

**SERVICE MANAGER'S
PERSONAL COPY**



VOL. 7 NO. 4

FEB. 15, 1933

**A SUGGESTION . . .
NOW IS THE TIME TO
PREPARE YOUR CAR FOR SPRING**



Listed on the attached service order are the Spring conditioning items we suggest you have taken care of at this time. They assure the satisfactory operation of your car.

You will not want to be inconvenienced by having your car in the Service Station on the bright Spring days soon to come.



This work can now be done at a very reasonable figure since the special price quoted represents a substantial saving.

Please sign the attached order and mail it, or bring it in with your car.

PACKARD DEALER
YOUR STREET No
CITY

PACKARD OWNERS ARE BEST SERVED BY PACKARD SERVICE

Another Spring Piece

We illustrate a conditioning order and letter combination. This type of piece has been used very successfully, particularly in connection with Winter and Spring conditioning. We have prepared one to assist you in your Spring Selling Campaign. The items covered would sell according to the standard flat rate price in Zone 1 at \$14.35. Since there is very little material used and the time required to do the work listed would not exceed six hours, we have suggested a special price of \$9.90. This price may be still further lowered, if you feel it advisable for your particular territory.

The pieces are printed on a light green paper and the order is perforated so that it can be detached and brought in by the customer. The pieces will be imprinted with your firm name on the front page. This same imprint will be repeated at the top of the order form and you may change the special price, if you wish.

The pieces may be ordered in any quantity from one hundred up at 2c each, including imprints and price.

**ACCESSORIES THAT HELP
"SPRUCE UP" YOUR PACKARD**

- RADIATOR GRILLES
- VENTILATOR WINGS
- CHROMIUM RIM RINGS
- TIRE COVERS AND GUARDS
- BODY POLISH—FABRIC CLEANER
- TOUCH-UP BLACK—TAR REMOVER

ALL PACKARD APPROVED



PACKARD DEALER
YOUR STREET No
CITY

PACKARD SERVICE
REPAIR ORDER and INVOICE

No. _____
Date _____ 1933

Name _____ Promised _____
Street _____ Phone _____ Delivered _____
City _____ State _____ Billed _____

License No. _____ Make _____ Type _____ Motor No. _____ Original Delivery Date _____ Mileage _____

| SYMBOL | OPERATIONS | Price |
|--------|---|-------|
| | Tune motor | |
| | Clean and adjust spark plugs and distributor points | |
| | Adjust timing chain | |
| | Adjust valve tappets | |
| | Adjust fan belt—Tighten packing nut | |
| | Spray motor and transmission | |
| | Flush radiator and block | |
| | Tighten body bolts | |
| | Adjust and tighten shackles and spring clip bolts | |
| | Adjust front wheel bearing and tram | |
| | Hydrometer test battery—Check headlights | |
| | Brush out car, clean windows, fill tires | |

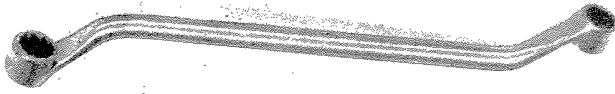
SPECIAL 60 DAY PRICE \$9.90

1. If while this work is being performed additional work is found to be desirable, this Company will secure Customer's approval.
2. This Company is not liable for loss or damage to vehicle by fire, theft, accident or breakdown and the vehicle as held at owner's risk.
3. Except as noted parts removed for removal will be scrapped at once.
4. Client must be present within 3 days from delivery.

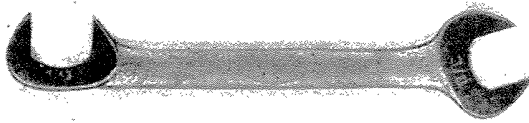
I authorize the above order

Customer's Signature _____

New Tools for Tenth Series



ST-908 cylinder head nut wrench is used for removing the nut located between the two coils. Without this wrench, this nut is very hard to get at. The wrench can also be used for tightening cylinder head nuts on the Eight and the Twelve motors. It is priced at \$1.40.



ST-909 distributor housing anchor bolt wrench. This is a special wrench and is required when retiming the distributor. You will find that the cap screws are so close to the distributor base that an ordinary wrench will not fit. This wrench is specially priced at 45c.

Brake Adjustment

It will be found that the Tenth Series brakes will equalize best with a slightly increased pull on the right front wheel.

In setting the brakes, on our factory equipment, the right front wheel is set for a pull of 625 to 650 lbs. with the other three wheels at 500.

The actual pull in pounds will vary with the equipment which is used, but this ratio will remain the same.

Valve Tappet Adjustment

A change has been made in the cam shaft design of the Tenth Series Eight and Super Eight.

This change calls for a slight increase in the exhaust valve tappet clearance, and these valves should be set at .006" instead of .004" as heretofore.

The intake valve clearance of .004" is unchanged.

Stop Light Switches

A new stop light switch is used on Tenth Series cars.

