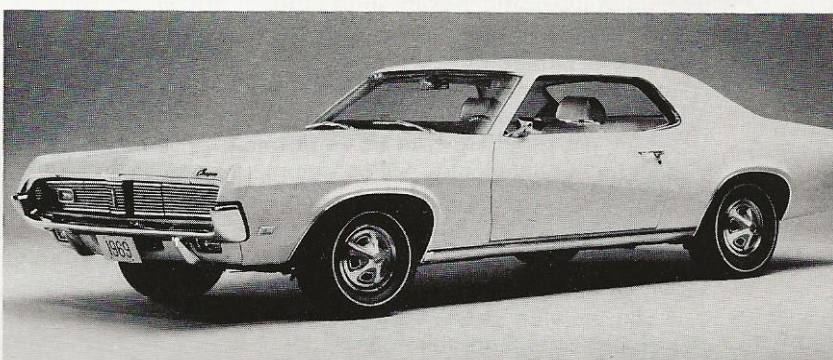
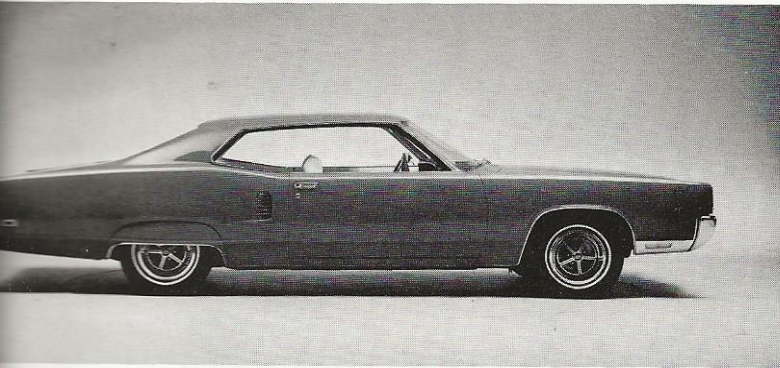


Dealer Progress

UNION 76



Dealer Progress

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DON P. McCAULEY..... Editor

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CAR CARE

These are the two magic words that have become a synonym for success in today's service stations.

The day of the simple "lube job" as a major source of income is gone, and a new service concept has taken its place. Motorists want—and expect—the dealer to be able to provide complete car care, including tune-up and wheel alignment, as well as lubrication and warranty services.

The aggressive dealer who is prepared to provide these services—and has the equipment and know-how—is the successful dealer, the one who reaps the profits and keeps his customers coming back.

This complete service concept forms the basis of the 1969 Safety/Service Guide. The new style car model charts, introduced last year, provide complete data for each vehicle on two facing pages, with tune-up and wheel alignment an integral part of each chart. This enables dealers to quickly point out to his customer what services are needed—and when. Particular recommendations and specifications are listed to insure accuracy of work.

The 1969 Safety/Service Guide, then, embraces the know-how Pure dealers need on all the important profit-producing services such as PCV and Exhaust Emission Control Devices, Tune-up, Wheel Alignment, Brake Adjustment and Replacement and many others. The price for your new 1968 Guide is only \$5.95—a \$15.00 value that will pay off for you in a big hurry when servicing the new cars.

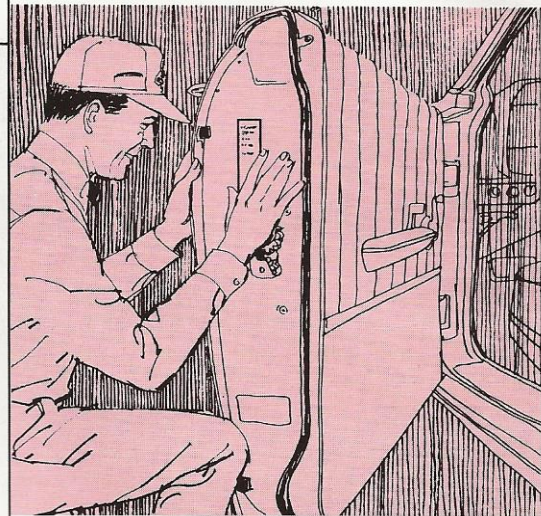
FEATURES OF THE NEW 1969 PURE SAFETY/SERVICE GUIDE

1. 8¾"x11¾" size, wire spiral bound Guide — handier and easier to use.
2. Index plus page numbers on each chart will speed locating correct chart.
3. Complete Car Care Service information on 2 facing charts.
4. 6's and V-8's combined to provide maximum coverage in minimum number of pages.
5. Engine illustrations with short straight arrows showing location of points to be serviced.
6. Chassis illustrations with symbols indicating location of lifting points, lube fittings and plugs.
7. All services grouped by "Service Interval" — provides a check list of services to be performed. An effective sales tool for servicemen in selling complete Car Care.
8. Manufacturer's required warranty service indicated by symbols.
9. Manufacturer's approved tire rotation pattern—a lead-in to wheel balancing, alignment service and new tires sales.
10. Brake service data—emphasizes bleeding sequence and peculiar service requirements.
11. Complete Crankcase, Transmission and Differential Recommendations and Capacities.
12. Crankcase Capacity and motor oil type shown in bold-face type for quick reference.
13. Tune-Up and Wheel Alignment Specifications in tabular style—more information—easy to read and use.
14. Complete Engine identification for all standard and optional engines.
15. Additional Tune-Up Specifications include:
 - Maximum dwell variation
 - Drive belt tension
 - Breaker point spring tension
 - Generator/Alternator specs.
 - Coil—current draw
 - Regulator specs.
16. Complete Wheel Alignment Specifications.
17. Plus features such as:
 - Simplified Key to Lubricate
 - Lubricant symbols show what lubricant to use
 - Compression Pressure
 - Spark Plug number, gap and torque
 - Number of Plugs and Fittings requiring lubrication
 - Ignition Points Gap and Dwell
 - Cooling System Capacities and Pressure
 - Condenser Capacity
 - Oil Filter Service Location—under hood or under car
 - Timer Setting
 - Tune-Up Specifications on:
 - Battery Group Number and ampere-hour rating
 - Engine Idle Speed
 - Valve Clearances
18. Tire Sizes and Pressures for "Normal" and "Full Load—High Speed."

1969 PURE SAFETY/SERVICE GUIDE



1969 PURE SAFETY/SERVICE GUIDE



UNION

Pure Oil Division
 Union Oil Company of California

Listed on the following pages are basic driveway service data for some of the new 1969 cars. Keep this issue of *Dealer Progress* until your complete 1969 Pure Safety/Service Guide is delivered. See your salesman now to order—you'll be glad you did!

DRIVEWAY SERVICES FOR 1969 CARS



**What's the fuel tank capacity of the 1969 Ford Galaxie 500?
Where's the crankcase dipstick located on the Chevrolet 307 engine?
Where do you look for the gas fill on the Mark III?**

The answers to these and similar questions is the kind of information you must have to correctly and efficiently service the 1969 cars. You simply cannot afford to guess on such critical service as crankcase and cooling systems capacities and manufacturers' motor oil recommendations. Nor do you have time to search through the Owner's Manuals. Besides, that's a little embarrassing.

Here, in brief, summarized form, is all the driveway information you need to service most 1969 cars.

Liquid capacities are given for both U.S. and Canadian models with Canadian imperial measure shown in **boldface**. Right or left side of the vehicle or engine is determined from the driver's seat facing forward.

Keep this handy for ready reference. Knowing what and where and how much, will save you time when servicing the new cars.

AMERICAN MOTORS

Gas tank fill location: AMX, Javelin and Rambler, rear center; Rebel and Ambassador, left rear fender.



Ambassador SST

• Capacity: Ambassador, Rebel 21½ gals. (**17¾**); AMX, Javelin, 19 gals. (**15¾**); Rambler, 16 gals. (**13¾**); 3-seat station wagon, 19 gals. (**15¾**).



Javelin SST

• Recommended fuel: regular except V-8 engines with 4V carburetor, premium.



Rambler Rouge 2-door Hardtop

Crankcase dipstick location: 6-cyl., right side of engine, rear; V-8, left side of engine, rear.

• Capacity (less filter): 4 qts. (**3¾**).



Rebel 2-door Hardtop

Use Pure High HP Purelube.

Recommended motor oil: MS. Grades:
Above +32° 20, 20W 10W-30
Above 0° 10W 10W-30
Below 0° 10W* 5W-20

*When using 10W, avoid sustained speeds above 65 mph.

Cooling system capacity with heater: 6-cyl., 10½ qts. (**8¾**); V-8 290 engine, 14 qts. (**11½**); 343, 390 engines, 13 qts. (**10¾**).



AMX 2-seater Sport Coupe

• Radiator drain location: 6-cyl. and V-8, left side bottom of lower tank.

• Cylinder block drain: 6-cyl., left side of engine, rear; V-8, both sides of engine, rear.

BUICK



Electra 225 4-door Hardtop

Gas tank fill location: rear center behind license plate; station wagon, left rear fender.

• Recommended fuel: all engines with 2V carburetor, regular; with 4V carburetor, premium.

• Capacity: Special Deluxe, Skylark, **GS 350, GS 400**, Station Wagons, 20 gals. (**16¾**). LeSabre, Wildcat, Electra, 25 gals. (**20¾**); Riviera, 21 gals. (**17½**).

Crankcase dipstick location: 6-cyl., right side of engine, rear; V-8, left side, center.

• Capacity (less filter): 4 qts. (**3¼**).

Use Pure High HP Purelube.

Recommended motor oil: MS. Grades:
Above +20° 20W* 10W-30
10W-40
20W-40
0° to +60° 10W 5W-30
10W-30
10W-40
Below +20° 5W** 5W-20**
5W-30

*30 may be used above +60°.

