBURETION — 1803-8

In the December 1, 1939 Service Letter a stumble in the Super-Eight engine on light throttle pickup at from 10 to 18 m.p.h. was discussed and some suggestions were made for altering the carburetor to overcome it.

Further experience has shown that additional changes can be made to further improve the condition. Inasmuch as certain of these alterations have already been made in production, we are reviewing the entire operation. The carburetors are identified by the code number which is stamped on top of the float cover.

Carburetors Code Number 10-40 and 10-40A. Drill out idle tubes to No. 62 drill size. Install .052" main metering jets and advance the ignition timing about 2°.

Carburetors Code Number 10-40B, 10-40C, and 10-40D have No. 62 idle tubes and they need not be drilled. Install .052" main metering jets and advance ignition timing about 2°.

Carburetors Code Number 10-40E have all of the above metering changes and can be used with engines having either the early or late type camshaft.

Please refer to the Service Letter of February 1, 1940 for the changes to be made in the carburetor when the early type camshaft is replaced with one of the later type.

IGNITION DROWNING OUT
ALL MODELS

We have had reports from the field of the ignition drowning out when water is splashed under the bonnet.

The first step on a complaint of this nature should be to check the engine side pans. The fender side splasher particularly should be checked to see that it fits securely against the frame and the fender. Even a small gap may permit water to splash in on the ignition.

To further guard against water drowning out the ignitions, our cars are now being fitted with a rubber insulator over each end of the coil to the distributor high tension cable and at the distributor end of the spark plug wire. These insulators may be ordered from the Service Stores Division. 362119—Spark Plug Cable Insulator $0.04 AA List. 8 required for 110's, 10 required for 120's.

We have had reports from some of our distributers of the good results they have had in overcoming ignition drowning out by sealing the ignition wires with "Lektrik Power Seal" and similar sealing compounds. In extreme cases you may find it advisable to use these materials.

To seal the ignition, the sealing compound is painted on the ignition wires with a small brush —a five-cent mucilage brush will do. It is not necessary to remove the spark plug wires from the conduit. The wires should be pulled out of the distributor head and coated all over their exposed length. Before replacing them work enough of the sealing material into the distributor cap terminal sockets so that it oozes out when the wires are put in place. The coil to distributor cable and terminals at each end should be painted and treated in the same way. It is not necessary to coat the distributor cover entirely. The cover should be removed, however, the inside cleaned and the contacts painted. The pigtail of the condensor should also be painted at the same time.

EXHAUST MANIFOLD GASKETS

We have found very little demand for individual manifold gaskets, and due to a change in design and thickness, we believe it advisable to ship all future orders in sets only.

Pc. Nos. 300037, 300038 and 300039 will no longer be furnished. Instead order Pc. No. 303906 manifold gasket set for all Model 120's.

Pc. Nos. 341619, 341620 and 341621 will no longer be furnished. You should order Pc. No. longer be furnished. Order Pc. No. 351069 manifold gasket set for 18th Series Super Eight.

TRANSMISSION JAZZ—1801

You may have had some complaint, particularly on the 1801, of a rattle or buzz that is heard on pickup at about 20 to 30 m.p.h. Although this noise is a low pitched rattle and sounds much like a loose muffler, it actually is in the transmission and Econo-Drive. It is caused by a natural engine period which sets the transmission and Econo-Drive gears to rattling.

The effect of the engine period may be heard in all cars but is most noticeable in Econo-Drive-equipped cars because of the greater number of gears that may rattle.

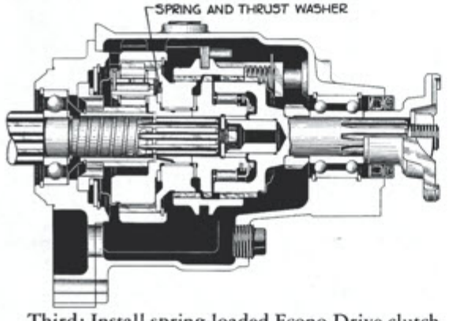
Usually one or more of the following four steps will correct it:

First: Change the transmission and Econo-Drive oil to summer grade S.A.E. 250. Use a premium grade of oil that will maintain its viscosity nearly constant and will not thin out when it gets hot. In some cases the added cushioning effect of the heavier oil alone will dampen out the vibration.

Second: Increase the Econo-Drive cut-in speed so that the engine will have gone through the period before the Econo-Drive is engaged. Governor switches are available in three different speed ranges. The speed range is identified by a paint mark on the cover.

