# DHUDSON



## FLAT RATE MANUAL

480-490-500 AND "A" SERIES

HUDSON MOTOR CAR COMPANY DETROIT 14, MICHIGAN

#### INTRODUCTION

This edition of the Hudson Flat Rate Manual covers service operations applying to the 480. 490 and 500 and "A" series 6 and 8 cylinder Hudson cars. It is to be used as a guide by the Distributor and Dealer in determining his time allocations and establishing fair and competitive service charges to Hudson Owners.

The time established has been based on performance of the complete operation, with the necessary special tools, equipment and mechanics of average ability.

Where difficulty is encountered in doing the operation in the time given, a check should be made to determine if the Factory recommended procedure is being followed and, also, if the proper tools and equipment are used.

Factory adjustment of replacement certificates is on the basis of the established times shown in this flat rate manual.

In the back of this book will be found printed forms which are provided for reporting Dealers' shop experiences as related to the service operations and flat rate times shown in this manual. Your cooperation in making use of these forms when suggesting changes in time or additional service operations will be valuable when compiling new additions to this manual.

#### INSTRUCTIONS

In the "time required" column following the description of operations, there is also listed in some cases additional time required to perform further work at that particular state of disassembly.

The words, "remove," "install," and "overhaul" have definite meanings as will be explained in the following paragraphs.

The word "remove", implies to take off or out the part or parts unless otherwise specified such as "remove and replace," or "remove and install."

The word "install" is opposite of removal and applies to putting back the used part or installing a new one, for example, the first installation of an accessory or optional equipment.

"Overhaul" signifies removal of an assembly from the car, disassembly, inspection of all parts, and rebuild the assembly, using the same or new parts. Install the assembly and make necessary adjustments.

To expediate pricing and quoting, a labor conversion table is shown at the rear of the book and is computed at rates of \$2.50 to \$4.00 per hour labor charge.

The established time allowed covers the complete operation and allows for necessary preparation such as spotting the car, applying protective covers, procuring tools and parts.

The time established for the operations applies to standard production model cars. Therefore, where special equipment interferes with the performance of the operation, additional time allowances will have to be added to the standard time.

#### MODEL DESIGNATION

The new Hudson models are produced in the Super and Commodore Series and are identified as follows:

Hudson Super Six	Model 481-491	-501
Hudson Commodore Six	Model 482-482	2-502
Hudson Super Eight	Model 483-493	3-503
Hudson Commodore Eight	Model 484-494	-504
Hudson Pacemaker six	Model	500

#### 1951 — "A" SERIES

Pacemaker Custom - 6 cyl.	Model	4A
Super Six Custom - 6 cyl.	Model	5A
Commodore Six Custom - 6 cyl.	Model	бΑ
Hornet $Six - 6$ cyl.	Model	7A
Commodore Eight Custom - 8 cyl.	Model	8A

### **GROUP INDEX**

Group		Page	Group		Page
1	SUSPENSION - FRONT	1	12	EXHAUST SYSTEM	48
2	AXLE - REAR	4	13	ELECTRICAL	48
3	WHEELS AND TIRES	6	14	ACCESSORIES	52
4	BRAKES	7	15	FRAME AND SHEET METAL	54
5	CLUTCH	11	16	BUMPERS	58
6	TRANSMISSION	13	17	SUSPENSION REAR	58
7	OVERDRIVE	17	18	FUEL SYSTEM	59
8	PROPELLER SHAFT	20	19	LUBRICATION AND INSPECTION	60
9	ENGINE	21	20	STEERING GEAR	61
10	BODY AND HARDWARE	33	21	VACUMOTIVE DRIVE	63
11	COOLING	46	22	DRIVE-MASTER	65

23 HYDRA-MATIC TRANSMISSION 67

#### **ALPHABETICAL INDEX**

			ı		
14	ACCESSORIES	52		Axle Housing	4
	Back-Up Light	52		Axle Shaft, Bearings and Oil Seals	6
	Battery Filler	52		Carrier Companion Flange	6
	Cigarette Lighter	52		Differential Bearings	4
	Clocks	52		Differential Carrier	4
	Curb Signals	52		Differential Gears	6
	Direction Indicator	52		Drive Gear and Pinion	4
	Exhaust Deflector	52			
	Fog Lights	52	10	BODY AND HARDWARE	
	Front Fender Top Ornament Kit	52		Balance Link - Conv.	33
	Front Door Vent Wing Shields	52		Body Paint Instructions	45
	Gas Tank Locking Cap	52		Body Interior Trim	37
	Hill Hold Kit	52		Convertible Body	39
	Hub Cap Kit (Large)	52		Doors, Regulators, Handles	33
	Kar-Visor	52		Door Hinges, Lock, Mouldings - Conv	42
	Kleenex Tissue Dispenser	52		Door Vent Wings	36
	License Plate Frame	52		Doors, Regulators, Switches - Conv.	41
	Moulding Kit	52		Instrument Panel Assembly	38
	Oil Filter	52		Instrument Panel Instruments	39
	Outside Rear View Mirror	52		Interior Trim and Seats - Conv.	43
	_Radio	53		Motor and Pump Assembly - Conv.	40
	Radiator Grille Guard	53		Quarter Window Hinge - Conv	42
	Rear Window Wiper	53		Rear Compartment Door	38
	Seat Cover	53		Rear Curtain - Conv.	39
	Spot Light	53		Rear Window Glass	36
	Steering Wheel	53		Seats and Upholstery	35
	Under Seat Heater	53		Top Control Valve - Conv.	40
	Weather Control	53		Top Covering - Conv.	39
	White Side Wall Tires	53		Top Header, Bows, Side Rails—Conv.	40
	Window Vent Shades	53		Weatherstripping	34
	Windshield Washer	53		Weatherstripping - Conv.	43
				Windlace	37
2	AXLE REAR	4		Window Glass and Regulators Conv	41
	Axle Assembly	4		Window Stop Bumpers - Conv.	41
			1		