**Not recommended for sustained high-speed driving.



GS 400 two-door Hardtop

Cooling system capacity with heater: 6-cyl. 250 engine 11¼ qts. (**9¾**), with air conditioning 13 qts. (**10¾**). LeSabre 350 engine 13¼ qts. (**11**), with air conditioning 13¾ qts. (**11¾**); all other models with 350 engine 13½ qts. (**11¼**). 400 engine 16¼ qts. (**13½**), with air conditioning 17 qts. (**14½**). 430 engine 16¾ qts. (**14**), with air conditioning 17 qts. (**14½**).

• Radiator drain location: left rear side of lower tank.

• Cylinder block drain: 6-cyl., left rear side of engine; V-8, both sides center.

DRIVEWAY SERVICES FOR 1969 CARS

CADILLAC



Coupe de Ville 2-door

Gas tank fill location: rear center, behind license plate.

- Recommended fuel: premium.
 - Capacity: 75 Series (commercial chassis) 20 gals. (16%). Eldorado 24 gals. (20). All others 26 gals. (21%).
- Crankcase dipstick location:** left side of engine, center.



Eldorado 2-door Coupe

- Capacity (less filter): all except Eldorado 4 qts. (3¼); Eldorado 5 qts. (4½).

Use Pure High HP Purelube.

Recommended motor oil: MS.	Grades:
Above +20° 20W*	10W-30
	10W-40
	20W-40
0° to +60° 10W	5W-30
	10W-30
	10W-40
Below +20° 5W**	5W-20**
	5W-30

*30 may be used above +60°.

**Not recommended for sustained high-speed driving.

Cooling system capacity with heater: all except commercial chassis 21¼ (17½), with air conditioning 21¾ (18½). Commercial with or without air conditioning 24¾ (20%).

- Radiator drain location: left rear side of tank.
- Cylinder block drain: both sides of engine, center.

CHEVROLET



Camaro RS Convertible

Gas tank fill location: Camaro, Chevrolet, Chevelle, Nova, rear center behind license plate. Station wagons, left rear fender under hinged door. Corvair, left front fender under hinged door. Corvette, center of rear deck lid under emblem.



Chevelle SS 396 Sport Coupe

- Recommended fuel: 4- and 6-cyl. engines, except 164-110 hp engine, regular. 307 2V and 327 4V 250 hp V-8 engines, regular. 164-110 hp and all other V-8 engines, premium.
- Capacity: Chevrolet and Chevrolet station wagon, 24 gals. (20). Chevelle, Corvette, 20 gals. (16½); Chevelle station wagon, 22 gals. (18½); Camaro, Nova, 18 gals. (15); Corvair, 14 gals. (11½).



Impala Custom Coupe

Crankcase dipstick location: 153, 230, 250 engines, right side, rear; 307, 327, 350 engines, left side, rear; 396, 427 engines, right side, center, direct to oil pan. Corvair 164 engine, upper right side, near back of engine.

- Capacity (less filter): 4 qts. (3¼) except 4-cyl. 153 engine, 3½ qts. (2¾); 427 engine, 5 qts. (4½).



Chevy II Nova 2-door Coupe

Use Pure High HP Purelube.

Recommended motor oil: MS.	Grades:
Above +20° 20W*	10W-30
	10W-40
	20W-40

0° to +60° 10W	5W-30
	10W-30
	10W-40
Below +20° 5W**	5W-20**
	5W-30

*30 may be used above +60°.

**Not recommended for sustained high-speed driving.



Corvette Stingray Sport Coupe

Cooling System capacity with heater: Chevrolet, 6-cyl., 12 qts. (10), V-8 327, 17 qts. (14½), 350, 15 qts. (12½), 396, 23 qts. (19½), 427, 22 qts. (18%). Chevelle, 6-cyl., 13 qts. (10¾), V-8 307, 17 qts. (14½), 350, 16 qts. (13¾), 396, 23 qts. (19½). Nova, 4-cyl., 9 qts. (7½), 6-cyl., 13 qts. (10¾), V-8 307, 17 qts. (14½), 350, 16 qts. (13¾). Camaro, 6-cyl., 13 qts. (10¾), V-8 307, 17 qts. (14½), 350, 16 qts. (13¾). Corvair, V-8 350, 15 qts. (12½), 427, 22 qts. (18¾). Corvair, air-cooled.

- Radiator drain location: all except Chevrolet and Corvair, lower left rear face; Chevrolet, lower right rear face; Corvair, none (air-cooled).

- Cylinder block drain: 4 and 6-cyl., all except Corvair, left side, rear, of engine; Corvair, none (air-cooled). V-8, all, both sides of engines, center.



Corvair Monza Sport Coupe

CHRYSLER

Gas tank fill location: rear center behind license plate; Town & Country wagon, left rear fender under hinged door.



Newport Custom 4-door Coupe

- Recommended fuel: premium except Newport, Town & Country wagon with 383 2V engine, regular.
- Capacity (approx.): 24 gals. (20); Town & Country wagon, 23 gals. (19½). **Crankcase** dipstick location: left side of engine, center.
- Capacity (less filter): 4 qts. (3¼).

Use Pure High HP Purelube.

Recommended motor oil: MS.	Grades:
Above +32°	30 20W-40
	10W-40
Above -10°	10W-30
	10W-30
Below +10°	5W-20
	5W-30



"300" two-door Hardtop

Cooling system capacity with heater: 383 engine, 16 qts. (13¾), with air conditioning, 17 qts. (14½). 440 engine, 17 qts. (14½), with air conditioning, 18 qts. (15). Additional 1½ qts. (1¼) for models with rear seat heater.

- Radiator drain location: right rear side of lower tank.
- Cylinder block drain: both sides of engine, center.

DODGE



Coronet 500 two-door Hardtop

Gas tank fill location: Coronet, Monaco, Polara, rear center behind license plate. Charger, Dart, Station Wagons, left rear fender exposed or under hinged door.

- Recommended fuel: engines with 1V or 2V carburetor, regular; with 4V or two 4V, premium.

- Capacity (approx.): Dart, 18 gals. (15); Charger, Coronet, 21 gals. (17½); Monaco, Polara, 24 gals. (20); Coronet Wagon, 19 gals. (15½); Polara Wagon, 23 gals. (19½).



Dart Swinger 2-door Hardtop

Crankcase dipstick location: 6-cyl., left side of engine, center. V-8 273, 318, 340 engines, right side, forward; 383, 426, 440 engines, left side, center.

- Capacity (less filter): 4 qts. (3¼) except 426 Hemi engine, 6 qts. (5).

Use Pure High HP Purelube.

Recommended motor oil: MS.	Grades:
Above +32°	30W* 20W-40
	10W-40*
	10W-30
Above -10°	10W*
	10W-30
	10W-40*
Below +10°	5W-20
	5W-30*

*426 engine: Above +32°, 40, 30 or 20W-40; below +32°, 10W-30 or 10W-40.



Charger 2-door Sport Coupe

Cooling system capacity with heater: 170 engine, 12 qts. (10), with air conditioning, 14 qts. (11½); 225 engine, 13 qts. (10¾), with A/C, 15 qts. (12½); 273 engine, 17 qts. (14½), with A/C, 19 qts. (15½); 318 Dart engine, 16 qts. (13¾), with A/C, 18 qts. (15); 318 Charger, Coronet, Monaco, Polara engine, 16 qts. (13¾), with A/C, 19 qts. (15½); 340 engine with or without A/C, 16 qts. (13¾); 383 engine, 16 qts. (13¾), with A/C, 17 qts. (14½); 426 engine with or without A/C, 18 qts. (15); 440 engine, 17 qts. (14½), with A/C, 18 qts. (15).



Polara 500 2-door Hardtop

- Radiator drain location: 6-cyl., left rear side of lower tank; V-8, right rear side.
- Cylinder block drain: 6-cyl., right rear side of engine; V-8, both sides, center.

FORD



Falcon Futura 2-door Sport Coupe

Gas tank fill location: Falcon, Galaxie, Custom, Thunderbird, all station wagons, left rear fender, exposed or under hinged door. Fairlane, Torino, rear center, behind license plate; Mustang, rear, above license plate. Bronco, left rear quarter panel, auxiliary tank (optional) left side panel, rear of center.



Mustang 2-door Hardtop

- Recommended fuel: all engines with 1V or 2V carburetor, regular except 390 and 429 2V high compression engines, premium. All engines with 4V carburetor, premium.

DRIVEWAY SERVICE FOR 1969 CARS

- Capacity: Bronco, 14 gals. (11%), auxiliary tank, 12 gals. (10); Falcon, 16 gals. (13%); Galaxie, Custom, Thunderbird, 24 gals. (20); all others, 20 gals. (16%).



Torino Country Squire Station Wagon

Crankcase dipstick location: 6-cyl., left side of engine, center; 302, 351 V-8 engines, right side, forward, 390, 427, 428 V-8 engines, left side, forward; 429 engine, right side, forward.

- Capacity (less filter): 6-cyl., 3½ qts. (2¾) except 240 engine, 4 qts. (3¼). All V-8 engines, 4 qts. (3¼) except 427 engine, 5 qts. (4¼). Bronco 6-cyl., 6 qts. (5), V-8, 5 qts. (4¼).



Thunderbird Hardtop

Use Pure High HP Purelube.

Recommended motor oil:

SINGLE VISCOSITY	
-10° to +10°	10W
+10° to +32°	20, 20W
+32° to +90°	30
Above +90°	40
MULTI-VISCOSITY	
Below +32°	5W-30*
-10° to +90°	10W-30
	10W-40
Above +32°	20W-40

Cooling system capacity with heater: 170, 200 engines, 9½ (7¾); 240 engine, 13 (10¾); 250 engine, 10 (8¾); 302 Falcon, 13½ (11¼); 302 others, 15½ (12¾); 351, 15½ (12¾); 390 2V, 428, 429 engines, 20½ (17¾); 390 4V, 427 engines, 20 (16%).

- Radiator drain location: 6-cyl., right side rear of lower tank except



Torino 4-door Sedan

240 engine, left rear side. V-8 engines, right side of lower tank except 302, 351 engines, left rear side.