Color	*Range*	*Piece Number*
Yellow	Low	355075
Red	Medium	347478
Blue	High	354943

The exact cut-in speed varies according to the axle ratio (see Service Letter March 1, 1940). The Blue—High—governor switch should be used.



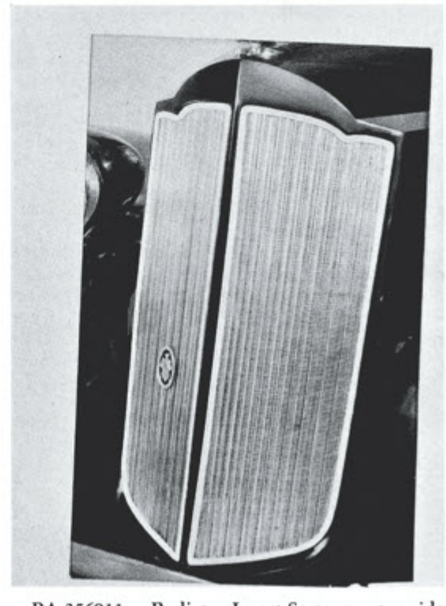
Third: Install spring-loaded Econo-Drive clutch thrust washer. This washer is used to replace the solid bronze thrust washer between the planetary pinion cage and the ring gear hub.

To install it, disassemble the Econo-Drive and replace the original thrust washer with the new thinner washer and spring. Coat both thoroughly with transmission oil and install the spring first with the cupped surface toward the rear of the car and the machined face of the thrust washer away from the spring. When assembling the ring gear and over-running clutch cam, be careful not to jar the spring and washer off the shoulder on the pinion cage. Pull the screw up slowly and turn the assembly occasionally to make sure the spring and washer remain in place. 362821 Overdrive clutch thrust washer, front. 362822 Overdrive clutch thrust washer front spring. These will be available about the second week of June.

Fourth: Install a high friction lag clutch driven plate. A special high friction lag clutch plate is now available for use in the 1801 Econo-Drive equipped cars. This plate (Part No. 362637) is identified by a white paint mark on the hub.

All clutch driven plates now carried in service stock are selected to the high limit of friction lag and are identified by a yellow paint mark.

RADIATOR INSECT SCREENS



PA-356911 — Radiator Insect Screens — provide full protection for the 1940 radiators. These screens cover the fender air grilles and radiator grille. They are attractive in appearance and easy to install. Now is the time to sell screens!

Southern Wheels TECHNICAL SERVICE BULLETIN



VOL. 14 No. 4 FEBRUARY 15, 1940

HOW TO USE THE NEW HEADLAMPS

The 1940 Packard cars carry a new headlighting system known as "Sealed Beam."

This lighting system represents the coordinated effort of the automobile and headlamp manufacturers and has the endorsement and approval of the American Association of Motor Vehicle Administrators, Society of Automotive Engineers, Automobile Manufacturers' Association and organizations interested in National Safety.

"Sealed Beam" headlamps provide two separate and distinct beams, giving considerably more light than has been produced in the past:

1. A country or **upper beam** designed to illuminate the road evenly for a considerable distance ahead of the car. This beam is for use on the **open highway** when no other vehicles are approaching.

2. A traffic or **lower beam** is also provided which is low enough on the left side to avoid glare in the eyes of the oncoming drivers. It is intended for use on heavily traveled highways and should always be used **when meeting other vehicles.** This beam is designed so that it does not throw any dazzling light into the eyes of the approaching driver under any condition of car loading. At the same time the distribution of light is such that the right side of the road is illuminated as far ahead as is practicable without causing glare on curves.

These headlamps have been designed to insure the motorist of maximum safety and comfort for night driving, but to obtain this safety for himself and for others the motorist must be willing and anxious to use his headlighting equipment in the manner intended. Good drivers are always courteous.

The operation of the headlights is a simple one, allowing the motorist to use either the country (upper) or the traffic (lower) beam, as traffic and road conditions demand, by means of a conveniently located foot switch. By pulling the light button on the instrument board to the second or last position, either the country (upper) or traffic (lower) headlamp beams are obtained alternately by operating the foot switch.

When the country (upper) beams are lighted a red pilot bulb in the instrument cluster will be illuminated, making it convenient for the driver to determine when this beam is in use. **Never pass an approaching car with this red light burning.** Always use the traffic (lower) beam when meeting.