#### **ALPHABETICAL INDEX—Continued**

	Windshield	36		Bellcrank	66
	Windshield Wiper	36		Trouble Shooting	65
	Windshield Reseal	36		Detent Ball and Spring	66
	Windshield Glass	36		Governor Switch	67
	Windshield Garnish Moulding	36		Mounting Bracket	66
	Windshield Drain Tubes	36		Neutral and Limit Switch	67
	DD 14470	_		Power Cylinder	66
4	BRAKES	7		Shift Shaft	66
	Adjustments (Minor and Major)	7		Solenoid Valves	66
	Backing Plates	9		Transfer Diaphragm	66
	Bleed Lines	7		Transmission Switch	66
	Brake Shoes — Re-Line	7		Throttle Lock	67
	Cables and Linkage	10		Vacuum Line or Elbow	66
	Drums (Reface)	9		Wire Harness Check	67
	Hand Brake and Control	11			
	Hoses, Tubes, and Tees	10	13	ELECTRICAL	48
	Inspection	7		Battery and Cables	48
	Master Cylinder	9		Condenser	50
	Master Cylinder, Stop Light Switch	9		Distributor Points	50
	Mechanical Follow-Up	10		Generator and Regulator	49
	Pedal, Lever, Housing	10		Headlights	51
	Wheel Cylinders	9		Horns ( Dual)	49
				Horn Relay	50
16	BUMPERS	58		Ignition Coil, Distributor	50
	Assembly	58		Ignition Switch and Cables	51
	Brackets	58		Parking Lights	50
	Bumper Impact Bar	58		Spark Plugs	51
	Guards	58		Starter Bendix Cover	51
	License Plate Bracket	58		Starter Motor	51
	Stone Guards	58			
			9	ENGINE	21
	CLUTCH	11		Camshaft	23
5	Adjustment (Pedal)	11		Check Valves	26
	Clutch — Remove and Install	11		Connecting Rods, Pistons and Rings	27
	Clutch Crosshaft	13		Con. Rod and Main Bearings	23
	Drain and Refill	11		Crankshaft	25
	Housing	11		Cylinder Block, Hone, Rebore	26
	Overhaul	11		Cylinder Block and Studs	26
	Pilot Bearing	11		Cylinder Head	31
	Removal and Installation	11		Engine Assemblies	21
	Shift Yoke and Shaft	13		Engine Combination Operations	33
	Throwout Bearing, Collar, or Oil Seal	13		Engine Mountings	23
				Engine Paint	21
	COOLING	46		Exhaust and Intake Manifold	26
11	Flushing	46		Flywheel Crankshaft and Timing Gears	25
	Hoses	46		Lubrication	26
	Radiator	46		Main Bearings	25
	Temperature Indicator Element	47		Oil Pan Assembly	27
	Thermostat, Housing or Gasket	46		Oil Pressure Check	27
	Water Distributing Tube	47		Oil Pump Assembly	27
	Water Jacket or Plugs	46		Pistons, Rings and Pins	29
	Water Pump and Fan	47		Skeleton Engine	21
				Support Plates	23
	DRIVE-MASTER	65		Tune-Up Combinations	32
22	Accelerator Switch	67		Timing Chain and Gears	26
	Adjustment	65			

#### **ALPHABETICAL INDEX—Continued**

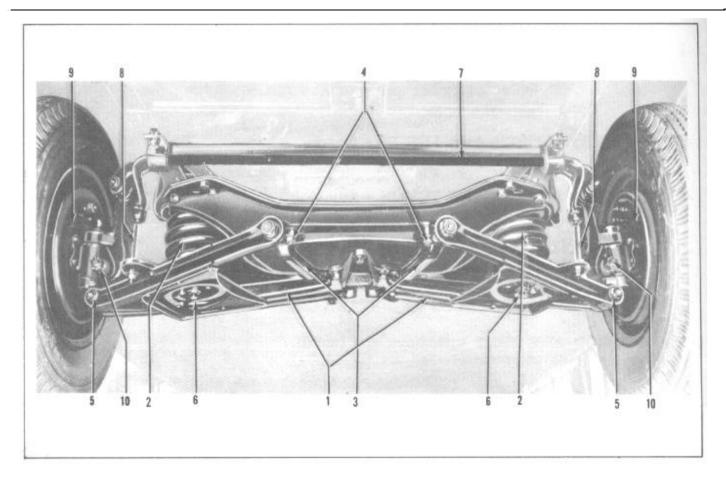
	Timing Coverand Oil Seal Valves, Springs, Tappets and Guides	25 31		Regulator Valve Reverse Gear Anchor	68 70
	Vibration Dampener	25		Reverse Gear Assembly	70
				Road Test	71
12	12 EXHAUST SYSTEM	48		Servos	70
	Exhaust Manifold	48		Servos Adjust	71
	Exhaust Manifold Damper Valve	48		Shift Control Lever	70
	Exhaust Pipes and Clamps	48			
	Intake Manifold	48	19	LUBRICATIONS AND INSPECTIONS	60
	Muffler	48		Clutch	61
				Differential	61
15	FRAME AND SHEET METAL	54		Front Wheel Bearings	61
	Fender — (Front)	54		Inspections — 1,000 and 2,000	61
	Fender — (Rear)	54		Lubrication (Complete)	60
	Fender Mouldings	54		Pre-Delivery Inspection	61
	Front Frame and Crossmembers	54		Rear Springs	61
	Gas Tank Filler Door and Springs	54		Rear Wheel Bearings	61
	Hood	55		Steering Gear	61
	Radiator Grille and Baffles	56		Transmission	61
	Rocker Panels and Mouldings	55		Vacumotive Power Cylinder	61
	Scuff Plates	55			
	Stone Guards	54	7	OVERDRIVE	17
	Water Baffle and Drain (Rear Fender)	55		Adapter and/or Gasket	19
	Wheel Covers (Rear)	55		Assembly	17
				Bearings	19
18	FUEL SYSTEM	59		Control Cable	19
	Automatic Choke	60		Control Shaft	19
	Air Cleaner	60		Governor Switch	19
	Carburetor Assembly, Overhaul	59		Oil Seal (Rear)	17
	Combination Fuel Pump	60		Overhaul	17
	Flexible Hose	60		Relay	19
	Gas Lines	60		Shift Rail and Fork	17
	Gas Tank and Gauge	60		Solenoid	19
	Heat Tube	60		Speedometer Drive Gear	19
	Needle Valve (Carburetor)	60		Stationary Gear or Balk Ring	19
	Standard Fuel Pump	60		Wiring Harness	17
	Sediment Bowl and Screens	60			
	Vacuum Gauge Check	60	8	PROPELLER SHAFT	20
				Center Bearing and Housing	20
23	HYDRA-MATIC TRANSMISSION	67		Center Bearing Support Cushions	20
	Adjustments	70		Companion Flange	20
	Assembly — Remove and Install	67		Overhaul	20
	Control Valve	69		Sleeve Yoke	20
	Drain and Refill	67		U Bolts	20
	Frame #3 Crossmember	67		Universal Joints	20
	Flywheel and Housing	68			
	Front Oil Pump or Seal	69	20	STEERING	61
	Governor	69		Adjustments	63
	Inspection	67		Housing	61
	Mainshaft Bushing	68		Jacket Tube and Bearing	61
	Oil Level Check	71		Overhaul	61
	Oil Pressure Check	68		Pitman Arm	63
	Overhaul	67		Sector Shaft	63
	Planetary Units	69		Steering Wheels	63
	Rear Oil Pump	69		Worm and Tube Assembly	63
	Rear Oil Seal	69			

