

Studebaker

SERVICE BULLETIN

OCTOBER

NO. 210

STUDEBAKER

1948



COLD WINTER

MILD WINTER



Whether your customers are located where winter brings snow and ice, and frosty, biting winds, or where winter means little more than a slight drop in the temperature, Studebaker dealers are assured that their customers will receive through the current Studebaker direct mail program, a colorful, impressive reminder that seasonal service time is here again.

Whatever type of winter season your customers drive in, their cars must have certain periodic services at this time of year to insure smooth operation at peak economy and efficiency during the coming months.

You can effectively supplement this seasonal mailing by emphasizing winter conditioning in your local advertising and service promotion.

This issue of the Service Bulletin outlines for both severe winter and mild winter climates the recommended service operations, parts and accessories, and service equipment required to condition all cars properly for the next several months of driving.

COLD CLIMATE**Winterization Services**

Drain and reverse flush cooling and car heating circulation system. Refill radiator with correct antifreeze solution. Be sure rust inhibitor is included in cooling system.

Check entire cooling and car heating system for leaks. Check Climatizer valve operation.

Drain and refill crankcase with good oil of correct grade. Change filter cartridge.

Drain and flush transmission and differential. Refill with recommended lubricant.

Check generator for proper output.

Test battery for specific gravity and for need of recharge or replacement. Add water if necessary, clean and tighten terminals and coat with petroleum jelly.

Check cylinder head gasket for leaks and tighten head bolts in correct sequence (use tension wrench).

Other Essential Operations

Examine all tires for cuts, breaks, or need of replacement, and criss-cross wheels and tires.

Lubricate and adjust front wheel bearings.

Check front and rear springs for free rebound or need of service.

Check front wheels for correct toe-in, caster, camber, and king pin inclination. Inspect all steering connections for wear.

Inspect and adjust brakes, if required.

Check condition of all lights and aim head lamps.

Waterproof ignition wires, coil, distributor cap, battery cables, and terminals.

Lubricate chassis.

Clear body drain holes.

HIGHLY DESIRABLE

Inspect and test car for additional services required to improve performance and appearance.

WARM CLIMATE**Seasonal Services**

Drain and reverse flush cooling and car heating circulation systems. Refill radiator with ethylene glycol base antifreeze. Because alcohol base antifreeze evaporates quickly in warm climates, a permanent type of antifreeze is preferable. Be sure rust inhibitor is included.

Check entire cooling and car heating system for leaks. Check Climatizer valve operation.

Drain and refill crankcase with good oil of correct grade. Change filter cartridge.

Drain and flush transmission and differen-

tial. Refill with recommended lubricant.

Check generator for proper output.

Test battery for specific gravity and for need of recharge or replacement. Add water if necessary. Clean and tighten terminals and coat with petroleum jelly.

Check cylinder head gasket for leaks and tighten head bolts in correct sequence (use tension wrench).

Clean fuel pump bowl and reset carburetor adjustment, if necessary.

Other Essential Operations

Examine all tires for cuts, breaks, or need of replacement, and criss-cross wheels and tires.

Lubricate and adjust front wheel bearings.

Check front and rear springs for free rebound or need of service.

Check front wheels for correct toe-in, caster, camber, and king pin inclination. Inspect all steering connections for wear.

Inspect and adjust brakes, if required.

Check condition of all lights and aim head lamps.

Waterproof ignition wires, coils, distributor caps, battery cables, and terminals.

Lubricate chassis.

Clear body drain holes.

HIGHLY DESIRABLE

Inspect and test car for additional services required to improve performance and appearance.

ADDITIONAL MECHANICAL AND APPEARANCE SERVICES FOR ALL CLIMATES

These are the complete services that should be offered the customer providing the results of the car test and inspection prove that their need exists.

Cooling System Checks

It is very important that the cooling system be clean and free from corrosion and that no leaks exist. For quick warm-up and economical operation the thermostat should be operating properly. To have cold weather comfort, the Climatizer or heater must be in good operating condition. Don't forget to clean the Climatizer filter, if so equipped.

Check condition of water pump seal or packing.

Check thermostat operation for opening and closing at the proper temperature.

Install grille covers.

Check Climatizer or heater for proper operation.

Check condition and adjustment of fan belt.

SAFETY SERVICES

Winter months with slippery driving conditions and more hours of darkness make it very important that the following checks and, where necessary, corrections be made.

Tires

Check tire pressure.

Inspect tires for cuts, breaks, and need of recapping or replacement.

Criss-cross tires to place those with most remaining miles where greatest wear occurs.

Steering

Balance front wheels (static and dynamic).

Lubricate and adjust front wheel bearings.

Check front and rear springs for free rebound and need of service.

Inspect steering gear connections for looseness.

Adjust steering gear to eliminate excessive backlash.

Check front wheel toe-in, caster, camber, and king pin inclination.

Lights

Check all light circuit wires for loose connections or damaged insulation.

Check all lights for proper operation.

Aim head lamps.