Southern Wheels TECHNICAL SERVICE BULLETIN

STICKY VALVES AND CAR STORAGE

Winter often brings with it the problem of car storage and while we all know there are certain things to be done we often overlook important items.

When cars are placed in storage there are two important precautions which should be followed.

The first of these is to avoid starting the motors and running them for short periods. When this is done the raw gasoline which is delivered to the cold engine washes the oil from the cylinder walls and a deposit of rust is apt to form on the cylinder walls and the piston rings. Over a period of months rust may form to such an extent that the rings will be completely plugged in the groves.

Many cases of excessive cylinder wear and premature over-oiling can be traced to running the motors in storage. Unfortunately the condition is unlikely to be detected and when the early deterioration of the motor follows, it is blamed on the customer or on the factory. The fault actually lies with the storage practice.

The other condition which may result from running motors in storage is the rusting of the valve stems. When cars are taken out of storage with sticky valves the blame is placed on the factory although it is caused by the fact that the motors have been run for short periods.

If the valves are actually stuck the condition is corrected before delivery to the customer; but, unfortunately the deposit of rust may not be quite enough to cause trouble. In this case the car is delivered to the customer, and a slight amount of carbon added to the rust formation causes the valves to stick. Here, again, the customer or the factory is blamed for a storage fault.

The other precaution which should be observed in storing cars is to remove the batteries and see that they are kept in a charged condition. This insures the delivery of the cars with fully charged batteries.

The removal of the battery when the car goes into storage, moreover, prevents the condition which was first described. If it is necessary to move a car it must be moved by hand and this is the way it should be done.

When cars are placed in storage the spark plugs should be removed and a liberal quantity of oil poured into each cylinder through the spark plug hole. The engine should then be turned over several times with the starter before the battery is removed.

If this precaution is taken no particular attention is necessary when the car goes into service other than to see that a fully charged battery is installed.

LICENSE DATA AND CAPACITY INFORMATION

Series	No. of Cylinders	Cylinder Bore	H. P. A. M. A. Rating	Piston Displacement	Stroke	Wheelbase	Crankcase	Transmission	Rear Axle	Cooling System	Fuel System
1200-1-2	8	3 7/8	32.5	320	5	127-134-139	8 Qts.	4½ Pts.	6 Pts.	5 Gals.	25 Gals.
1203-4-5	8	3½	39.2	384.8	5	132-139-144	9½ Qts.	4½ Pts.	6 Pts.	5½ Gals.	25 Gals.
1207-8	12	3 7/16	56.7	473	4¼	132-139-144	10 Qts.	4½ Pts.	6 Pts.	10 Gals.	30 Gals.
1400-1-2	8	3 7/8	32.5	320	5	127-134-139	8 Qts.	4½ Pts.	6 Pts.	5 Gals.	25 Gals.
1403-4-5	8	3½	39.2	384.8	5	132-139-144	9½ Qts.	4½ Pts.	6 Pts.	5½ Gals.	25 Gals.
1407-8	12	3 7/16	56.7	473	4¼	139-144	10 Qts.	4½ Pts.	6 Pts.	10 Gals.	30 Gals.
1500-1-2	8	3 7/8	32.5	320	5	127-134-139	8 Qts.	4½ Pts.	6½ Pts.	6 Gals.	25 Gals.
1506-7-8	12	3 7/16	56.7	473	4¼	132-139-144	10 Qts.	4½ Pts.	6 Pts.	10 Gals.	30 Gals.
120	8	3¾	33.8	257	3⅜	120	6 Qts.	1 Qt.	4¼ Pts.	4⅛ Gals.	20 Gals.
120-B	8	3¾	33.8	282	4¼	120	6 Qts.	1 Qt.	4¼ Pts.	4½ Gals.	20 Gals.
120-C	8	3¾	33.8	282	4¼	120	6 Qts.	1 Qt.	5 Pts.	4 Gals.	20 Gals.
115-C	6	3 7/16	28.36	237	4¼	115	6 Qts.	1 Qt.	5 Pts.	3¾ Gals.	17 Gals.
1600	6	3½	29.4	245.34	4¼	122	6 Qts.	2 Pts.	6 Pts.	3¾ Gals.	18 Gals.
1601-2	8	3¼	33.8	282.05	4¼	127-148	6 Qts.	2 Pts.	6 Pts.	4 Gals.	21 Gals.
1603-4-5	8	3 7/8	32.5	320	5	127-134-139	8 Qts.	4½ Pts.	6½ Pts.	5 Gals.	24 Gals.
1607-8	12	3 7/16	56.7	473	4¼	134-139	10 Qts.	4½ Pts.	6 Pts.	10 Gals.	30 Gals.
1700	6	3½	29.4	245.34	4¼	122	5 Qts.	2 Pts.	6 Pts.	3.8 Gals.	18 Gals.
1701-2	8	3¼	33.8	282.05	4¼	127-148	6 Qts.	2 Pts.	6 Pts.	4 Gals.	21 Gals.
1703-5	8	3 7/8	32.5	320	5	127-148	7½ Qts.	2 Pts.	6 Pts.	5½ Gals.	21 Gals.
1707-8	12	3 7/16	56.7	473	4¼	134-139	10 Qts.	4½ Pts.	6 Pts.	10 Gals.	30 Gals.
1800	6	3½	29.4	245	4¼	122	5 Qts.	1 Pt.	5 Pts.	17 Gals.	18 Gals.
1801	8	3¼	33.8	282	4¼	127	6 Qts.	1 Pt.	6¾ Pts.	18 Gals.	21 Gals.
1803-4-5-6-7-8	8	3½	39.2	356	4⅝	127-138-148	7 Qts.	1 Pt.	6¾ Pts.	20 Gals.	21 Gals.