#### **ALPHABETICAL INDEX—Continued**

1	SUSPENSION — FRONT	1		Mainshaft Bearing	15
	Alignment	4		Mainshaft Oil Seal	15
	Caster, Camber and Toe-In	4		Main Drive Gear	15
	Coil Spring and Shock Absorbers	3		Main Drive Gear Stop Ring	15
	Drag Link	4		Overhaul	13
	Hub and Drum Assembly	2		Remote Control Bell Crank	17
	Lower Support Arm	1		Remote Control	16
	Overhaul	1		Reverse Idler Gear and Shaft	16
	Stabilizer	3		Shift Lever — Inner and Outer	16
	Steering Arms	3		Shift Selector Lever	16
	Steering Spindles	1		Speedometer Gear Housing	15
	Tie Rods	3		Transmission Cover or Gasket	13
	Upper Support Arm	1		Transmission Shift Shaft	16
	Wheel Bearings — Front	1			
			21	VACUMOTIVE DRIVE	63
17	SUSPENSION — REAR	58		Accelerator Switch	64
	Bushings or Pins	59		Adjustments	63
	Leafs (Spring)	58		Bell Crank	63
	Mounting Clips	59		Compensator Lever	64
	Shackles	58		Governor Switch	64
	Shock Absorbers (Rear)	59		Installation (Initial)	63
	Springs (Rear)	58		Mounting Bracket	63
	Spring Covers	58		Power Cylinder	63
	Spring Removal and Installation	58		Piston Rod and Boot	64
	Stabilizer	59		Solenoid Valve	63
				Threaded Sleeve Rod Assembly	64
6	TRANSMISSION	13		Valve Lever Cam	63
	Companion Flange	15		Wire Harness Check	64
	Counter Shaft Bushing	16			
	Counter Shaft Gear Cluster	15	3	WHEELS AND TIRES	6
	Floor Opening Cover	13		Align Front Wheels	6
	High and Second Shift Rail	16		Bearings and Cups	6
	Interlock Plunger	16		Hub and Drums	7
	Low and Reverse Shift Rail	16		Tires and Wheels (Rotate)	6
	Mainshaft	15		Wheel Balance	7
			1		

OPERATION	DESCRIPTION	TIME	PRICE
	FRONT SUSPENSION		
1-1	FRONT SUSPENSION OVERHAUL — Rebush and replace any parts necessary — Includes adjusting caster, camber and toe-In All Models	5.9	
	LOWER SUPPORT ARMS		
1-2	LOWER SUPPORT ARM (INNER) PIVOT — Remove and Install.  All Models — one side both sides	.5 .9	
1-3	LOWER SUPPORT ARM (INNER) PIVOT BUSHINGS — Remove and Install.  All Models — one side both sides	.4 .7	
1-4	LOWER SUPPORT ARM (OUTER) PIVOT AND/OR BUSHING — Remove and Install.		
	All Models — one side both sides	.6 1.1	
1-5	LOWER SUPPORT ARM — Remove and Install.		
	All Models — one side both sides	13 25	
	UPPER SUPPORT ARMS		
1-6	UPPER SUPPORT ARM (INNER) PIVOT BUSHINGS — Remove	_	
	and Install. All Models — right side left side	.6 .7	
1-7	UPPER SUPPORT ARM ECCENTRIC BUSHING AND/OR PIVOT — Remove and Install.		
	All Models — one side both sides	.7 13	
1-8	UPPER SUPPORT ARM (INNER) PIVOT ASSEMBLY — Remove and Install.  All Models — one side both sides	1.4 2.7	
1-9	SUPPORT ARM RUBBER BUMPERS — Remove and Install.		
	All Models — one side both sides	.3 .5	
	STEERING SPINDLE AND WHEEL BEARINGS		
1-10	STEERING SPINDLE — Remove and Install.		
	All Models — one side . both sides	13 2.1	
1-11	STEERING SPINDLE PIVOT PIN AND SUPPORT BUSHINGS — Remove and Install.		
	All Models — one side	1.7	
1-12	STEERING SPINDLE SUPPORT — Remove and Install.  All Models — one side	1.9	
1-13	WHEEL BEARINGS — Remove, clean, repack, install and adjust.		
	All Models — one side both sides	.6 .9	

**OPERATION DESCRIPTION** 



#### FRONT SUSPENSION

- Lower support arm assemblies
   Coil spring
- 3. Lower support arm pivot
- 4. Lower support arm pivot to frame bolt
- 5. Lower support arm to spindle support pivot and bushing
- 6. Shock absorber anchor plate and attaching nuts
- 7. Front stabilizer bar
- 8. Stabilizer connectors
- 9. Brake backing plates
- 10. Steering arm nut