- Cylinder block drain: 6-cyl., right side of engine, center, or rear of center; V-8, 302, 351 engines, right side, forward, left side, rear; 390, 427, 428 engines, both sides, center; 429 engine, both sides rear.

MERCURY

Gas tank fill location: all models except Cougar, left rear fender under hinged door. Cougar, rear center behind license plate.

- Recommended fuel: all 1V and 2V carburetor engines, except 390P 2V and 429 2V, regular. 390P 2V, 429 2V and all 4V engines, premium.



Cougar 2-door Hardtop

- Capacity: Cougar and Montego, 20 gals. (16%); Marquis, Marauder, Monterey, 24½ gals. (20%); station wagons, 22½ gals. (18¾).

Crankcase dipstick location: 250 engine, left side of engine, center; 302, 351, 429 engines, right side, forward; 390, 428 engines, left side, forward.

- Capacity (less filter): 4 qts. (3¼) except 250 engine, 3½ qts. (2¾).



Marauder X-100 Hardtop

Cooling system capacity with heater: 250 engine, 10 qts. (8¾); 302 engine, 13½ (11¼); 351 engine, 14½ (12); 390, 427 engines, 20 (16%); 428 engine, 19 (15¾).

Use Pure High HP Purelube.

Recommended motor oil:

SINGLE VISCOSITY	
-10° to +10°	10W*
+10° to +32°	20-20W
+32° to +90°	30
Above +90°	40
MULTI-VISCOSITY	
Below +32°	5W-30*
-10° to +90°	10W-30
	10W-40
Above +32°	20W-40

*For sustained high speeds above 60 mph, use next heavier grade.



Montego 2-door Hardtop

- Radiator drain location: right rear side of lower tank, except 302, 351 engines and 390 4V Cougar only, left rear side of lower tank.

- Cylinder block drain: 250 engine, right rear side of engine, rear; 302, 351 engines, right side, forward, left side, rear; 390, 428 engines, both sides, center; 429 engine, both sides, rear.



Monterey Custom 4-door Sedan

OLDSMOBILE

Gas tank fill location: F-85, Cutlass, 4-4-2, Eighty-Eight, Ninety-Eight, rear center, behind license plate; Toronado, rear center under hinged door; Vista Cruiser, Cutlass Station Wagon, left rear fender under hinged door.



F-85 Cutlass Supreme 4-door Hardtop

- Recommended fuel: F-85, Cutlass, 4-4-2, Vista Cruiser, regular except 350, 400 V-8 engines with 4V carburetor, premium. Eighty-Eight, Ninety-Eight, premium except low-compression engines with 2V carburetor, regular. Toronado, premium.
- Capacity: Eighty-Eight, Ninety-Eight, 25 gals. (20 $\frac{7}{8}$); Toronado, 24 gals. (20); Vista Cruiser, Cutlass Station Wagon, 23 gals. (19 $\frac{1}{8}$); all others, 20 gals. (16 $\frac{5}{8}$).



Ninety-Eight Luxury Hardtop Sedan

Crankcase dipstick location: 6-cyl., right side of engine, rear; V-8, left side, center or near center.

- Capacity (less filter): 4 qts. (3 $\frac{1}{4}$) except Toronado, 5 qts. (4 $\frac{1}{8}$).



Toronado 2-door Hardtop

Use Pure High HP Purelube.

Recommended motor oil: MS.	Grades:
Above +20°	20W*
	10W-30
	10W-40
	20W-40
0° to +60°	10W
	5W-30
	10W-30
	10W-40
Below +20°	5W**
	5W-20**
	5W-30

*30 may be used above +60°.
**Not recommended for sustained high-speed driving.

Cooling system capacity with heater: Toronado, 18 qts. (15), with air conditioning, 18 $\frac{1}{2}$ qts. (15 $\frac{3}{8}$); Eighty-Eight, Ninety-Eight, 17 $\frac{1}{2}$ qts. (14 $\frac{5}{8}$), with air conditioning, 18 qts. (15); 4-4-2, 16 qts. (13 $\frac{3}{8}$), with air conditioning, 17 qts. (14 $\frac{1}{8}$); F-85 with or without air conditioning, 12 $\frac{1}{2}$ qts. (10 $\frac{3}{8}$); all others, 15 qts. (12 $\frac{1}{2}$), with air conditioning, 15 $\frac{1}{2}$ qts. (12 $\frac{7}{8}$).

- Radiator drain location: left rear side of lower tank.
- Cylinder block drain: 6-cyl., left rear side of engine; V-8, both sides of engine, center.

IMPERIAL

Gas tank fill location: rear center behind license plate.

- Recommended fuel: premium.
- Capacity (approx.): 24 gals. (20). **Crankcase dipstick location:** left side of engine, center.
- Capacity (less filter): 4 qts. (3 $\frac{1}{4}$).



LeBaron 4-door Hardtop

Use Pure High HP Purelube.

Recommended motor oil: MS.	Grades:
Above +32°	30
	20W-40
	10W-40
	10W-30

Above -10°	10W	10W-30
		10W-40
Below +10°		5W-20
		5W-30

Cooling system capacity with heater: 19 qts. (15 $\frac{7}{8}$), with air conditioning, 20 qts. (15 $\frac{7}{8}$). Additional 1 $\frac{1}{2}$ qts. (1 $\frac{1}{4}$) for models with rear seat heater.

- Radiator drain location: right rear side of lower tank.
- Cylinder block drain: both sides of engine, center.

LINCOLN CONTINENTAL



Continental 2-door Hardtop

Gas tank fill location: left rear fender under hinged door.

- Recommended fuel: premium.
- Capacity: Mark III, 24 gals. (20); all others, 25 $\frac{1}{2}$ (21 $\frac{1}{4}$).

Crankcase dipstick location: right side of engine, forward.

- Capacity (less filter): 4 qts. (3 $\frac{1}{4}$).



Mark III 2-door Hardtop

DRIVEWAY SERVICE FOR 1969 CARS

Use Pure High HP Purelube.

Recommended motor oil:

SINGLE VISCOSITY

-10° to +10°.....	10W*
+10° to +32°.....	20-20W
+32° to +90°.....	30
Above +90°.....	40

MULTI-VISCOSITY

Below +32°.....	5W-30*
-10° to +90°.....	10W-30
	10W-40
Above +32°.....	20W-40

*For sustained high speeds above 60 mph, use next heavier grade.

Cooling system capacity with heater: 19½ qts. (16¼).

- Radiator drain location: right rear side of lower tank.
- Cylinder block drain: both sides of engine, rear.

PLYMOUTH

Gas tank fill location: Belvedere, Fury, GTX, Road Runner, Satellite, rear center behind license plate. Barracuda, Valiant, also Fury and Satellite station wagons, left rear fender, exposed or under hinged door.



Fury III 4-door Coupe

- Recommended fuel: engines with 1V or 2V carburetor, regular; with 4V or two 4V, premium.
- Capacity (approx.): Barracuda, Valiant, 18 (15); Satellite station wagon, 19 (15½); Belvedere, Road Runner, Satellite, 21 (17½); Fury Suburban wagon, 23 (19½); Fury, 24 (20).



Satellite GTX 2-door Coupe

Crankcase dipstick location: 6-cyl., left side of engine, center. V-8 273, 318, 340 engines, right side, forward; 383, 426, 440 engines, left side, center.

- Capacity (less filter): 4 qts. (3¼) except 426 Hemi engine, 6 qts. (5).



Valiant Signet 4-door Sedan

Use Pure High HP Purelube.

Recommended motor oil: MS. Grades:

Above +32°.....	30W*	20W-40
		10W-40*
		10W-30
Above -10°.....	10W*	10W-30
		10W-40*
Below +10°.....		5W-20
		5W-30*

*426 engine: Above +32°, 40, 30 or 20W-40; below +32°, 10W-30 or 10W-40.



Barracuda 383 Fastback Hardtop

Cooling system capacity with heater: 170 engine, 12 qts. (10), with air conditioning, 14 qts. (11½); 225 engine, 13 qts. (10¾), with A/C, 15 qts. (12½); 273 engine, 17 qts. (14½), with A/C, 19 qts. (15¾); 318 Valiant, Barracuda engine, 16 qts. (13¾), with A/C, 18 qts. (15); 318 Belvedere, Fury engine, 16 qts. (13¾), with A/C, 19 qts. (15¾); 340 engine with or without A/C, 16 qts. (13¾); 383 engine, 16 qts. (13¾), with A/C, 17 qts. (14½); 426 engine with or without A/C, 18 qts. (15); 440 engine, 17 qts. (14½), with A/C, 18 qts. (15).

- Radiator drain location: 6-cyl., left rear side of lower tank; V-8, right rear side.

- Cylinder block drain: 6-cyl., right rear side of engine; V-8, both sides, center.

PONTIAC

Gas tank fill location: rear center behind license plate except station wagons, left rear fender under hinged door.

- Recommended fuel: Firebird, premium, except 250 1V and 350 2V engines, regular. Bonneville, Catalina, Executive, Grand Prix, premium except 400 2V low compression engine, regular. Tempest, regular except 4V engines and GTO 400 2V high compression engine, premium.



Catalina 2-door Hardtop Coupe

- Capacity: Bonneville, Catalina, Executive, 25½ gals. (21¼); station wagons, 22 gals. (18¾); Firebird, 18½ gals. (15¾); Tempest, Grand Prix, 20 gals. (16¾); Tempest station wagons, 16 gals. (13¾).

Crankcase dipstick location: 6-cyl., right side of engine, rear; V-8, right side of engine, forward.

- Capacity (less filter): 6-cyl. 250 engine, 4½ qts. (3¾); V-8, 5 qts. (4½).



Firebird Convertible

Use Pure High HP Purelube.

Recommended motor oil: MS.	Grades:
Above +20° 20W*	10W-30
	10W-40
0° to +60° 10W	20W-40
	5W-30
	10W-30
Below +20° 5W**	10W-40
	5W-20**
	5W-30

*30 may be used above +60°.