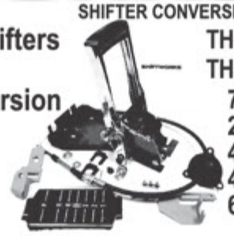
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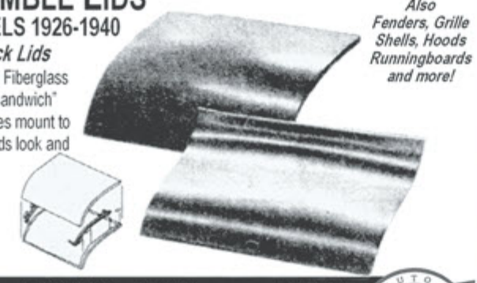
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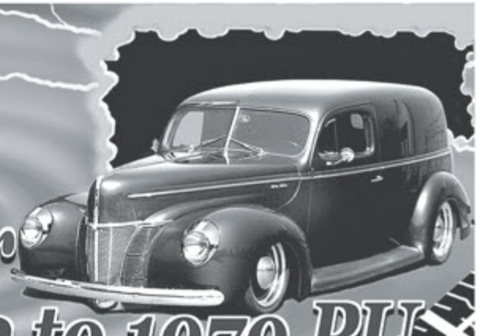
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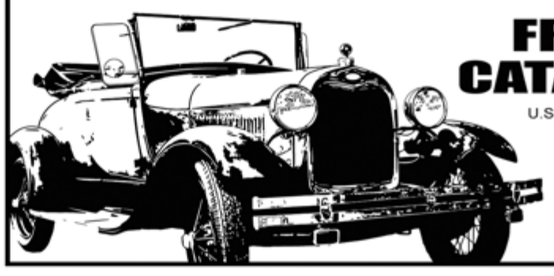
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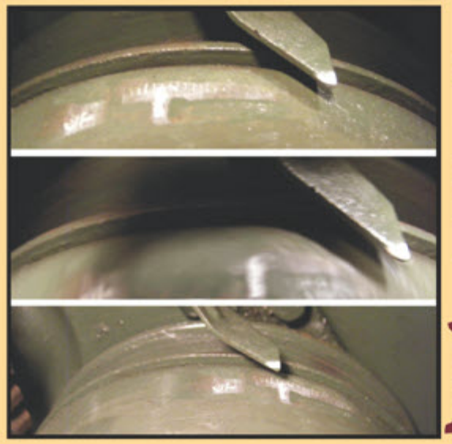
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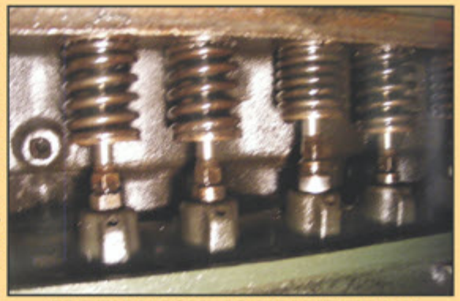


A Packard STRAIGHT 8 THAT'S LOST POWER AND BACKFIRES!

by Bill Johnson — Publisher

My first Packard was a 1946 282 (small 8) that I bought in 1970. That was back in the days of innocence, where I saw the car, bought it and drove it home. I was living in Lexington, Kentucky at the time and the Packard was in Cincinnati, 90 miles away. It had been sitting for 4-5 years in a building and I literally wiped it down, put a battery in it, checked the oil and tires and drove it home. Yes, I still have the car! A few years ago we decided to freshen up the engine but ran into a problem I'd like to tell you about.