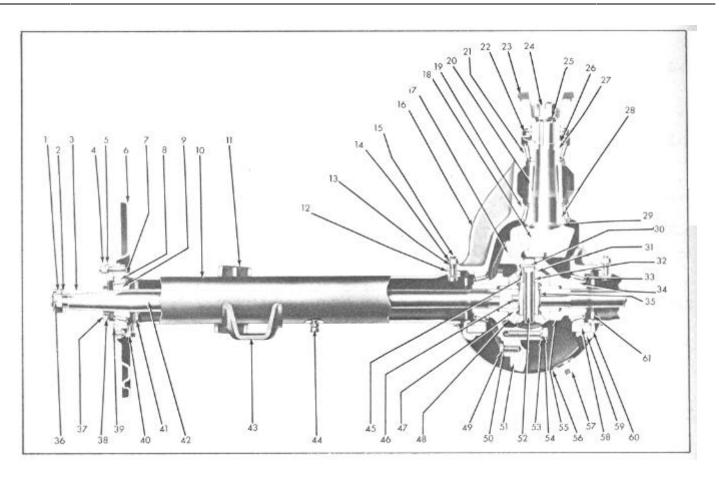
#### FRONT SUSPENSION—Continued

1-14	WHEEL HUB AND DRUM ASSEMBLY — Remove and Install		
	Includes cleaning, repacking and adjusting Wheel Bearings.		
	All Models — one side	.7	
	both sides	1.0	
1-15	WHEEL BEARINGS — Adjust Only —		
	All Models — both sides	.4	
1-16	SPINDLE GREASE RETAINER AND WASHER — Remove and Install.		
1 10	All Models — one side	2	
		.3	
	both sides	5	

### FRONT SUSPENSION—Continued SPRINGS, SHOCK ABSORBERS AND STABILIZER

1-17	COIL SPRINGS AND/OR SI	LENCER — Remove and Install.	
		All Models — one side	1.0
		both sides	1.8
		bout sides	1.0
1-18	SHOCK ABSORBER AND/O	R RUBBER GROMMETS — Remove	
	and Install.	All Models — one side	.5
		both sides	.9
1-19	SHOCK ABSORBER ANCHO	OR PLATE — Remove and Install.	_
		All Models — one side	.2
		both sides	.3
1-20	LATERAL STABILIZER —	Remove and Install. — All Models	.7
1-21	LATERAL STABILIZER MO Remove and Install.	OUNTING BRACKETS TO FRAME —	
		All Models	.5
1-22	LATERAL STABILIZER CO Remove and Install.	NNECTORS AND/OR BUSHINGS —	
		All Models — one side	.3
		both sides	.5
	SI	EERING ARMS AND TIE RODS	
1-23	CENTER STEERING ARM	AND PIVOT ASSEMBLY — Remove	
	and Install.	All Models	1.0
	***************************************	111 1120 0010	
1-24	CENTER STEERING ARM I		
1-24	CENTER STEERING ARM I	PIVOT — Remove and Install. All Models	1.8
		All Models	1.8
1-24	CENTER STEERING ARM I	All Models  BEARINGS, SPACERS OR SEALS —	
		All Models	1.8
1-25	CENTER STEERING ARM I Remove and Install.	All Models  BEARINGS, SPACERS OR SEALS —  All Models	
	CENTER STEERING ARM I Remove and Install. CENTER STEERING ARM I	All Models  BEARINGS, SPACERS OR SEALS — All Models  PIVOT BRACKET — Remove and	1.2
1-25	CENTER STEERING ARM I Remove and Install.	All Models  BEARINGS, SPACERS OR SEALS —  All Models	
1-25 1-26	CENTER STEERING ARM I Remove and Install. CENTER STEERING ARM I Install.	All Models  BEARINGS, SPACERS OR SEALS — All Models  PIVOT BRACKET — Remove and All Models	1.2
1-25	CENTER STEERING ARM I Remove and Install. CENTER STEERING ARM I Install.	All Models  BEARINGS, SPACERS OR SEALS — All Models  PIVOT BRACKET — Remove and All Models  move and Install. Includes adjust toe-in.	.3
1-25 1-26	CENTER STEERING ARM I Remove and Install. CENTER STEERING ARM I Install.	All Models  BEARINGS, SPACERS OR SEALS — All Models  PIVOT BRACKET — Remove and All Models	1.2
1-25 1-26 1-27	CENTER STEERING ARM I Remove and Install.  CENTER STEERING ARM I Install.  TIE ROD ASSEMBLY — Re	All Models  BEARINGS, SPACERS OR SEALS — All Models  PIVOT BRACKET — Remove and All Models  move and Install. Includes adjust toe-in. All Models — one side	.3
1-25 1-26	CENTER STEERING ARM I Remove and Install.  CENTER STEERING ARM I Install.  TIE ROD ASSEMBLY — Re	All Models  BEARINGS, SPACERS OR SEALS — All Models  PIVOT BRACKET — Remove and All Models  move and Install. Includes adjust toe-in. All Models — one side  Remove and Install. Includes adjust toe-in.	.4
1-25 1-26 1-27	CENTER STEERING ARM I Remove and Install.  CENTER STEERING ARM I Install.  TIE ROD ASSEMBLY — Re	All Models  BEARINGS, SPACERS OR SEALS — All Models  PIVOT BRACKET — Remove and All Models  move and Install. Includes adjust toe-in. All Models — one side	.3
1-25 1-26 1-27 1-28	CENTER STEERING ARM I Remove and Install.  CENTER STEERING ARM I Install.  TIE ROD ASSEMBLY — Res	All Models  BEARINGS, SPACERS OR SEALS — All Models  PIVOT BRACKET — Remove and All Models  move and Install. Includes adjust toe-in. All Models — one side  Remove and Install. Includes adjust toe-in. All Models — both sides	.4
1-25 1-26 1-27	CENTER STEERING ARM I Remove and Install.  CENTER STEERING ARM I Install.  TIE ROD ASSEMBLY — Re	All Models  BEARINGS, SPACERS OR SEALS — All Models  PIVOT BRACKET — Remove and All Models  move and Install. Includes adjust toe-in. All Models — one side  Remove and Install. Includes adjust toe-in. All Models — both sides	1.2 .3 .4 .8
1-25 1-26 1-27 1-28	CENTER STEERING ARM I Remove and Install.  CENTER STEERING ARM I Install.  TIE ROD ASSEMBLY — Res	All Models  BEARINGS, SPACERS OR SEALS — All Models  PIVOT BRACKET — Remove and All Models  move and Install. Includes adjust toe-in. All Models — one side  Remove and Install. Includes adjust toe-in. All Models — both sides  e and Install. All Models — one side	.4
1-25 1-26 1-27 1-28	CENTER STEERING ARM I Remove and Install.  CENTER STEERING ARM I Install.  TIE ROD ASSEMBLY — Res	All Models  BEARINGS, SPACERS OR SEALS — All Models  PIVOT BRACKET — Remove and All Models  move and Install. Includes adjust toe-in. All Models — one side  Remove and Install. Includes adjust toe-in. All Models — both sides	1.2 .3 .4 .8
1-25 1-26 1-27 1-28 1-29	CENTER STEERING ARM I Remove and Install.  CENTER STEERING ARM I Install.  TIE ROD ASSEMBLY — Res  TIE ROD ASSEMBLIES — F	All Models  BEARINGS, SPACERS OR SEALS — All Models  PIVOT BRACKET — Remove and All Models  move and Install. Includes adjust toe-in. All Models — one side  Remove and Install. Includes adjust toe-in. All Models — both sides  e and Install. All Models — one side both sides	1.2 .3 .4 .8
1-25 1-26 1-27 1-28	CENTER STEERING ARM I Remove and Install.  CENTER STEERING ARM I Install.  TIE ROD ASSEMBLY — Res	All Models  BEARINGS, SPACERS OR SEALS — All Models  PIVOT BRACKET — Remove and All Models  move and Install. Includes adjust toe-in. All Models — one side  Remove and Install. Includes adjust toe-in. All Models — both sides  e and Install. All Models — one side both sides	1.23483
1-25 1-26 1-27 1-28 1-29	CENTER STEERING ARM I Remove and Install.  CENTER STEERING ARM I Install.  TIE ROD ASSEMBLY — Res  TIE ROD ASSEMBLIES — F	All Models  BEARINGS, SPACERS OR SEALS — All Models  PIVOT BRACKET — Remove and All Models  move and Install. Includes adjust toe-in. All Models — one side  Remove and Install. Includes adjust toe-in. All Models — both sides  e and Install. All Models — one side both sides  Remove and Install. All Models — one side	1.2 .3 .4 .8
1-25 1-26 1-27 1-28 1-29	CENTER STEERING ARM I Remove and Install.  CENTER STEERING ARM I Install.  TIE ROD ASSEMBLY — Res  TIE ROD ASSEMBLIES — F	All Models  BEARINGS, SPACERS OR SEALS — All Models  PIVOT BRACKET — Remove and All Models  move and Install. Includes adjust toe-in. All Models — one side  Remove and Install. Includes adjust toe-in. All Models — both sides  e and Install. All Models — one side both sides	.3 .8 .3
1-25 1-26 1-27 1-28 1-29	CENTER STEERING ARM I Remove and Install.  CENTER STEERING ARM I Install.  TIE ROD ASSEMBLY — Ref TIE ROD ASSEMBLIES — F TIE ROD CLAMP — Remove TIE ROD END (INNER) — R	All Models  BEARINGS, SPACERS OR SEALS — All Models  PIVOT BRACKET — Remove and All Models  move and Install. Includes adjust toe-in. All Models — one side  Remove and Install. Includes adjust toe-in. All Models — both sides  te and Install. All Models — one side both sides  Remove and Install. All Models — one side both sides	.3 .8 .3
1-25 1-26 1-27 1-28 1-29	CENTER STEERING ARM I Remove and Install.  CENTER STEERING ARM I Install.  TIE ROD ASSEMBLY — Ref TIE ROD ASSEMBLIES — F TIE ROD CLAMP — Remove TIE ROD END (INNER) — R	All Models  BEARINGS, SPACERS OR SEALS — All Models  PIVOT BRACKET — Remove and All Models  move and Install. Includes adjust toe-in. All Models — one side  Remove and Install. Includes adjust toe-in. All Models — both sides  e and Install. All Models — one side both sides  Remove and Install. All Models — one side both sides  Remove and Install. All Models — one side both sides	.3
1-25 1-26 1-27 1-28 1-29	CENTER STEERING ARM I Remove and Install.  CENTER STEERING ARM I Install.  TIE ROD ASSEMBLY — Ref TIE ROD ASSEMBLIES — F TIE ROD CLAMP — Remove TIE ROD END (INNER) — R	All Models  BEARINGS, SPACERS OR SEALS — All Models  PIVOT BRACKET — Remove and All Models  move and Install. Includes adjust toe-in. All Models — one side  Remove and Install. Includes adjust toe-in. All Models — both sides  te and Install. All Models — one side both sides  Remove and Install. All Models — one side both sides	.3 .8 .3