**Not recommended for sustained high-speed driving.

HO engines, use 30 above +32°, 10W-20 below +32°.

Ram Air engines, use 30 at all times.



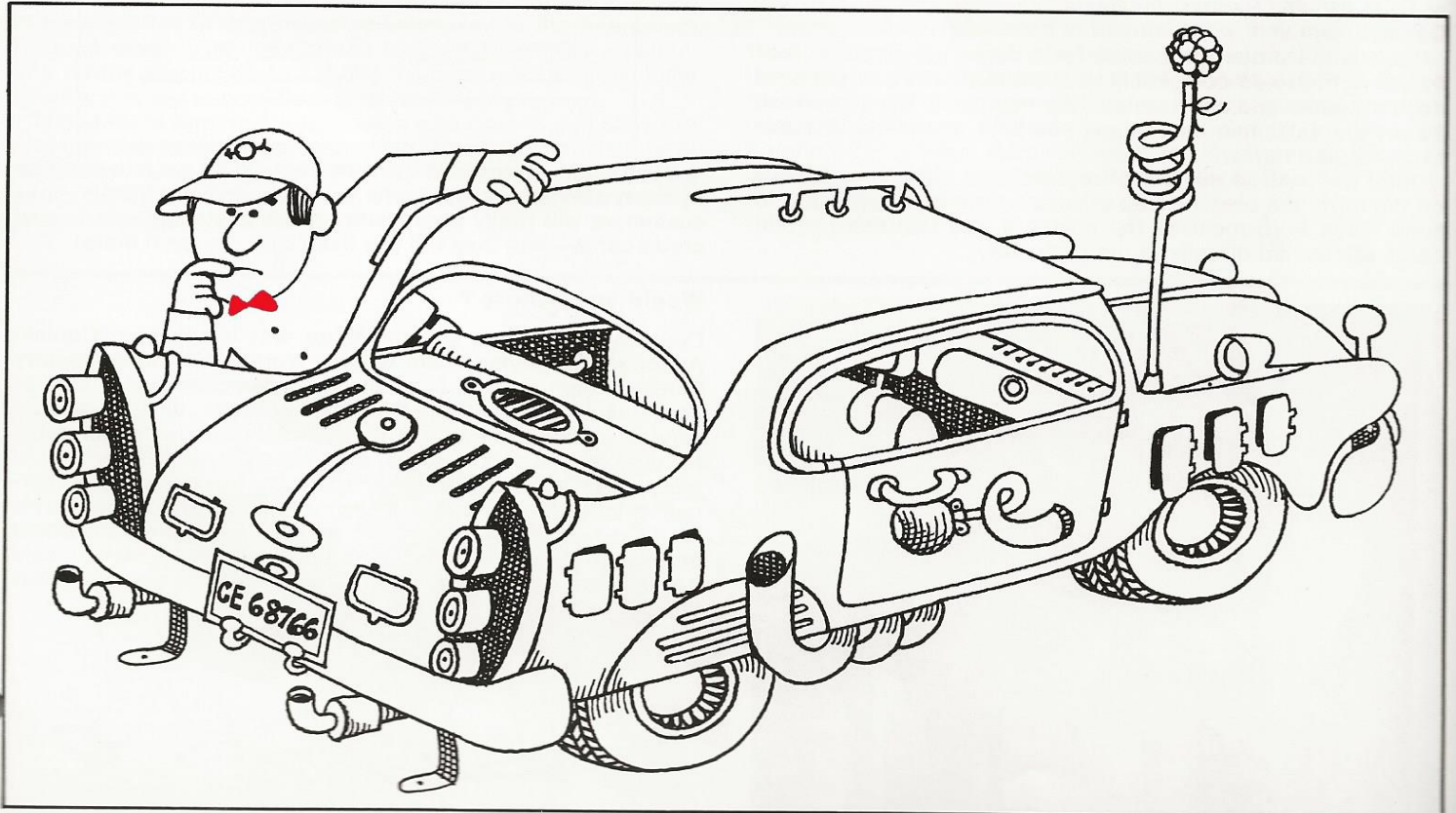
Grand Prix Hardtop Coupe

Cooling system capacity with heater: 250 engine, 12¼ qts. (10⅛), with air conditioning, 12¾ qts. (10⅝). 350 2V engine, 18½ qts. (15⅝), with A/C, 20¼ qts. (16⅞). 400 2V engine with or without A/C, 18 qts. (15); 400 GTO, 17¾ qts. (14¾), with A/C, 19½ qts. (16¼), 400 Grand Prix, 18¾ qts. (15⅝). 428 engine with or without A/C, 17¼ qts. (14¼).

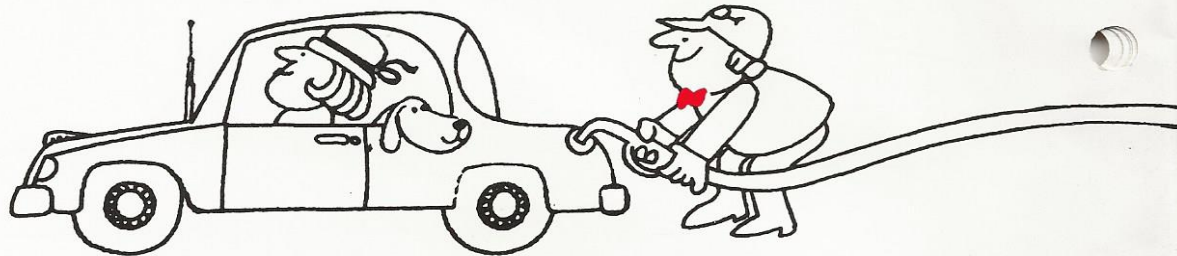
- Radiator drain location: left rear side of lower tank.
- Cylinder block drain: 6-cyl., left side of engine, rear; V-8, left side, center; right side, rear.



Tempest LeMans 4-door Hardtop



PURE ROUND-UP NEWS



40 years of service

Forty years of promoting Pure Oil products in the Jackson Center, Ohio area brought recognition Monday night to the Haas Brothers—Edwin and Howard. The company used the Feed Bag restaurant to give the gas and oil jobbers a dinner and to present silver coffee and tea services and diamond-studded tie clips to each of the brothers along with a plaque to the firm. About 30 friends, employees and business associates attended. The gifts were given by Paul Jones, division manager of Pure Oil, Columbus, and B. W. Lee, district manager, Toledo. Pictured left to right: Mrs. Mary Haas, her husband, Howard; Edwin Haas, his wife, Carmen, and Lee, making the presentation. The business was founded by the brothers' father, the late George Haas.



Here's how to get worn credit cards out of circulation

Here's the easiest way in the world to make points with your best credit card customers. Offer to replace their cracked or worn credit cards with fresh new cards.

Your best customers are the ones who use their cards most. Inevitably, their credit cards begin to show signs of wear and tear. You can fix that in a jiffy. All you need is a good supply of Form 210-25 "Request for Replacement or Additional Credit Cards."

Here is the proper procedure for ordering a new card. Just fill out form 210-25 completely with the customer's credit card number, name and address, and the number of cards wanted. Your Pure salesman can supply you with quantities of these free postcard forms.

After the desired number of replacement cards is indicated on the form, the postage-free postcard form is dropped in the mail. When Pure receives the postcard, the requested credit cards are mailed directly to the customer.

Request for Replacement or Additional Credit Cards

Credit Card Number

Customer's Name _____

Street Address _____

City _____ State _____ Zip _____

Number of Cards Requested _____

Reason for Request

<input type="checkbox"/> Address Change Print new address above	<input type="checkbox"/> Credit Card Lost replacement needed
<input type="checkbox"/> Present Card Damaged	<input type="checkbox"/> Renewal Card not received
<input type="checkbox"/> Additional Cards needed	<input type="checkbox"/> Using Credit Check Book

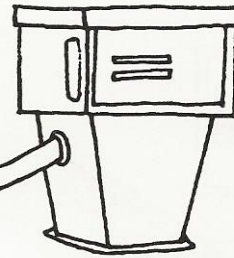
210-25

It is a simple process and one that should be put into practice by every station employee who writes up delivery tickets. Your customers will really appreciate having glistening, clean new credit cards—and they will use them with you even more!



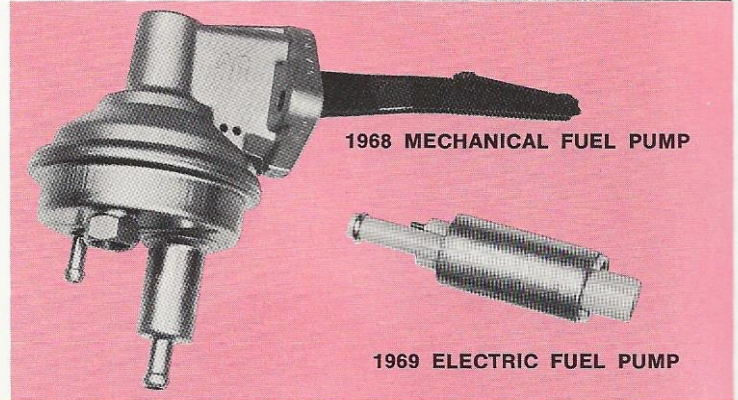
Would you believe?

Country-Western star Johnny Moore, who is billed as "Captain Astronaut," is laying claim to the "World's Marathon Country Singing Record." Moore vocalized for 48 consecutive hours at Vero Beach, Florida's Pure Oil Courtesy House, an ultra-modern service station complete with waterfall, automated turntable for cars, pastel service bays, and recessed color television in a carpeted, panelled customer's lounge. More than 1,000 persons watched Moore try for the record at the service station. He credited fans with keeping him awake. Jim Coffey, President of Earman Oil Company, owners-operators of the station, said "Johnny not only set the record—he's ready to defend it any-time, anywhere."