The problem happens when the engine is held at high revs. Idling is fine. The car is an evolving project car (sort of my Harley Earl's Y-job) with the drive train rebuilt. When we rebuilt the engine, the distributor was mistakenly set one tooth off. Number 1 timing plug tower on the distributor cap was at 6 o'clock instead of the correct 7 o'clock. This is a problem on "vacuum advance" cars because it changes the degrees of advance. This does create high rev problems and has been there since the rebuild, but the problem was getting worse, so we knew something else must be going on.



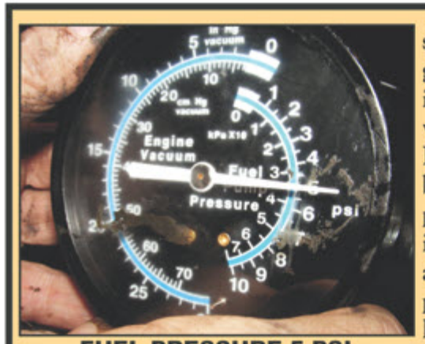
FREELY MOVING VALVE TRAIN

We only start this car about every three months, always with fresh gas and a little Marvel Mystery Oil down the carburetor. Even so, straight 8's are known for sticky valves, so that was the first place we looked. We removed all of the spark plugs and filled the cylinders with MM Oil, also removing the side covers (valve covers) and sprayed down the valve train with MM oil, then let everything soak for a week. At week's end, with the plugs removed, I turned the engine over, laying rags over the open cylinders as the MM oil blew out. Then, using air, I blew into the cylinders to dry them, and installed a new set of AC M-8 10mm spark plugs gapped at .028 and started the car. Same problem.



20" OF VACUUM @ IDLE

To test further for sticky valves, using my *tablet* I



FUEL PRESSURE 5 PSI

shot video of the valve train as the engine ran. Looked good. Then I removed the 1/4" pipe plug from the intake and connected my vacuum gauge to check vacuum at warm idle. It was a perfect 20 inches. As I revved the car, the gauge moved to different readings, but they were all okay. Next, I put an inline fuel pressure gauge right before the carburetor. The engine idled at around 450 RPM's and had 5 PSI fuel pressure, and when held at approximately 1500 RPM's, the fuel pressure dropped to 2 PSI. Even though the engine had been rebuilt, I decided to check the compression. It was 90 PSI on all cylinders (acceptable) and a good indication of no stuck valves. I could now be pretty sure that the problem would be in the fuel or ignition systems.

With the fuel pressure dropping so low at high revs, I decided to go through the fuel system first. The manual fuel pump runs off of the cam, and a worn cam can cause the fuel pump pressure to be erratic, but the cam was checked at the time of rebuild, with almost no miles on it since that time, so a bad cam wasn't likely. But I put an electric fuel pump on to eliminate that possibility. I made a steel plate and capped off the old manual fuel pump opening in the block. The electric pump I installed is a Carter #P-60430. This pump is a 6/12 volt, positive/negative ground. At 6V, fuel pressure is 4-5 PSI; at 12V it is 5-6 PSI. These pumps are gravity fed and should be mounted below the fuel tank and pointed toward the front of the vehicle. I have seen electric fuel pumps mounted above the tank in the trunk as in our '67 Jaguar Mk II. However, we ran out of gas once in the Jag and had to prime the pump by blowing air into the gas tank. Not much fun out on the road! To completely bypass our old fuel system, we put a 5 gallon gas can (full) on a stool above the fuel pump, then new gas line to the front of the car to the carburetor. We wired a manual switch to the electric fuel pump so we could cut it on and off while testing the system. It is recommended to run it through the ignition switch, but ours is for testing only. If it didn't work, we would go back to the manual fuel pump.

Now with the new fuel system on, we turned on the fuel pump and almost immediately the fuel pressure test gauge went to 4.5 PSI. As I started the car, the fuel pressure dropped to 4. As it warmed up, I held up the throttle. Pressure dropped to 2 PSI with the same missing and backfiring through the tail pipe.