4		
OPERATION	DESCRIPTION	TIME PRICE
	FRONT SUSPENSION—Continued	
1-33	DRAG LINK ASSEMBLY — Remove and Install. — All Models	.8
1-34	DRAG LINK DUST COVER — Remove and Install.  All Models	.3
1-35	DRAG LINK BEARING AND/OR SPRING — Remove and Install.  All Models — one end both ends	.4 .7
1-36	DRAG LINK — ADJUST. — All Models	.5
	ALIGNMENT	
1-37	CASTER CAMBER AND TOE-IN — ADJUST. — All Models	13
1-38	CASTER CAMBER AND TOE-IN — CHECK. — All Models	.5
1-39	TOE-IN — ADJUST ONLY. — All Models	.6
	REAR AXLE	
2-1		
<i>2</i> -1	AXLE ASSEMBLY — Remove and Install complete unit. Includes bleeding brake lines. — All Models	3.7
2-2	<b>AXLE ASSEMBLY HOUSING</b> — <b>Remove and Install.</b> — Includes disassembly, inspection, reassembly and bleeding brake lines.  All Models	6.5
2-3	DIFFERENTIAL CARRIER AND GEAR SET ASSEMBLY OR HOUSING GASKET — Remove and Install. All Models	2.2
2-4	DIFFERENTIAL CARRIER AND GEAR SET ASSEMBLY —  Overhaul. — Includes disassembly and replacing necessary parts and adjusting drive gear and pinion. — All Models	4.7
2-5	DIFFERENTIAL BEARINGS — Remove and Install.  All Models — both bearings	3.0
2-6	<b>DRIVE PINION BEARINGS</b> — <b>Remove and Install.</b> — Front and rear also includes adjustment of drive gear and pinion.  All Models	3.8
2-7	DRIVE GEAR AND PINION — Remove and Install. — Includes adjusting drive gear and pinion. — All Models	4.2
2-8	<b>DRIVE GEAR AND PINION</b> — <b>Adjust.</b> — Includes remove and install carrier. — All Models	3.7
2-9	DRIVE PINION OIL SEAL — Remove and Install.  All Models	1.1
2-10	DIFFERENTIAL CARRIER — Tighten to Axle Housing.  All Models	.4



#### REAR AXLE ASSEMBLY

- Drive shaft nut
- Drive shaft nut washer
- Drive shaft key
- Adjusting cap bolt nut
  Adjusting cap lockwashers
- 6. Brake backing plate
- 7. Adjusting cap bolt
- Wheel bearing cup 8.
- Wheel bearing cone 9.
- Axle housing 10.
- Spring mounting pad 11.
- Carrier gasket 12.
- 13. Carrier stud lockwasher
- Carrier to housing stud nut 14.
- 15. Carrier stud
- Carrier to cap assembly 16.
- Differential case bottom half 17. Rear pinion bearing cup

19.