Tank-mounted fuel pump

A new electric fuel pump developed by AC Spark Plug Division of General Motors is being installed inside the gasoline tank of all 1969 Buick Riviera models. The tank-mounted pump keeps the fuel under pressure at all times because it pushes the gasoline to the carburetor. The steady, non-pulsating pressure assures improved hot fuel handling characteristics and reduces the possibility of vapor lock and engine stalling in hot weather. The compact electric pump is a continuous flow, self-regulating unit weighing only five ounces and measuring 1 3/8 inches in diameter and only 3 3/4 inches in length.



1968 MECHANICAL FUEL PUMP

1969 ELECTRIC FUEL PUMP

\$546,508 total amount of benefits paid to participants of Pure Benefit Programs

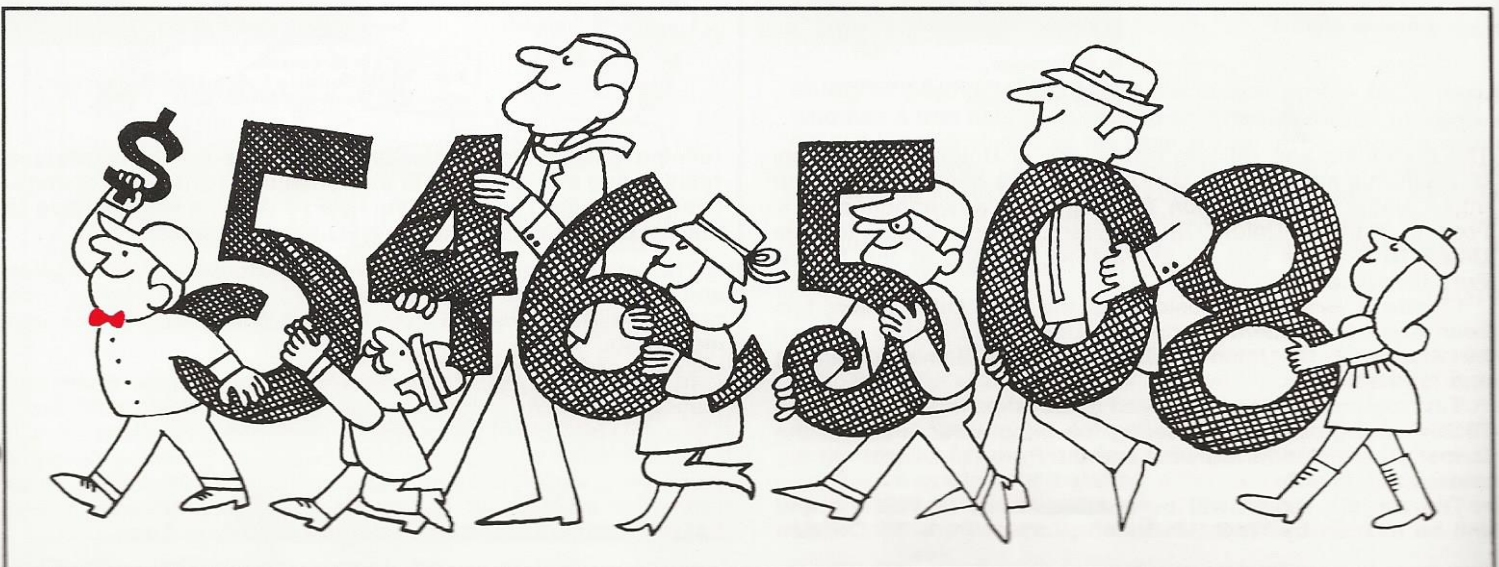
A total of \$546,508 has been paid to participants or their beneficiaries of two kinds of benefit plans available to Pure Oil Division jobbers, distributors and dealers and their employees, according to the Modern America Companies which serve as consultants and administrators for the financial security programs.

As of June 30th, over \$253,383 has been distributed among 49 beneficiaries of those who were enrolled in the Retirement Program which was inaugurated in March, 1963. In addition, nine claims amounting to \$36,306 have been paid in disability benefits directly to participants of this same program.

The Modern America organization also reports that \$256,819 in claim checks has been issued on behalf of participants of the Group Health & Security Plan for Distributors and Dealers Marketing Pure Oil Products, as of May 1, 1968. This program became available in June, 1965.

To provide greater financial security for themselves, participants of the Pure Oil retirement and health plans make a nominal contribution into their plans each month. These contributions are usually made through an automatic bank draft arrangement. This method provides a reliable record of payments; and the Plans, themselves, are more apt to be kept in force for future security.

Those persons interested in learning how they may be protected through the sound provisions of these benefit plans, are invited to contact a Consultant of the Modern America Companies through their Pure Oil Sales Representative. Further information is also available by writing directly to: Modern America Companies; Administrators for the Pure Oil Division Jobbers, Distributors, & Dealers Benefit Plans; P.O. Box 18295; Dallas, Texas 75218.



NEW 76 DIVISION FORMED

Claude S. Brinegar,
president Union 76 Division



James Egan,
director of marketing Union 76 Division



W. S. McConnor,
vice president refining & marketing
Union 76 Division



W. S. Conklin,
advertising & sales promotion manager
Union 76 Division

The marketing and refining operations of Union Oil Company of California and its Pure Oil Division have been consolidated into a single national Union 76 Division, it was announced by Fred L. Hartley, Union Oil president. Headquarters for the Union 76 Division will be in Palatine, Illinois, at the former Pure Oil offices.

Claude S. Brinegar, president of the Pure Oil Division, has been named president of the new Union 76 Division and will be responsible for Union Oil Company's total domestic refining and marketing.

Two regional offices have been established in the new Union 76 Division, generally paralleling the geographic areas of the former 76 Division in the west and the Pure Oil Division in the midwest and south.

The eastern region will be headquartered in Palatine and will be headed by W. S. McConnor, former Pure Oil Division

refining vice president. McConnor will now be vice president, refining and marketing. Until the scheduled 1970 brand change-over, the eastern region of the new 76 division will continue to market products under the Pure Oil brand names.

The western region will be headquartered in Los Angeles and will be headed by C. E. Rathbone, former marketing vice president. Rathbone will now be vice president, refining and marketing.

In other major appointments announced, James Egan was named director of marketing for the new Union 76 Division. Egan, formerly manager of marketing planning at Palatine, will be responsible for directing all activities in marketing development programs, including merchandising, advertising, sales promotion and TBA. W. S. Conklin was named Advertising and Sales Promotion manager, reporting directly to Egan.

WHAT'S YOUR COMPETITION DOING?



From The **NUMBER 1 NAME** IN RACING



No matter how successful you may be as a Pure dealer, you will always find that somewhere, there is a competitive dealer who has an idea or a good gimmick that has paid off with increased business—and that's the whole purpose of this column—to let you know what is going on with other dealers. We think you'll find by adapting some of these ideas to your operations, your business will profit also.

Night owl service pays!

Ask Conoco dealer George Winslow, Denver, Colorado, what he thinks about 24-hour operation and you're apt to have a hard time getting away. He's convinced it's helped his particular business more than any other one thing. His records show sales between the hours of midnight and 6 a.m. have jumped from 5,000 gallons to over 35,000 gallons per month and the accompanying increase in the light bill was almost negligible—about \$22 per month. It's also been good for service work, with a lot of oil changes, lubrication and safety inspections during the evening hours. George also insists that his daytime business had increased because of the all-night operation, although he had used the selling point of asking people to bring the car in and let them keep it overnight for service work, deliver it in the morning. Key to a good 24-hour operation: A good all-night man. "He's got to be experienced," George says. George himself works till midnight each night.

Conoco Today



Winter's coming

It will be a while yet, but when the snow starts falling for the first time this year, you may want to borrow an idea used last season by a Gulf dealer in High Point, North Carolina. During the first eight days of really cold weather, he sold 17 batteries by simply taking along his battery tester and a new battery on all service calls.

Gulf Dealer News

Dealer plays Santa

Last year, a Sunoco dealer in Butler, Pa. hosted Santa and his elves for three days at his locations. This dealer donated the labor cost on all service jobs and asked his customers to donate their change from the gas tank to Butler's Crippled Children's Society fund raising campaign. During the three days, the Santas and elves handed out free candy canes and apples to children who came into the station. You can bet this dealer is sure to be rewarded this Christmas for the good deed he did in his community last year.

Sunoco Diamond

You can always learn

Although he's been a dealer for nearly 20 years, a Humble dealer in Baton Rouge, Louisiana, realizes the importance of keeping up with new developments. Three years ago he returned to the Humble Retail School for a refresher dealer course. He took advantage of a vacation trip to California last year to learn something about the emission control devices that were to appear nationwide on the '68 models. Staying up to date is one reason why this dealer, who took over his present station two years ago after 17 years at another Humble location, topped his two-year gallonage projection in just two months. He's averaging 45,000 gallons a month now, has a TBA ratio of \$125 per 1,000 gallons and grosses \$1,700 a month in service work.

The Humble Extra

Loot lane

Safety is paying in increased traffic and profits for a dealer who has a free safety inspection program. Between two yellow stripes leading to one of his bays are an arrow and the words "Free Inspection Lane." The station averages 40 inspections a week and almost all of them turn up needed repair work that nine out of 10 customers have done on the spot. The dealer encourages repeat business by reminding the customers to return for an inspection every 5,000 miles.

DXtra

Spuds and gasoline

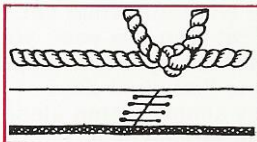
A Louisville Ashland dealer has come up with a winning idea: Egg or potato promotions. The desired produce item is ordered in grocery-store-size quantities. It's then sold—a bag of potatoes or a dozen eggs—to customers at cost, with a gasoline purchase, of course. At one Louisville area station where the gimmick was tried, for instance, a five-pound bag of spuds went for a nickle with a \$3 purchase. Cunningham managed to sell three tons of potatoes. And a lot of gasoline, too.