2 BBL WITH 2 SQUIRTS OF GAS

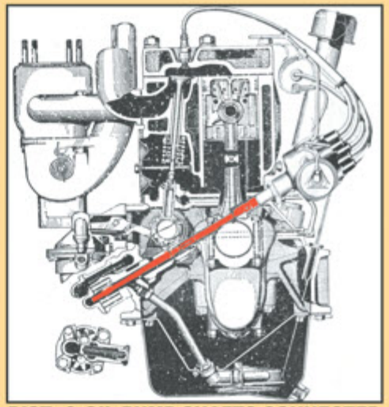
The only thing left in the fuel system was the carburetor. A bad accelerator pump can cause our problem. With the engine turned off, I pushed the butterfly open and throttled the carb, and was able to see two squirts of gas go into the throat. That told me that the accelerator pump was working, but not how well, so I replaced the Carter carb with a rebuilt one from our longtime Packard buddy David Moe, then started the car.

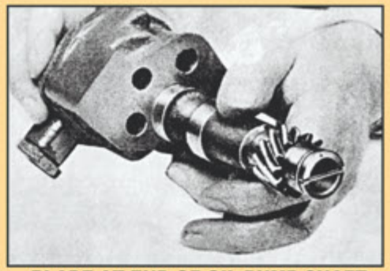
S-s-s-same problem !!!

The fuel system was all ok. It was now time to go to the ignition system. Before remedying our distributor-one-tooth-off problem, I checked the timing.

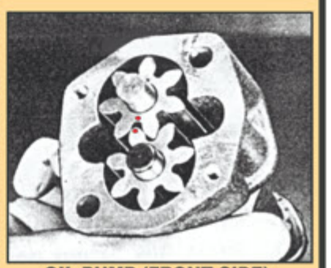
CONTINUED

We hadn't touched it since rebuild, so it should be on spec of 6 degrees before top dead center (BTDC). The Packard 1946 motors manual specs timing at 7 degrees. Motor's Manual specs 6 degrees, and another motors manual says 5 degrees. The car runs best at 6 degrees. I have a 6V and a 12V timing light, but decided to use the 6V to be in period with the car. To do this, you have to turn off the garage lights to see the timing mark on the harmonic balancer. With the lights off I could see fire jumping around the spark plug wires at the cap and the timing was now on 8 degrees. How did that happen? It was time to straighten all of this out. First, to set #1 plug on my distributor cap from 6 o'clock to 7 o'clock. I set the harmonic balancer pointer to top dead center, and using a paint marker, I put a dot on the distributor cap and a dot next to it on the engine block, then dots on the rotor and distributor plate where the rotor pointed and carefully pulled out the distributor. I noted the position of the end of the distributor shaft (oil pump side) was at 9 o'clock and I moved it to 10 o'clock, which would move my rotor to point at the correct 7 o'clock on the distributor cap. The distributor runs off of the oil pump on the other side of the engine, so I went to the right side of the car and pulled the oil pump, marking the pump to the engine block for reference. After removing the oil pump, I turned it around to check the drive gear to see its position. It was at 9 o'clock, the same as the distributor had been. I moved the drive gear's shaft to 10 o'clock, marking reference marks on the gears (front side) so the gears wouldn't be moved when I put it back in. This would make the oil pump's drive blade parallel with the cam when installed in the engine. The oil pump has a shaft with a blade that inserts into the distributor shaft groove. After doing this several times out of the car, I reinstalled them both. They fit right together (the oil pump has to be rotated about one quarter turn to go in and come out of the block.)


DIST. & OIL PUMP SHAFTS CONNECTED


BLADE AT END OF OIL PUMP SHAFT


GROOVE AT END OF DIST. SHAFT


OIL PUMP (FRONT SIDE)

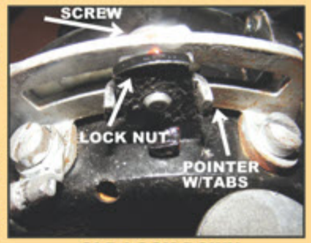
I had cleaned up the distributor while it was out, putting in new points, condenser, rotor, cap and spark plugs and wires. I found the reason that ignition fire was jumping at the cap. The wires' insulation was cracked on most of the wires (we use the stranded, lacquer cloth covered wires). When the distributor was out of the car, it was easy to see the vacuum advance and how it connects to the distributor.