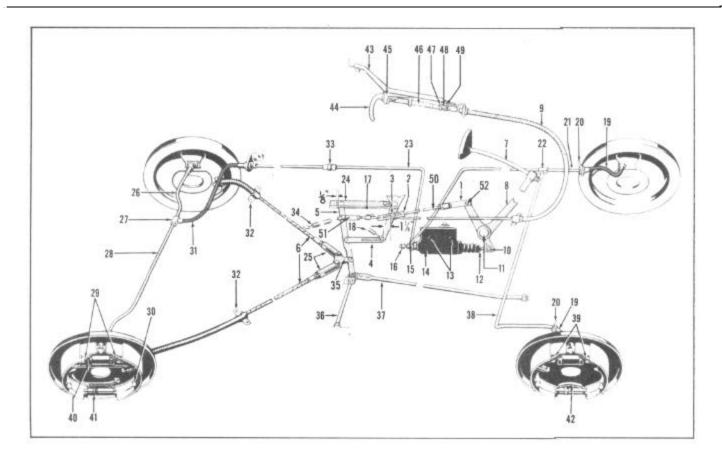
- 18. Drive pinion
- Pinion bearing spacer 20.
- Front pinion bearing cup 21.
- 22. 23. Pinion oil seal
- Axle companion flange
- 24. Axle companion flange nut
- Axle companion flange washer
- Drive pinion oil washer 26.
- 27. Front pinion bearing cone 28.
- Rear pinion bearing cone 29. Rear pinion bearing shim
- Pinion shaft locating screw 30.
- 31 Pinion assembly

- Pinion bushing
- 33. Bearing cup
- 34. Bearing cone
- 35. Drive shaft thrust spacer
- 36. Drive shaft nut cotter
- 37.
- Bearing adjusting cap
  Bearing adjusting cap oil seal 38.
- 39. Bearing adjusting cap shims
- 40. Bearing grease hole plug
- Drive shaft oil seal assembly 41.
- 42. Drive shaft
- 43. Axle housing stabilizer bracket
- 44. Axle housing vent assembly
- 45. Differential pinion thrust washer
- 46. Drive shaft thrust button
- 47. Differential gear
- Differential gear thrust washer 48.
- 49. Drive gear bolt
- 50. Drive gear bolt lockwasher
- 51. Drive gear
- 52. Pinion shaft
- 53. Case screw lockwasher
- 54. Case screw
- 55. Case upper half
- 56. Housing cover
- Housing cover drain plug 57.
- 58. Differential bearing adjusting cap
- 59. Bearing adjusting nut cotter
- 60. Bearing adjusting nut lock
- Bearing adjusting nut 61.
- 62. Bearing adjusting cap screw

OPERATION	DESCRIPTION	TIME PRICE
	REAR AXLE—Continu	ed
2-11	DIFFERENTIAL CARRIER HOUSING — Remove and In When removed from car. — Includes removing all parts a installing in a new housing. — All Models	
2-12	<b>DIFFERENTIAL ASSEMBLY OVERHAUL</b> — When rem car. — Includes replacing any case, gears, pinions, pinion thrust washers or spacer block. — All Models	
2-13	DIFFERENTIAL CARRIER COMPANION FLANGE — I Install. All Models	Remove and .6
2-14	<b>AXLE SHAFT</b> — <b>Remove and Install</b> — ( <b>one</b> ). — Includes reshaft and repacking bearing. — All Models	eplacing <b>1.1</b>
2-15	AXLE SHAFT — Adjust end play.  All Models — one side both sides	.6 1.1
2-16	<b>AXLE SHAFT THRUST BUTTON</b> — <b>Remove and Install</b> With shaft removed. — All Models	(one). — .4
2-17	AXLE SHAFT (INNER) OIL SEAL — Remove and Install. — Includes repacking bearing.  All Models — one side both sides	1.2 2.0
2-18	AXLE SHAFT (OUTER) OIL SEAL — Remove and Instal Includes cleaning brakes and drums.  All Models — one side both sides	
2-19	WHEEL BEARINGS — Remove and Install. — Includes clebearings.  All Models — one side both sides	2.0
	WHEELS AND TIRE	
3-1	WHEELS AND TIRES — Remove and Install — (Five) . — to conserve tire life. — All Models	
3-2	TIRE — Remove and Install.  All Models — (One)  (Two)	.4 .7
3-3	WHEELS AND TIRES — Remove and Install (Five). — Read and balance two front Wheel Assemblies. — All Models	
3-4	<b>ALIGN FRONT WHEELS.</b> — Includes caster, camber, toe-in steering gear on high point. — All Models	_
3-5	FRONT WHEEL BEARINGS — Adjust Both. — All Model	
3-6	FRONT WHEEL BEARINGS — Remove and Install. Includes cleaning, repacking and adjusting.	.4
	All Models — one wheel both wheels	.6 1.0