Ashland Oil Dealer

THE GROWING V-BELT AND HOSE MARKET

The Fan Belt

Before 1921 fan belts were made of rope, flat leather, or rubber-covered cotton duck or canvas. Most of these belts were subject to stretching or shrinkage depending on changes in moisture content of the atmosphere.



The results were loss of friction or excessive tension on shafts and bearings with belt breakage (depending on whether the belt stretched or shrank).

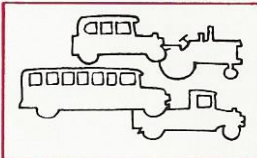
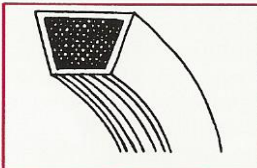
As under-the-hood space was reduced and engines increased in size and horsepower, the need for smaller pulleys and more efficiency demanded a new belt design.

The V-belt was the answer.

By wedging into the pulley groove, V-belts could transmit the same power as a flat belt with 70% less tension.

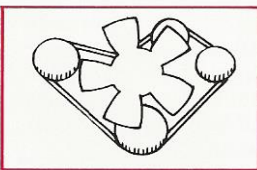
V-belts could be made in an endless circle and did not need to be stitched together.

The V-belt was superior in every way and by 1922, every make of passenger car, truck, bus and tractor standardized on V-belts to drive the fan and water pump.



The Engine Belt

The modern V-belt is a highly engineered product that, although reduced considerably in size from the old flat belts and early V-belts, handles higher horsepower drives with heavier shock loads and power surges than ever imagined in 1921.



The latest improved design and construction, using polyester fiber cords and the finest fabric and rubber compounds, provides the high-performance characteristics needed for today's engines.

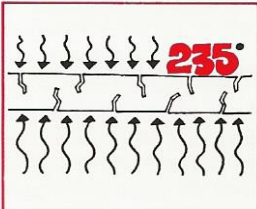
Use of the term "fan belt" seems out of place today since V-belts now power the fan, alternator or generator, water pump, power steering, air conditioner, and anti-smog devices. The terms "Engine Belts" or "Power Belts" would be more descriptive of the job they do.

And because they perform so many important functions, failure of one or more V-belts can cause extreme inconvenience to the motorist.

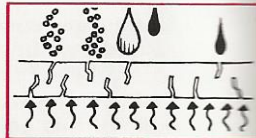
Furthermore, on today's automobile, when one belt breaks, it may wrap around other belts causing them to break also.

The modern V-belt is a well engineered product. And it must do its job under extreme conditions of heavy loads, surges of power, heat and dirt.

The major enemy of under-hood rubber is heat.



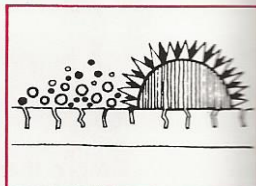
Extreme heat build-up under the hood may run as high as 235°F which can cause "heat cracks" that weaken the belt.



Besides heat, oil, grease, oil additives, anti-freeze solutions, radiator flushes and rust removers, carburetor and engine cleaners, salt or other ice-removing chemicals, sand and dirt can contribute to early belt failure.

Ozone (a gas created by an electrical discharge in the presence of oxygen) is also an enemy of rubber.

The intensity of ozone attack increases in the presence of sunlight and hydrocarbons in the atmosphere such as occurs in smog areas of the West Coast.



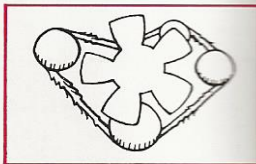
A high proportion of ozone under the hood may result in severe cracking of fan belts and radiator hose and general deterioration of under-hood rubber products.

Belt slippage (usually due to improper tensioning) can cause glazing and reduce belt efficiency.

At normal engine speeds of 4,000 R.P.M. V-belts flex as many as 24,000 times per minute thereby magnifying belt weaknesses that may lead to belt failure.

Selling & Servicing Today's Engine Belts

In examining belts, you should look for signs of wear such as torn cover, glazing, "heat cracks," stretching that may be the result of cord breakage, or ply separation.



Belt replacements costs are negligible when compared with engine damage or towing costs that may be incurred if the belt breaks on the highway.

You are doing your customer a favor when you point out to him a belt that needs to be replaced. You are providing a service that will save him time, trouble and money.

The importance of proper belt tensioning cannot be emphasized too much.

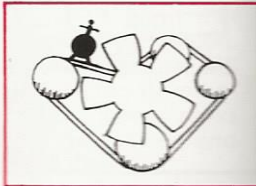
The terrific strain put on the V-belt with fast starts is magnified by the size of the crankshaft pulley (6" diameter) vs. the alternator pulley (2½" diameter). This condition may cause the belt to belly out and flip out of the alternator pulley.

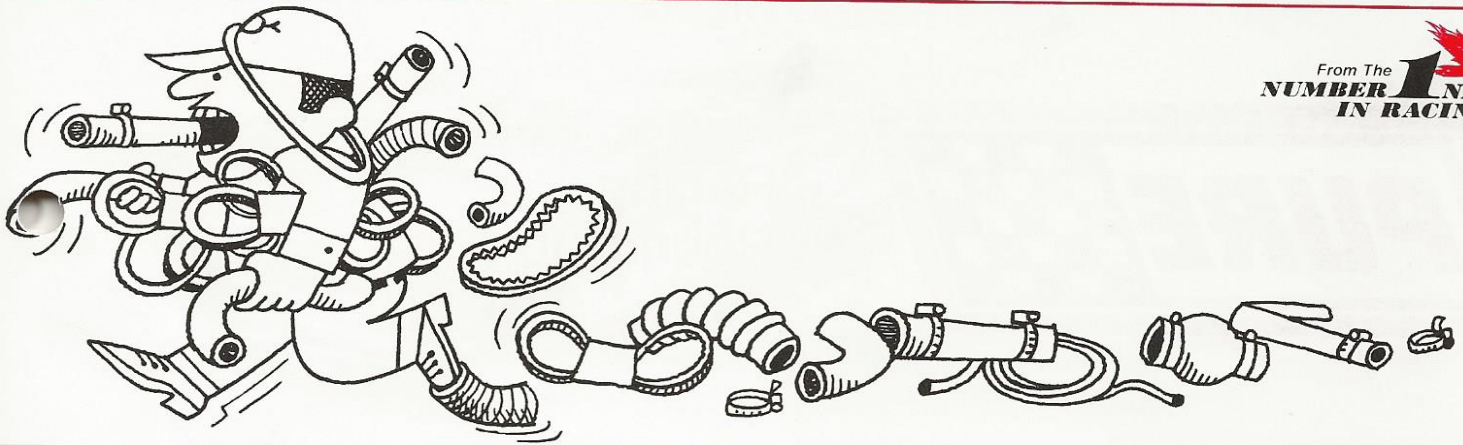
The same is true of the air conditioning drive that experiences sudden surges of power that puts excessive strain on the V-belt.

Therefore, tension recommendations may go as high as 125-135 lbs.

Belt squeal can be a sign of improper tensioning that can cause belt breakage so be sure to check belt tightness.

The best way to properly tension belts is to use a tension gauge. Tension recommendations are given in your catalog.





AUTOMOTIVE RADIATOR HOSE

The first radiator hose consisted of a length of metal pipe with rubber end caps, which were "clamped" to the necks on the block and radiator by tightly twisted pieces of wire.

This construction was replaced, before World War I, by a straight tube of natural rubber.

A few years later, to correct the twin problems of bursting and collapsing, the rubber tube was reinforced by being wrapped with a single ply of cotton which was in turn, wrapped with an outer cover of rubber.

In 1939, engine designs required that the hose be curved to avoid built-in obstructions. For the next 15 years, molded curved hose and straight hose were the only types in existence.

During this time, they underwent steady improvement, first by the addition of extra plies of reinforcing materials, then by the use of synthetic textiles such as rayon and nylon and finally by the use of synthetic rubbers such as neoprene and butyl.

Wire-reinforced flexible radiator hose first appeared on the market in 1954. The wire reinforcement gave it far greater burst strength than that demanded by any cooling system. It also prevented its collapse.

Its flexibility made it easier to install and provided a wide range of coverage with a minimum inventory.

The cooling system in the modern automobile is pressurized to control higher operating temperatures and prevent radiator boiling.

Some thermostats don't open until engine temperature reaches 210°-215° F.

Radiator pressure caps are designed to increase pressures to as high as 15 p.s.i. which permits an increase in temperature of 45° F.

Higher temperatures and higher pressures will transform a minor defect in the cooling system into a major problem in a few miles of driving.

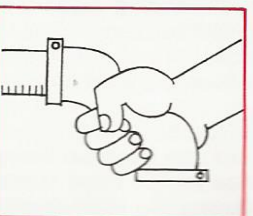
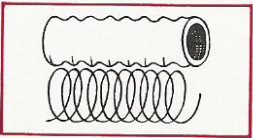
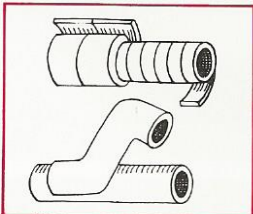
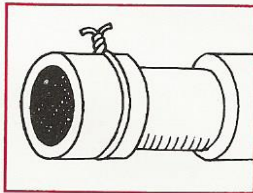
Pressure caps also have a vacuum valve, in combination with the pressure valve, to admit atmospheric pressure into the system when the engine is cold.

However, if the valve should fail to open, the hoses could collapse if they are in a weakened condition or do not have a wire coil inside the hose.

Vacuum is also created in normal high speed operation that can cause hose collapse and engine overheating.

Much of the deterioration of radiator hose occurs internally and is not noticeable from outside appearances.

Radiator hose may become soft and spongy as well as cracked and brittle.



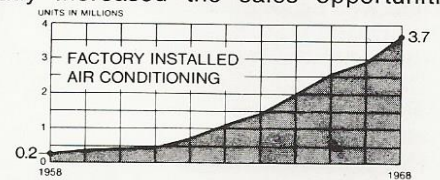
Therefore, when servicing or winterizing a car, it is particularly important to carefully examine the radiator hose and replace them when necessary.