CRACKED SPARK PLUG WIRE INSULATION

This is an Auto Lite system, and the vacuum advance moves the distributor body as the advance kicks in (over 500 RPM's) as opposed to the Delco centrifugal type, also used by Packard, that moves the distributor plate inside the distributor, not the distributor body. At first look, the advance hookup is genius. The vacuum control arm attaches to the distributor calibration plate (octane selector) with a #10 cam screw that goes down through the vacuum advance control arm, through the calibration plate and through to the bottom side, where a pointer with downward tabs on each side keeps the nut below it from turning. When the desired timing is reached, the pointer shows the degrees on the distributor calibration plate and you turn the screw inward, thus locking down the whole assembly. Here's what's wrong with that:

When the distributor is in the car, it is so low on the engine that the cap covers the pointer and the pointer/lock nut spins when you tighten it down, even though the pointer has two tabs that face downward to keep the nut in place, and a tab on the back of the lock nut that is supposed to push up against the distributor body to keep the nut from moving. I didn't appreciate how comical all of this was until Woody was holding the timing light as I moved the distributor to get my 6 degrees with my left hand (rubber gloves on, of course) then with my right hand I tightened down the lock screw, not realizing the lock nut was turning, then I turned the car off and restarted it. Back to 8 degrees! After doing this five times, I realized I was doing the same thing over and over again, expecting a different result. This is one definition of insanity. So I made my own distributor lock down. I used the same cam screw, passing through the vacuum arm and distributor calibration plate, then on the bottom side I added a star washer, deleted the tabbed pointer, used the threaded lock nut from the old assembly and added a thumb nut at the bottom to double-nut it. Packard changed to a very similar setup as evidenced on the cover of their Ignition Training Booklet dated April, 1947 (see next page).





OLD LOCK DOWN SCREW ASSEMBLY

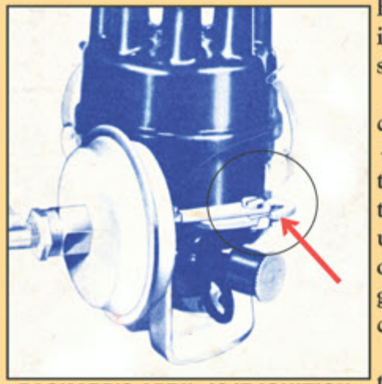

"THIS HAS GOT TO COME TO AN END!"


MY NEW DIST. LOCK SCREW ASSEMBLY



To base time an engine, #1 plug is removed, put your thumb over the hole and crank the engine over (coil wire off) to bring #1 piston up on its compression stroke. You will feel the air from the cylinder pushing out against your thumb. Stop when the pointer points to TDC on the harmonic balancer and the rotor points to #1 plug (ours is at 7 o'clock. If it had been at 1 o'clock we would

CONTINUED



PACKARD'S APRIL 1947 IGNITION SYSTEM BOOKLET COVER PIC

have been 180 degrees out.) Also, to confirm, #1 piston's intake and exhaust valves will be closed (down on our straight 8), which is correct for the compression stroke.

To static time using a test light, put one lead on the distributor's primary terminal (the wire from the coil's + side [ours is a positive ground car]) and the other lead to a ground on the engine. Turn the distributor until the light goes out (points closed). Then turn the distributor toward #1 firing plug (clockwise on our car; this is opposite of cam rotation). Turn until the instant the light goes on (points open). Lock down the screw and you're done.

To time with a timing light, warm the car to operating temperature with low idle and disconnect the vacuum advance and cap off the carb end of the line. This will keep the vacuum advance from kicking in and advancing the timing. I backed off the #10 lock screw and advanced my timing (this distributor advances clockwise and retards counter-clockwise), setting the timing to 6 degrees on the harmonic balancer using the timing light, then locked down the screw. When I started it, it idled nicely, no miss, 20 inches of vacuum, 5 PSI fuel pressure at idle, 3.5 PSI at "snap" throttle, then back to 4.5 PSI at fast RPM's. (I found that fuel pressure drop can be caused by bad ignition timing, causing less fuel supply as engine speed increases and starts to miss.) Now when I brought the revs up. 500, 800, 1000, 1500, no missing, no loss of power, no back fire! The old straight 8 was back! One thing about these old L-heads is, I've found they love to idle and be throttled, but not to just hold them up at 3,000 RPM's with no load. They were not designed for that.