OPERATION	N DESCRIPTION	TIME	PRICI
	WHEELS AND TIRES—Continued		
3-7	FRONT WHEEL BEARING GREASE RETAINER — Remove and		
-	install. All Models — one wheel	.3	
	two wheels	.6	
3-8	WHEELS — BALANCE. — Includes remove and Install and Balance		
	statically and dynamically. — All Models — both front wheels	.9	
3-9	HUB AND BRAKE DRUM (FRONT) — Remove and Install. —		
	Includes clean and repack and adjust bearings.		
	All Models — one wheel	.6	
	both wheels	1.0	
3-10	<b>HUB AND BRAKE DRUM (REAR)</b> — <b>Remove and Install.</b>		
	All Models — one wheel	.4	
	both wheels	.7	
3-11	<b>HUB KEY (REAR)</b> — <b>Remove and Install.</b>		
	All Models — one	.4	
	two	.7	
3-12	FRONT WHEEL GREASE RETAINER — Remove and Install.		
	All Models — add	.2	
	BRAKES		
4-1	<b>BRAKES</b> — <b>INSPECTION.</b> — Includes remove and Install Wheels and inspect condition of lining and any other parts. — Note if a reline or adjustment is ordered cancel this operation charge.		
	All Models — one wheel	3	
	four wheels	9	
		•/	
4-2	<b>BRAKES—MINOR ADJUSTMENT</b> — Adjust shoes and brake cables, check anchor pin nuts for tightness, adjust brake pedal and check fluid		
	level in master cylinder. — All Models	1.0	
4-3	BRAKES—MAJOR ADJUSTMENT—Includes remove drums, check lining,		
	clean shoes and backing plate, grease and adjust cables, adjust anchor pins, brake pedal and refill master cylinder. — All Models	2.0	
4-4	BLEED BRAKE LINES. — All Models	.7	
4-5	<b>FLUSH BRAKE SYSTEM.</b> — Includes flush with alcohol and refill system with brake fluid and bleed lines. — All Models	.9	
4-6	<b>BRAKES</b> — <b>RELINE AND ADJUST</b> . — Includes removing drums, cleaning backing plates, lubriplate shoe contact points, install new shoes and lining, repack and adjust front wheel bearings and refill master cylinder. Time		
	allowance includes .9 for relining shoes.	2.5	
	All Models — (four wheels)	3.7	
	If necessary to bleed lines add	.7	

**DESCRIPTION OPERATION** 



#### HYDRAULIC BRAKE ARRANGEMENT

- Brake pedal pull rod clevis
- Brake pull rod slide link 2.
- Brake pull rod slide link retainer pin
- Play link assembly
- Hand brake cable lever
- Rear brake cable
- Brake pedal rod assembly 7.
- Brake pedal lever assembly
- Hand brake cable assembly
- Brake pedal to master cylinder clevis 10.
- 11. Brake pedal lever shaft
- Brake pedal to master cylinder push rod 12.
- 13. Master cylinder attaching bolts
- Master cylinder assembly 14.
- 15. Master cylinder outlet fitting
- Master cylinder stop light switch 16.
- 17. Pedal pull rod to guide hanger return spring
- Brake control lever to guide return spring 18.
- 19. Front brake hose assembly
- 20. Front brake hose to frame assembly
- 21. Frame tee to left front hose tube assembly
- 22. Front frame tee
- 23. Master cylinder to frame connector tube
- Hand brake cable lever guide plate assembly
- Rear brake cable clevis
- 26. Rear axle tee to left rear wheel tube

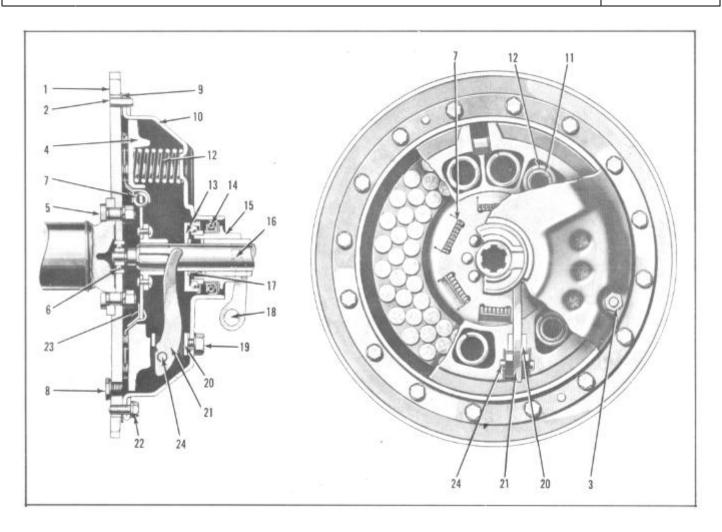
- 27. Rear axle brake tee
- 28. Rear axle tee to right rear wheel tube
- 29. Brake shoe to anchor pin spring - rear
- 30. Brake shoe hold down spring and retainer
- 31. Rear brake hose assembly
- Rear brake cable support bracket 32.
- 33. Brake tube connector
- Hand brake cable lever return spring 34.
- 35. Hand brake cable lever toggle assembly
- 36.
- 37.
- Cable lever pivot plate slide brace Cable lever pivot plate and brace assembly Frame tee to right front hose tube assembly 38.
- 39. Brake shoe to anchor pin spring - front
- 40. Brake cable lever strut
- 41. Brake adjusting screw
- Brake adjusting screw spring 42.
- 43. Hand brake mounting bracket assembly
- Hand brake lever grip 44.
- 45. Hand brake ratchet rod housing
- Hand brake ratchet rod 46.
- 47. Hand brake inner ratchet rod stabilizer
- Hand brake ratchet rod stabilizer spring 48.
- 49. Hand brake outer ratchet rod stabilizer
- Brake pedal lever pull rod 50. 51. Hand brake cable clevis
- 52. Pedal link clevis.

OPERATION	DESCRIPTION	TIME	PRICE
	BRAKES—Continued		
4-7	BRAKES — RELINE AND ADJUST TWO (FRONT OR REAR). — Includes remove and install drums, clean backing plates, lubriplate shoe contact points, install new shoes and linings, repack and adjust front wheel bearings and refill master cylinder. Time allowance includes .5 for relining shoes.  All Models (two wheels) If necessary to bleed brakes add	1.9	
4-8	BRAKE BACKING PLATE — Remove and Install. — Includes removing and installing necessary parts, adjust brakes and bleed lines.  All Models — one front one rear	1.6 1.9	
4-9	<b>BRAKE DRUMS</b> — <b>Remove and Install.</b> Includes packing wheel bearings and adjusting.		
	All Models — one front one rear	.6 .4	
4-10	BRAKE DRUMS — REFACE — When removed from car. All Models — one two four	.4 .7 1.3	
	WHEEL CYLINDERS		
4-11	WHEEL CYLINDER — Remove and Install. — Includes bleeding lines and adjusting brakes.		
	All Models — one front two front one rear two rear all four	1.3 1.8 1.4 1.9 3.0	
4-12	WHEEL CYLINDER — Recondition (One). — Includes remove, hone, replace necessary parts, install, bleed lines and adjust brakes.  All Models — one front one rear  When removed from car	.4 .5 .5	
4-13	WHEEL CYLINDER — BLEEDER SCREW — Remove and Install. All Models	.2	
	MASTER CYLINDER		
4-14	MASTER CYLINDER — OVERHAUL. — Includes remove and install, honing cylinder, replace necessary parts and bleed lines. — All Models	1.5	
4-15	MASTER CYLINDER — OVERHAUL — When removed from car. All Models	.6	
4-16	MASTER CYLINDER OUTLET FITTING AND/OR GASKET — Remove and Install.		
	All Models If necessary to bleed brakes — add	.4 .7	
4-17	MASTER CYLINDER STOP LIGHT SWITCH — Remove and Install.  All Models  If necessary to bleed brakes — add	.3	