Brakes

Inspect brakes for indication of leaks at pipes, fittings, wheel cylinders, and master cylinder.

Check condition of brake lining and brakes for proper adjustment.

Check brake pedal for correct free travel.

Check fluid level in brake master cylinder.

Check parking brake adjustment.

Check hill holder for proper adjustment (if so equipped).

Engine Performance

Valves

Check for uneven or low compression.

Remove carbon, if required.

Reface valves and valve seats, if required.

Check valve tappet adjustment.

Tighten manifold to cylinder block studs and check for leaks.

Ignition

Clean and test spark plugs and set to proper electrode gap.

Inspect high tension cables for leaks and deterioration.

Inspect condition of distributor points and adjust.

Check spark modifier operation and ignition timing.

Test coil and condenser.

Waterproof ignition wires, coil, and distributor cap.

Fuel System

Disassemble, clean, rebuild, and adjust carburetor. Replace all gaskets.

Clean and service carburetor air filter.

Check choke for free operation and proper adjustment.

Clean fuel pump sediment bowl and screen.

Check fuel pump pressure.

Inspect heat riser valve for free operation.

Set carburetor low speed adjustment.

Check and set engine idle speed.

Electrical Checks

With more battery drain due to greater use of lights and harder starting in the months ahead, the electrical system should be in the best possible condition.

Battery

Test battery specific gravity and need for recharge or replacement. Add water as required.

Clean and tighten terminals and coat with petroleum jelly.

Waterproof cables and terminals.

Generator

Check generator output.

Inspect generator brushes.

Inspect armature, if required.

Check field coils, if required.

Check voltage regulator for proper operation.

Starter

Check starter switch and cables.

Inspect starter brushes.

Inspect starter armature and bearings, if required.

Check starter field coils, if required

Check Bendix drive.

APPEARANCE CONDITIONING

Everyone likes to drive a clean, good looking automobile. Sell the customer these appearance services and keep him proud of his car.

Sheet Metal

Remove all dings from fenders and body panels. Refinish as required.

Plated Parts

Clean all chrome or silver-plated parts and coat with clear enamel.

Finish

Wash, clean, and polish entire car.

Upholstery

Inspect cushion springs, upholstery, and floor mats for need of repair.

Clean upholstery and floor mats.

VEHICLE LIFE

Clutch

Check clutch operation for slippage, chatter, or grab.

Check clutch pedal adjustment for correct free travel.

Transmission

Check transmission for proper operation in all forward and reverse speeds. Check overdrive operation.

Check transmission shift rods for proper adjustment.

Check overdrive control for proper adjustment.

Inspect transmission for leaks.

Drain, flush, and refill transmission with oil of proper quality and grade for seasonal temperatures expected.

Rear Axle

Inspect for leaks at wheels, pinion shaft, and rear axle housing.

Check rear axle shaft bearing adjustment. Drain, flush, and refill differential with hypoid lubricant of the proper quality and grade for seasonal temperatures expected.

Springs

Check spring shackles for excessive wear. Tighten spring U-bolts.

Repack springs with recommended lubricant, if necessary.

Shock Absorbers

Fill shock absorbers with recommended fluid.

Check shock absorber operation.

Check shock absorber adjustment.

Check shock absorber links.

Tighten shock absorber to frame bolts.

Exhaust System

Inspect exhaust pipe, muffler, and muffler outlet pipe for leaks.

Tighten exhaust pipe to manifold bolts and exhaust system hangers and brackets.

See that manifold heater valve operates freely.

Lubrication

Lubricate chassis according to manufacturer's recommendations -- including doors, hinges, locks, etc. Refer to lubrication chart.

Check universal joints and lubricate.

Lubricate rear axle shaft outer bearings, if required.

Drain and refill engine crankcase with good oil of correct grade.

Change filter cartridge.

Body

Adjust door striker plates.

Eliminate window rattles.

Tighten body bolts, bumper bolts, and wheel bolts.

Check windshield wiper for proper operation.

Check operation of hood lock.

Check operation of door, package compartment, and luggage compartment locks.

ESSENTIAL SERVICE EQUIPMENT

Proper equipment is essential for satisfactory customer service.

This equipment should be in good operating condition and, particularly if exposed to customer view, clean and attractively painted.

Cooling System Flushing Equipment

Trouble-free performance depends largely on having a clean, rust-free cooling system. Sediment and scale, resulting from oxidation, require reverse flushing for effective removal.

Steering Alignment Equipment

Long life of tires, ease of handling, and safety of customer and his passengers depend on efficient and balanced steering apparatus. Alignment equipment is essential in satisfactorily aligning entire front end and steering.

Headlight Service Equipment

Greater customer satisfaction and safety will result from correct use of essential headlight service equipment.

Brake Service Equipment

Correctly adjusted and smoothly operating brakes, resulting from correct use of proper

equipment, add considerably to customer safety and enjoyment.

Engine Tune-Up Equipment

Greater economy and peak performance will result from the use of modern tune-up equipment.

Electrical Service Equipment

For longer battery life and better operation of electrical units, checks should be made with proper testing equipment.