One of the terminals on the switch is grounded, and in order to prevent the possibility of accidental short circuits, the live wire running to the switch should be connected with the insulated terminal of the switch itself.

The live wire should attach to the terminal nearest the center of the switch body, but this is not the case in some of the early Tenth Series shipments.

Better Parts Ordering

Every parts man should welcome a plan which will help him to assist "the boss" in saving money in the parts department. Nothing eats up parts profit as quickly as obsolescence. Most of us expect to find obsolescence by going through our bins after the annual inventory and we are hardly ever disappointed. This, however, is the wrong time and place to look for it. The right time is when you are ordering stock. The right place is on your stock record card and your parts order blank.

The new plan is not a cure-all by any means. It will help any parts man who will use it. Like all other plans, it requires intelligent use. Trade Letter 2601 and a sample order pad have already been sent each distributor. Every wide awake parts man will determine how he can put this plan to work so that it will put a stop to loss through obsolescence.

STANDARD SIZES AND ADJUSTMENTS

| Model | 1001 | 1002 | 1003 | 1004 | 1005 | 1006 |
|----------------------------------|--------------------------|-----------------|---|-----------------|-----------------|-----------------|
| BRAKE | | | | | | |
| Clearance around Drum | Free | Free | Free | Free | Free | Free |
| Lining Size—Front Left | 15½" x 1¾" x ¼" | 15½" x 1¾" x ¼" | 15½" x 1¾" x ¼" | 15½" x 1¾" x ¼" | 16½" x 1½" x ¼" | 16½" x 1½" x ¼" |
| Lining Size—All Others | 15½" x 2¼" x ¼" | 15½" x 2¼" x ¼" | 15½" x 2¼" x ¼" | 15½" x 2¼" x ¼" | 16½" x 2½" x ¼" | 16½" x 2½" x ¼" |
| No. of Linings per Car | 8 | 8 | 8 | 8 | 8 | 8 |
| Hand Brake Setting—Wheels Locked | Three to Four Notches | | | | | |
| CLUTCH | | | | | | |
| No. of Driven Plates | 1 | 1 | 1 | 1 | 1 | 1 |
| Lining—Hycó—Size | 6½" x 11" | 6½" x 11" | 7" x 12" | 7" x 12" | 7" x 12" | 7" x 12" |
| Clearance Hub to Clutch Shaft | No Perceptible Back Lash | | | | | |
| Clutch Spring Load | 115 Lbs. @ 1¼" | 115 Lbs. @ 1¼" | Inner—50 Lbs. at 1⅛" Outer—100 Lbs. at 1⅛" | | Same | Same |
| Clearance Pedal to Toeboard | 1" | 1" | 1" | 1" | 1" | 1" |