THE GROWING MARKET FOR BELTS AND HOSE

V-Belts

Increase in the number of belt applications on modern automobiles has greatly increased the sales opportunities for replacement.

AIR CONDITIONING



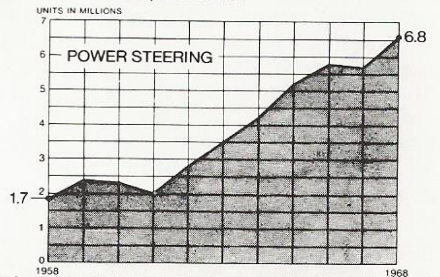
1958 — Air conditioning units for new cars totaled 198,254 units or 4.6% of new car production. Aftermarket installations totaled 142,656 units.

1968 — Factory installed air conditioning units totaled 3,749,000 units or 44.6% of car production—an increase of almost 1900% over 1958.

In the model year 1968, over 90% of Cadillacs, Lincolns and Chrysler Imperials were equipped with air conditioning.

Aftermarket installations totaled 650,000 units.

POWER STEERING



1958 — Factory installed power steering totaled 1,749,991 units or 41.1% of car production.

1968 — Factory installed power steering totaled 6,808,860 units or 81.1% of car production—an increase of 380% over 1958.

The growing market for replacement belts is illustrated in the fact that — A REPLACEMENT V-BELT IS SOLD IN THE U.S. EVERY TWO SECONDS.

Radiator Hose

The increase in sales opportunities for radiator hose has also developed through the increase in the number of applications.

Higher engine temperatures, chemical additives and ozone attack can seriously reduce hose life.

You should carefully check both upper and lower radiator hoses as well as by-pass hoses and heater hoses for signs of deterioration. This might be in the form of brittleness, cracking, mushiness or ballooning.

Merchandising

Both V-belts and radiator hoses can be easily sold if defects are pointed out to the motorist.

Effective use of point-of-sale material and display of merchandise can create sales opportunities. Rubber products are most easily sold with car winterizing and prior and during the summer vacation season.

Many motorists can also be convinced to carry spare V-belts if warned of the inconvenience that can occur if a belt or belts break on the highway.

The secret to sales is . . . TELL AND SELL



Racing Round-up

1968 race season is over

The 1968 major stock car racing season is now history. And, a group of new names will go into the record books.

Cale Yarborough, the Mercury driver from Timmonsville, S.C., was the winning money winner picking up \$150,000. Dave Pearson copped the 1968 Grand National Point Championship after a close battle with Bobby Isaac.

Tiny Lund was crowned king of the new Grand Touring Division of NASCAR.

These are only the highlights of a record breaking season in which NASCAR showed a big increase in attendance and money paid to the drivers. 1969 looks like an even better year with a new 2½-mile track opening in Talladega, Ala., and the same distance track in Jackson, Mich.

Pure Firebird gasoline, which powered all the winners above, also added another tank full of records to its already bulging tank.

Wood again champ

The famed Wood Brothers pit crew, headed by Leonard Wood, proved why Cale Yarborough makes up as much time in the pits as on the race track in the Wood Brothers' Mercury.

Yarborough's crew captured the second annual Pure Pit Club race in record smashing time of 18.276 seconds at Rockingham, N.C.

The Wood Brothers, defending champions in the event, poured in 14 gallons of Pure Firebird gasoline in the Mercury and changed two outside tires faster than most people can say "Pit Stop," much less make one.

The famous pit crew, consisting of brothers Glenn, Leonard, Delano and Clay Wood, along with Ralph Edwards and Ken Martin, established the old record of 21.922 seconds in 1967 but this year's effort was more than two seconds faster than second place finisher, Junior Johnson's Ford crew.

Johnson's crew made the stop in 20.320 seconds, nudging the Richard Petty crew that posted a time of 20.700 seconds.

Four crews will be admitted to the club at the annual awards banquet next October, prior to the running of the American 500 at North Carolina Motor Speedway. The Wood, Johnson and Petty crews are repeat members but Paul Goldsmith's Dodge crew earned membership by being fastest among that make. Goldsmith's crew, headed by Mack Howard, posted a time of 27.695 for sixth place overall.

The Pure Pit Club is really an exclusive chief mechanic's Hall of Fame with crew chiefs on each participating make of car eligible for membership.

Maybe next time, Buddy

Buddy Baker, good naturedly chiding the human element, related this story:

"Fans call me over to the fence to sign autographs before the start of a race, and as soon as the green flag waves and the race starts they forget all about me and start cheering for Richard Petty."

The final blow, Buddy said, was when—after he signed the autographs—one teenage lass blurted, with a giggle: "You don't sign them as fancy as Petty, do you?"



Bobby Mausgrover, driving car No. 52 loses control of his 1968 Ford in the first turn at Darlington Raceway and slides back into the high-speed lane right in front of Jabe Thomas (25); Bobby Isaac (71) and Pete Hamilton (1).

Thomas is the first to greet Mausgrover with Isaac right behind.

Parsons ARCA champ

Young Benny Parsons of Detroit has won the Automobile Racing Club of America new car division championship by a narrow 20 points over Les Snow of Bloomington, Ill.

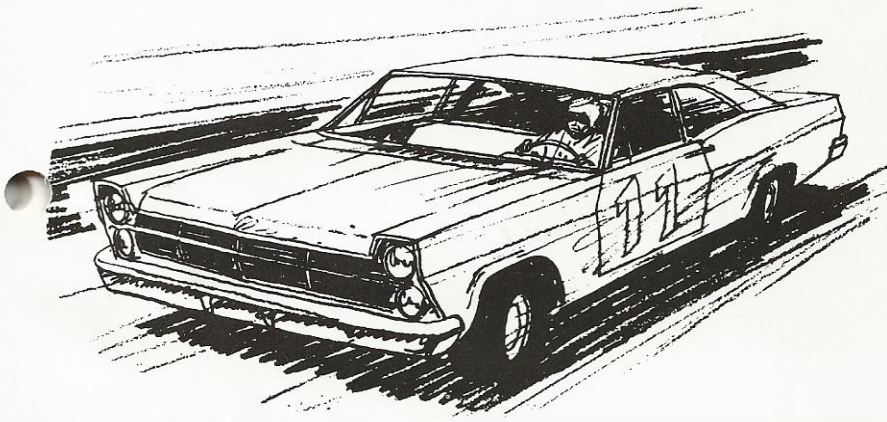
Parsons drove his 1968 Ford Torino to 11 wins in ARCA feature events in 1968 and finished in the top four in 21 of the 29 races he entered.

Parsons' first 1968 event with ARCA was in February at Daytona where he established a qualifying record for ARCA drivers at 179.459 MPH for two laps (five miles).

Defending champ Iggy Katona, Les Snow, Andy Hampton and Paul Wensink all held the point lead before Parsons nailed down the championship at Pennsboro, W. Va. Paul Wensink is a Pure Oil Dealer in Deshler, Ohio. (see August *Dealer Progress*)

Smokey to Ford?

Veteran Daytona Beach race car builder Henry Smokey Yunick has joined Ford Motor Co. and is expected to field stock cars during the 1969 season.



Water fills the air like a rain shower as radiators burst from the impact and Mausgrover gets turned around by the oncoming cars.

With cars spinning all over the track, Roy Trantham (84) spins sideways trying to avoid the crash. He didn't make it either.



EXTRA HELP—Jim Hylton, who drives a Dodge Charger on the NASCAR Grand National tour finds out how the track crews live as Jim helps put down some quickdry in the first and second turn at Darlington Raceway. Actually the first and second turns were being patched before the Southern 500 and Jim was just looking over things.

Paul Goldsmith of Munster, Ind., has been mentioned strongly as chief driver of the Yunick Ford products.

Yunick said from his Daytona Beach home that his new position involves "research and development" and in order to do his job he must have some race cars.

For the past 11 years Yunick has been associated with General Motors.

Real rough go

What's it like to be a raw rookie banging fenders with the likes of Cale Yarborough, Buddy Baker, Richard Petty and David Pearson on NASCAR's Grand National circuit?

Blond, wiry articulate 25-year-old Pete Hamilton, answers: "It's just like it sounds—rough and tough! There's no give anywhere, especially for a rookie. The drivers have been testing me and I know it. There's never an easy minute, ever."

1968 jinx over

Richard Petty snapped a superspeedway jinx and roared to victory in the American 500 stock car race, the finale for the stockers on the major speedway in '68.

Driving a perfectly performing Plymouth Roadrunner, Petty streaked under the checkered flag 16 seconds in front of Ford driver David Pearson.

Petty, who tied Pearson with 16 grand national victories apiece, averaged 105.060 mph even though the pace was slowed by five caution flags during the first 100 miles.

The victory was the first for Petty during the season in races of 250 miles or more.

Off to USAC

Alex Ulmann, president of the Automobile Racing Club of Florida, in a surprise announcement disclosed the Sebring 12-hour race, scheduled for March 22, 1969 would be sanctioned by the United States Auto Club.

SERVICE SAVVY

Improving Ignition Timing Pointer Visibility—Ford 390, 428 Engines

By applying white paint to the 6° BTDC mark on the vibration damper and to the tip of the pointer, visibility is improved when checking the ignition timing of Ford 1968 390 and 428 *Thermactor-equipped* engines. Aim the timing light at the pointer from in back of the *Thermactor* pump adjusting arm so that it can be seen between the alternator dual drive belts. This same idea can be applied to other engines of cars you service regularly where it may be difficult to obtain good visibility of the timing mark.

1968 Lincoln Air-Fuel Ratio

The following air-fuel ratio specifications are recommended for setting the carburetor idle mixture for all 1968 models of Lincoln Continental:

Engine	Air-Fuel Ratio
462	14.5
460	13.8

Settings should be made using a certified engine exhaust gas analyzer.