Now, what exactly caused my problem? Here's how the clues add up. Most every time we started the car over the years, we removed the distributor cap to file the points because of oxidation (Georgia's wet climate!). We would unclip the distributor cap and hold it back toward the spark plug wires. This cracked the insulation on the spark plug wires causing cross-firing, and this moved the ignition timing itself. And the distributor being off one tooth with a vacuum advance secondarily contributed. Next time we file the points, the cap will be carefully moved to the side with no stress on the wires. This fixed the chronic after-fire problem when the engine was raced, but on occasion when the engine revs were held up with no load, it might occasionally backfire through the tail pipe. The only thing that wasn't done was to rebuild the distributor. Our distributor was sent to our good buddy Ron Carpenter. He is a specialist on these old Packards and has the knowledge and equipment to go through the distributor

After we got the distributor back from Ron, totally rebuilt including a new vacuum advance, we dropped it in. The idle was now smoother and never any after fire through the tail pipe! I would suggest having your distributor tested and rebuilt before going through the carburetor and other parts of the ignition system. As for us, we wanted to go through *all* of our systems to ensure many more years of dependable service from our old friend.

Keep 'em driving!

Our thanks to Ron Carpenter, California Packard restorer and SW team member!



THE NEW

1946 PACKARD CLIPPER

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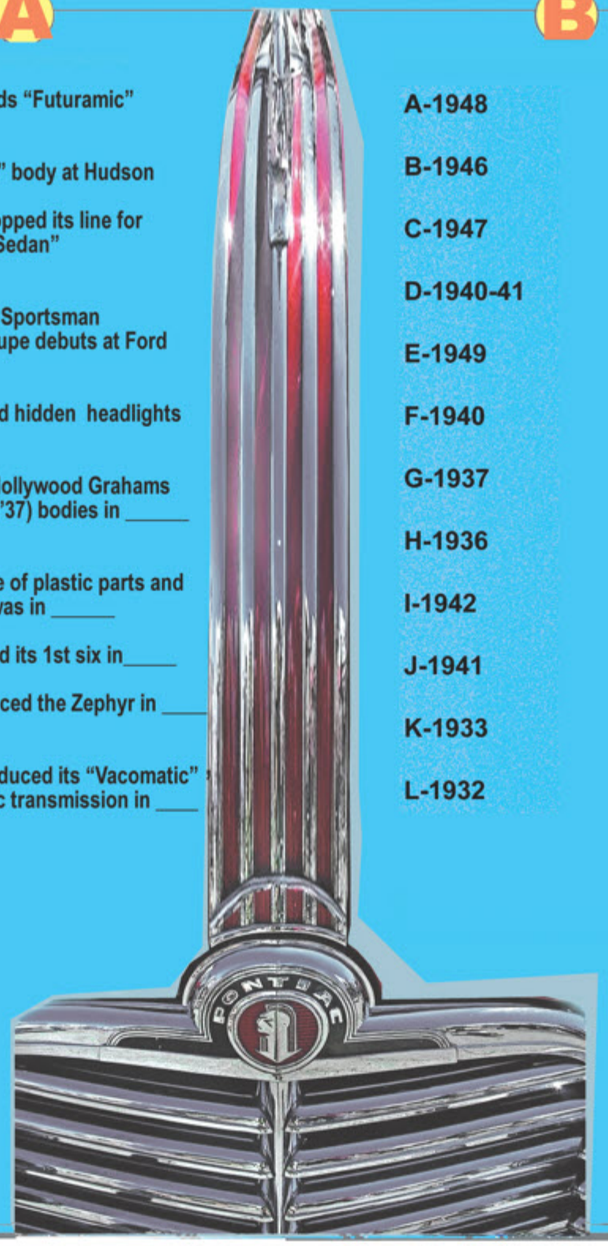
OLD CAR

MATCH GAME

(Answers on Page One)

WHAT YEAR?

A	B
☐ 1. First year of Olds "Futuramic" styling	A-1948
☐ 2. First "Monobilt" body at Hudson	B-1946
☐ 3. Studebaker dropped its line for "Land Cruiser Sedan"	C-1947
☐ 4. Woody-Bodied Sportsman Convertible Coupe debuts at Ford	D-1940-41
☐ 5. DeSoto featured hidden headlights for _____	E-1949
☐ 6. CLipper amd Hollywood Grahams used Cord ('36-'37) bodies in _____	F-1940
☐ 7 Chevy's 1st use of plastic parts and stainless trim was in _____	G-1937
☐ 8 Packard debuted its 1st six in_____	H-1936
☐ 9. Lincoln introduced the Zephyr in ____	I-1942
☐ 10. Chrysler introduced its "Vacomatic" semi-automatic transmission in ____	J-1941
	K-1933
	L-1932



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