Engine Reconditioning Equipment

For effective operation, proper reconditioning of engine with adequate equipment is essential.

Gear Flushing Equipment

Gear cases should be thoroughly flushed with proper equipment as Hypoid lubricants must not be mixed.

Lubrication Equipment

Proper lubrication equipment is essential for a thorough lubrication job, which will result in longer vehicle life.

Body Shop Equipment

For a good appearance reconditioning job in the minimum of time, proper equipment is essential.

ROSS GEAR & TOOL COMPANY, LAFAYETTE, INDIANA

SERVICE BULLETIN No. 210A

LUBRICATION OF ROSS CAM AND LEVER STEERING GEARS

The steering gear housing should be kept full of lubricant. Lubricate through the pipe plug hole or fitting in the top of the housing. Fill housing slowly to allow air to escape through the vent hole in the lower end of jacket tube. When lubricant runs out of vent hole, the housing is full.

The following lubricants are approved for year around use in steering gears. This approval is based on the lubricant manufacturers' statements that their trade name lubricants meet Ross Specification 045070 as follows:

"Lubricants recommended for Ross steering gears shall be properly refined petroleum bright stock, free from water, sediment, acid or any other substance detrimental to the proper performance of the lubricant. Fillers or abrasives such as talc, fuller's earth, graphite, mica, pulp, cork, asbestos, or any other substance which produces an artificial viscosity, are not permissible. They shall not corrode metal parts used in automotive construction. A mild EP is not forbidden, providing it is a non-corrosive mild inactive gear lubricant. The viscosity recommendations are given in viscosity numbers of the SAE for gear and transmission oils, namely, SAE 140, for year around use."

APPROVED FOR SUMMER AND WINTER USE

Alemite All Weather Steering Gear Lubricant No. 235

Alemite Extreme Pressure Lubricant SAE 140

made by Stewart-Warner Corp., Chicago, Illinois.

Amalie Extreme Pressure Lubricant, SAE 140

Amalie B.T. Lubricant, SAE 140

made by L. Sonneborn Sons Inc., New York, N. Y.

Amoco 273 Permalube Gear Oil SAE 140

made by American Oil Co., Baltimore, Maryland.

Elco Gear Safety "28", SAE 140, SCL Type

made by Elco Lubricant Corp., Cleveland, Ohio.

Enarco Trans.-Gear Lubricant SAE 140

made by National Refining Co., Cleveland, Ohio.

Valvoline X-18 SAE 140

Freedom #4202 SAE 140 All Purpose Gear Oil

made by Freedom-Valvoline Oil Co., Freedom, Pa. (Both oils sold under name Freedom, Valvoline and Galena.)

APPROVED FOR SUMMER AND WINTER USE

Gearese E.P. 140 Steering Gear Lubricant
Safco Allgear EP SAE 140

made by Swan-Finch Oil Corp., New York, N. Y.

Gulf Hypoid Gear Lubricant SAE 140 All-Purpose
Gulf Transgear Lubricant EP 140

made by Gulf Oil Corp., Pittsburgh, Pa.

Kendall Hypoid Gear Lube SAE 140
Kendall All Oil Gear Lube SAE 140
Kendall All Oil Gear Lube SAE 250
Kendall 3-Star Gear Lubricant

made by Kendall Refining Co., Bradford, Pa.

Lubriplate #8

made by Fiske Bros. Ref. Co., Toledo, Ohio.

Mobilube GXH
Mobilube 140
Mobilube C

made by Socony-Vacuum Oil Co., Inc., New York, N. Y.

Opaline Gear Lubricant CX

made by Sinclair Refining Co., New York, N. Y.

Pennzoil SCL Gear Lubricant #614

made by Pennzoil Co., Oil City, Pa.

Philube Heavy Duty Gear Oil SAE 140
Philube All Mineral Gear Oil SAE 140
Philvis Gear Oil, EP. SAE 140

made by Phillips Petroleum Co., Bartlesville, Oklahoma.

Quaker State Quadrolube SAE 140

Quaker State Super Quadrolube SAE 140

made by Quaker State Oil Refining Corp., Oil City, Pa.

RPM Gear Lubricant SAE 140

made by Standard Oil Co. of Cal., San Francisco, Cal.

Spirax SAE 140 EP

made by Shell Oil Co., Inc., New York, N. Y. and San Francisco, Calif.

Standard Gear Lubricant No. 140

Standard All Purpose Gear Lubricant No. 140

made by Standard Oil Co. of Indiana, Chicago, Illinois

Sunoco Multi-Purpose Gear Lubricant SAE 140

made by Sun Oil Co., Philadelphia, Pa.

Texaco Meropa Lubricant 6

made by The Texas Co., New York, N. Y.

Trojan Gear Oil SAE 140 AP

made by Cities Service Co., New York, N. Y.

Veedol T & T Gear Oil 140

made by Tide Water Associated Oil Co., New York, N. Y.

Whitmore No. 70

made by The Whitmore Mfg. Co., Cleveland, Ohio.