"Hidden" Windshield Wiper Blades

When installing new wiper blades on some new cars where blades are hidden or recessed into the lower windshield molding, you may find it helps to provide better access and working space by raising the hood.

Setting Idle Speed on New Engines

A new engine, with only a few miles of operation, may have high friction, requiring greater than normal throttle opening to produce recommended idle speed. This increased opening can expose the carburetor spark advance port to manifold vacuum, resulting in ignition timing advance at the specified idle speed. Some manufacturers recommend that engines with 50 to 300 miles be set 50 rpm lower than specified, since as the engine accumulates mileage and friction is reduced, the specified idle speed will be obtained with this same throttle opening.

Disconnect Both Battery Cables When Charging Battery in Car

This warning has been given before, but it bears repeating. When recharging a battery in the vehicle, always disconnect both battery cables before attaching the charger clips. If this is not done, there is risk of damaging headlights, radio and other electrical equipment if turned on during the charge. High voltage, surging through filaments and transistors can burn them out. Play it safe. Disconnect both cables. Then, before reconnecting, inspect and clean battery cables, connectors and posts. It's also a safe idea to disconnect the battery cables before attempting any repair work on the underside of the instrument panel cluster. Accidental shorting can cause burned out instruments, or in cases where a printed circuit is used, burned out conductors on the circuit board. Accidental shorting of such burned out circuits resulting from service work is generally not covered by the new-car warranty. This means that replacement is made at your own expense.

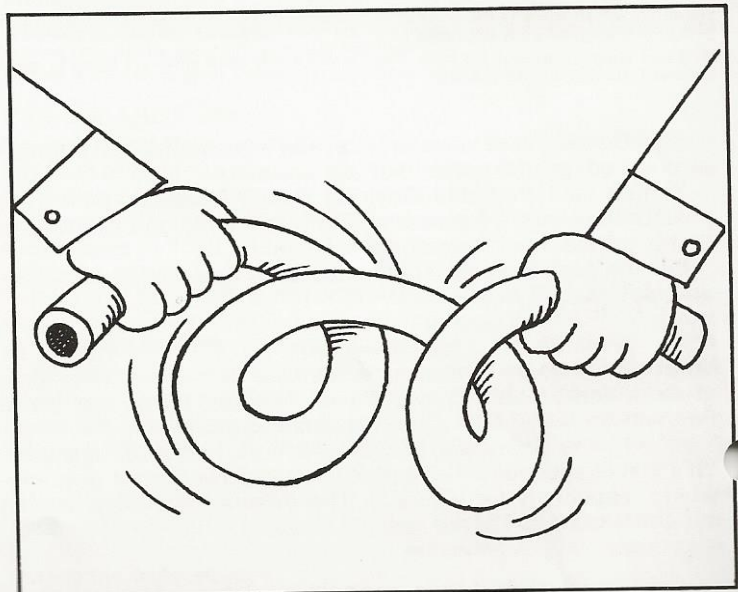
Cold Engine Loading Monojet "MV" Carburetor

Chevrolet advises that some earlier models of '68 6-cylinder Chevrolet, Chevelle, Chevy II and Camaro engines equipped with the Monojet MV carburetor (automatic choke), have a cranking enrichment valve. In operation, this valve supplements the fuel supplied by the idle circuit and main discharge nozzle during cold engine cranking. The valve can be recognized as a spring loaded stem plunger on the air horn contacting the choke valve lever. If the valve sticks in the open position (down) a loading condition may occur after the choke has moved to the open position. Use a pair of needle-nose pliers to pull upward on the stem to close the valve. When loading condition persists, remove air horn and clean valve cavity and bleed hole with solvent. Dry thoroughly. If necessary, the stem may be permanently removed, says Chevrolet, to place it out of contact with the choke valve lever. Later models of the MV carburetor do not incorporate the cranking enrichment valve.

Installing Power Steering Hoses

Chrysler Corporation recommends these precautions be observed when installing high pressure power steering hoses:

1. Do not bend hoses sharply. Bends should not be smaller than 10-inch diameter.
2. Avoid twisting when routing hoses. Keep clear of other components—exhaust manifold, battery case and tray, pulleys. Do not allow hoses to contact brake shoes.
3. Use protective sleeves of sponge material wherever hose comes in contact with metal surfaces.
4. Torque pump end fitting to 24 foot/pounds and steering gear end to 160 inch/pounds. Use torque wrench to insure against overtightening.



New GM ignition lock can affect emergency towing

General Motors' cars for '69 have the ignition switch located on the right side of the steering column. As an antitheft measure, the switch has a separate LOCK position which in addition to locking the ignition off, also locks the steering and shift selector mechanisms.

On models with automatic transmission, the switch cannot be locked unless the selector lever is in PARK. For manual transmission models, the gearshift must be in the REVERSE position. Consequently, the position of this switch and the availability of the ignition key will affect emergency towing procedures.

Normally, the car may be towed for distances not exceeding 50 miles at speeds under 35 mph with all four wheels on the road provided the transmission is not damaged and the ignition key is available so that the shift selector or gearshift lever may be put in NEUTRAL. Ignition switch should be in the OFF position.

If, however, the car must be towed for more than 50 miles or at speeds in excess of 35 mph, or the transmission is damaged

or inoperative, the car must be towed with rear wheels lifted (for rear-wheel drive models) or the driveshaft disconnected. Should the ignition key not be available and the switch is in the LOCK position, do not attempt to tow the car on its own wheels. A towing dolly must be placed under the rear wheels and the car towed with the front end raised. This procedure is also applicable to Buick Riviera '68 models. Do not tow on the car's rear wheels (front end lifted) because of possible gas tank damage. Rear end should be carried on a dolly.

Cadillac Eldorado and Oldsmobile Toronado with front-wheel drive may be towed on all four wheels for the same specified distances and speeds if the selector lever can be placed in NEUTRAL and transmission is not damaged. However, if transmission is inoperative, ignition switch is in LOCK position (and key is not available) or towing distance exceeds 50 miles and speeds above 35 mph, the car must be towed on the rear wheels (front end lifted). If rear end damage prevents this, a dolly must be placed under front wheels and car towed with rear end lifted.

Service tips for snowmobiles

Conservative estimates place the number of snowmobiles that will be operating this winter at some 200 thousand. They represent an increasing source of service business for automotive and farm implement servicemen in areas where the vehicles are most used.

These general service tips have been compiled from several snowmobile manufacturers' service literature to promote better and safer operation. Despite their unusual means of locomotion, snowmobiles are no great mystery when it comes to servicing. Anyone at all familiar with two and four-cycle engines used for boating or garden and lawn power equipment can quickly and easily master the service requirements.

For models with two-cycle engines, fuel and lubricating oil must be mixed in the correct proportions as recommended by the manufacturer for the range of temperature in which the vehicle will consistently be used. Most manufacturers advise against allowing the vehicle to stand with a nearly empty gas tank. Water vapor condensing on the walls of the tank can freeze the fuel system.

Battery should always be kept fully charged. A battery with a low charge may freeze causing cell dividers and case to burst. Some manufacturers suggest a quick hydrometer test of the battery before beginning any off-the-beaten-path overland run.

Points requiring lubrication with the grade and at intervals specified by the manufacturer, vary with design; however, these generally include:

- Drive chains or chain housing.
- Clutch shaft bearings.
- Ski column and linkage.
- Steering pivots and linkage.
- Idlers and bogie wheels, track guides.
- Transmission (AT fluid).



For units with a drive belt instead of a chain drive, check tension and condition of belt. Suggest carrying a spare belt for replacement when miles from a service source.

Engines not equipped with a governor may use a centrifugal-type clutch to limit top engine speed by load. Caution owners not to operate the engine at full throttle on downgrade runs. "Overrevving" the engine results in rapid and unnecessary wear.

Extremely cold temperatures can cause the transmission and or drive track to lose power. If this happens, jack up the vehicle so that the load is taken off the track, allowing it to run until it frees itself.

Track trunnions are generally equipped with adjusting bolts. A crawler track improperly aligned or tensioned will cause premature wear of sprockets and teeth. Parallel alignment of skis is also important or steering will be impaired. Adjustment procedures vary with models and are relatively easy to perform. After realigning track and skis, recheck track tension.

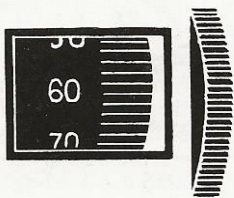
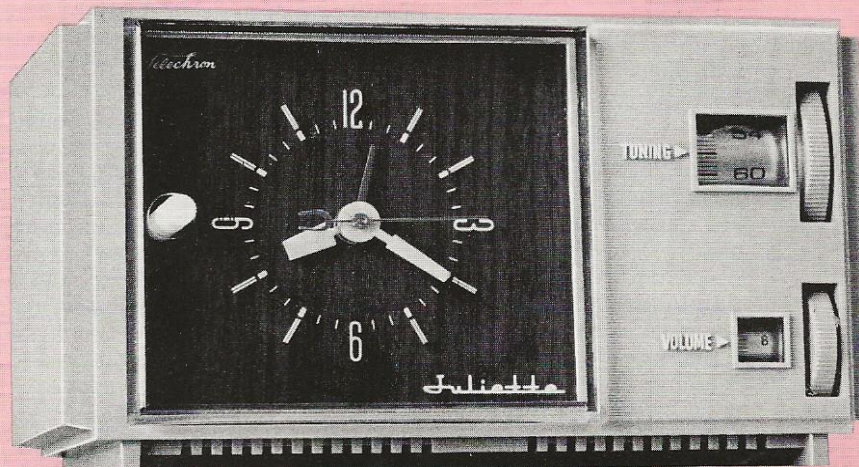
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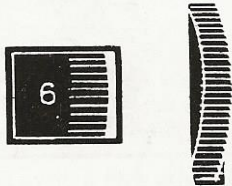
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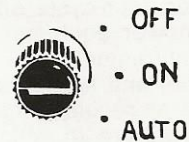
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