STANDARD SIZES AND ADJUSTMENTS—Continued

| Model | 1001 | | 1002 | | 1003 | | 1004 | | 1005 | | 1006 | |
|--|---|--|---|--|--|--|---|--|--|--|---|--|
| MOTOR—Cont. | | | | | | | | | | | | |
| Clearance to Push Rods—Motor Warm | .004" | | .004" | | .004" | | .004" | | Automatic Takeup | | Automatic Takeup | |
| Width of Contact of Valve Seat | Eight Hundred Eighty-three Ten-thousandths | | | | | | | | .062" | | .062" | |
| Clearance between Valve Stem and Guide | Inlet—Minimum—.025" Outlet—Minimum—.045" | | | | Same Same | | Same Same | | .0025" .005" | | .0025" .005" | |
| Tension of Valve Springs | 43 Lbs. at 3 ¹ / ₁₆ " | | 43 Lbs. at 3 ¹ / ₁₆ " | | 43 Lbs. at 3 ¹ / ₁₆ " | | 43 Lbs. at 3 ¹ / ₁₆ " | | 70 Lbs. at 2 ¹ / ₃₂ " | | 70 Lbs. at 2 ¹ / ₃₂ " | |
| Oil Pump Pressure at 1000 R. P. M. | Minimum—35 Lbs. | | | | | | | | | | | |
| Crankcase Oil Capacity | 8 Qts. | | 8 Qts. | | 10 Qts. | | 10 Qts. | | 10 Qts. | | 10 Qts. | |
| Rod Clearance to Surface Oil in Crankcase | 1 ¹ / ₁₆ " | | 1 ¹ / ₁₆ " | | 1 ¹ / ₁₆ " | | 1 ¹ / ₁₆ " | | Front 2 ¹ / ₁₆ " Rear 1 ¹ / ₁₆ " | | Front 2 ¹ / ₁₆ " Rear 1 ¹ / ₁₆ " | |
| Valve Timing | 00's on Crankshaft and Camshaft Sprockets Should be Nearest together and Line up on Each Side of Center | | 00's on Crankshaft and Camshaft Sprockets Should be Nearest together and Line up on Each Side of Center | | 00's on Crankshaft and Camshaft Sprockets Should be Nearest together and Line up on Each Side of Center | | 00's on Crankshaft and Camshaft Sprockets Should be Nearest together and Line up on Each Side of Center | | 00's on Crankshaft and Camshaft Sprockets Should be Nearest together on Center Line | | 00's on Crankshaft and Camshaft Sprockets Should be Nearest together on Center Line | |
| SPRINGS | | | | | | | | | | | | |
| Front | 900 Lbs. Body Type | | 900 Lbs. Body Type | | 950 Lbs. Body Type | | 950 Lbs. Body Type | | 1050 Lbs. Body Type | | 1050 Lbs. Body Type | |
| Rear | 1175 603 1175 603 1025 608 1025 609 | | *1000 610 1000 611 1000 621 1100 617 1100 618 1100 619 1100 623 1100 627 1200 613 1200 616 1300 614 1300 615 | | 1300 653 | | 1200 651 1200 661 *1200 650 1300 657 1300 658 1300 659 1300 663 1300 667 1400 656 1400 673 1500 654 1500 655 | | *1200 631 1200 641 *1200 630 1300 637 1300 638 1300 639 1300 643 1300 647 1400 633 1400 636 | | 1500 634 1500 635 | |
| NOTE—*—165 rate. All others—145 rate. | | | | | | | | | | | | |
| REAR AXLE | | | | | | | | | | | | |
| Oil Capacity | Six Pints—All Models | | | | | | | | | | | |
| Back Lash Between Driving Gear and Pinion—Minimum | Four Thousandths of an Inch | | | | | | | | | | | |
| STEERING | | | | | | | | | | | | |
| Front Wheel Camber | 1 ¹ / ₂ Deg. | | 1 ¹ / ₂ Deg. | | 1 ¹ / ₂ Deg. | | 1 ¹ / ₂ Deg. | | 1 ¹ / ₂ Deg. | | 1 ¹ / ₂ Deg. | |
| Front Wheel Caster | 3 ³ / ₄ Deg. | | 3 ³ / ₄ Deg. | | 3 ³ / ₄ Deg. | | 3 ³ / ₄ Deg. | | 1 ¹ / ₂ Deg. | | 1 ¹ / ₂ Deg. | |
| Front Wheel Toe-in | ¹ / ₁₆ " | | ¹ / ₁₆ " | | ¹ / ₁₆ " | | ¹ / ₁₆ " | | ¹ / ₁₆ " | | ¹ / ₁₆ " | |
| Minimum Turning Radius | 23 Ft. | | 23 Ft. 11 In. | | 23 Ft. 1 In. | | 24 Ft. | | 24 Ft. 7 In. | | 24 Ft. 8 In. | |
| Front Wheel Bearing Adjustment | Tighten Nut as Tight as Possible and Back off ¹ / ₂ Turn or More and Lock | | | | | | | | | | | |
| Recommended Tire Pressure | 35-40 Lbs. | | 35-40 Lbs. | | 35-40 Lbs. | | 35-40 Lbs. | | 35-40 Lbs. | | 35-40 Lbs. | |
| Shock Absorber Valving—Standard All Models | | | | | Front Rebound—1-C Front Compression—G-4X Front Static—2-A plus Rear Rebound—5-G Rear Compression—5-G Rear Static—2-A plus | | | | | | | |
| TRANSMISSION | | | | | | | | | | | | |
| Oil Capacity | Four and One-half Pints—All Models | | | | | | | | | | | |
| Ratio to Rear Wheels in Direct Drive | 4.07 4.36 4.69 | | 4.07 4.36 4.69 | | 4.06 4.41 4.69 5.07 | | 4.06 4.41 4.69 5.07 | | 4.06 4.41 4.69 5.07 | | 4.06 4.41 4.69 5.07 | |
| In Second | 6.21 6.65 7.15 | | 6.21 6.65 7.15 | | 6.21 6.74 7.15 7.63 | | 6.21 6.74 7.15 7.63 | | 6.21 6.74 7.15 7.63 | | 6.21 6.74 7.15 7.63 | |
| In First | 10.01 10.71 11.53 | | 10.01 10.71 11.53 | | 10.01 10.86 11.53 12.49 | | 10.01 10.86 11.53 12.49 | | 10.01 10.86 11.53 12.49 | | 10.01 10.86 11.53 12.49 | |
| In Reverse | 11.72 12.56 13.5 | | 11.72 12.56 13.5 | | 11.72 12.71 13.5 14.61 | | 11.72 12.71 13.5 14.61 | | 11.72 12.71 13.5 14.61 | | 11.72 12.71 13.5 14.61 | |
| Back Lash Between Gears Not Always in Mesh—Minimum | Four Thousandths of an Inch. | | | | | | | | | | | |
| UNIVERSAL JOINT | | | | | | | | | | | | |
| Assembling Universal Joints | Grease Plugs on Shaft and Universal Joint Sleeve Must be in Line. | | | | | | | | | | | |