10			
OPERATION	I DESCRIPTION	TIME	PRICE
	BRAKES—Continued		
4.10	MAGTED GW INDED EN LED GAD OD GAGWET. D		
4-18	MASTER CYLINDER FILLER CAP OR GASKET — Remove and Install.  All Models	.2	
	BRAKE HOSE AND TUBES		
4-19	BRAKE HOSE — Remove and Install. — Includes bleeding lines.		
	All Models — one front one rear	.9 .8	
4-20	BRAKE TUBES — Remove and Install. — All. Includes bleeding lines.		
4-20	All Models	1.8	
4-21	BRAKE TUBE — REAR AXLE TEE TO RIGHT REAR CYLINDER.		
	— <b>Remove and Install.</b> — Includes bleeding lines.  All Models	.9	
4-22	BRAKE TUBE — REAR AXLE TEE TO LEFT REAR CYLINDER.		
<b>4-</b> 22	— Remove and Install. — Includes bleeding lines.		
	All Models	.8	
4-23	BRAKE TUBE MASTER CYLINDER TO FRAME TEE — Remove and Install. — Includes bleeding lines. — All Models	.9	
4-24	BRAKE TUBE — FRAME TEE TO FRONT WHEEL (RIGHT OR		
	LEFT) — Remove and Install. — Includes bleeding lines.	0	
	All Models	.9	
4-25	FRAME TEE — Remove and Install. — Includes bleeding lines.  All Models	.9	
4-26	REAR AXLE TEE — Remove and Install. — Includes bleeding lines.		
4-20	All Models	.9	
	BRAKE CABLES AND LINKAGE		
4-27	BRAKE CABLES — Remove and Install. — Includes cleaning, free-up		
	and lubricate. All Models — one two	.9 1.5	
4-28	BRAKE PEDAL LEVER AND/OR SUPPORT BRACKET —		
4-20	Remove and Install. — All Models	.5	
4-29	BRAKES — MECHANICAL FOLLOW-UP PULL ROD — Remove		
	and Install. — All Models	.4	
4-30	BRAKES MECHANICAL FOLLOW UP — Adjustment. — All Models	.3	
4-31	BRAKE — PULL BACK SPRINGS — Any One — Remove and	•	
	Install. All Models	.2	
4-32	<b>BRAKE PEDAL ROD</b> — <b>Remove and Install.</b> — All Models	.4	
4-33	BRAKE PEDAL TO MASTER CYLINDER PUSH ROD — Remove and Install.  All Models	.5 .	
	HILL TIDWIII		

#### **BRAKES—Continued**

	DIVAREO—COntinueu	
4-34	BRAKE PEDAL LEVER, SHAFT AND HOUSING ASSEMBLY — Remove and Install.	
	All Models	1.0
	To rebush add to operation 4-34	.3
	HANDBRAKE	
4-35	HAND BRAKE CABLE LEVER TOGGLE — Remove and Install.	
	All Models	.6
4-36	HAND BRAKE CABLE — Adjust. — All Models	.3
4-37	HAND BRAKE LEVER — Remove and Install. — All Models	.4
4-38	HAND BRAKE RATCHET STABILIZER SPRINGS — Remove and	
4-30	Install. All Models	.3
4-39	HAND BRAKE RATCHET ASSEMBLY — Remove, free-up and	
	Install. All Models	.5
4-40	HAND BRAKE COMPLETE ASSEMBLY — Remove and Install.	
	All Models	1.0
	CLUTCH	
5-1	DRAIN AND REFILL. — All Standard Models	.3
	With Drive-Master	.4
5-2	DRAIN, FLUSH AND REFILL. — All Standard Models	.5
	With Drive-Master	.6
5-3	<b>CLUTCH ASSEMBLY</b> — <b>Remove and Install.</b> — Includes replacing cover or driving plate.	gasket
	All Models — Standard Transmission	5.0
	With Drive-Master	5.2
	With Supermatic	5.4
5.4	CLUTCH PILOT BEARING — Remove and Install. — Add to	
	operation 5-3. — All Models	.3
5-5	CLUTCH ASSEMBLY — OVERHAUL. — Includes remove and Install traclutch and replacing pressure plate, fingers engaging springs, clutch coverages a disastraction.	
	necessary adjustments.  All Models — Standard Transmission	5.6
	With Drive-Master	6.2
	With Supermatic	6.4
5-6	CLUTCH ASSEMBLY — OVERHAUL, WHEN REMOVED FROM	
	CAR. All Models	.6
5-7	CLUTCH PEDAL — ADJUST. — All Models	.3
5-8	CLUTCH HOUSING — Remove and Install. — Includes remove and instal transmission.	11
	All Models — Standard Transmission	4.6
	With Drive-Master	4.8
	With Over-Drive	5.0
	With Supermatic	5.2



#### 10" CLUTCH ASSEMBLY

- 1. Flywheel
- 2. Flywheel dowel pin
- 3. Clutch cover driving lug
- 4. Clutch driven disc
- 5. Flywheel bolt
- 6. Clutch pilot bearing
- 7. Clutch driven disc spring
- 8. Clutch filler plug
- 9. Clutch cover gasket
- 10. Clutch cover
- 11. Clutch engaging spring, inner
- 12. Clutch engaging spring, outer

- 13. Clutch throwout bearing
- 14. Throwout bearing oil seal
- 15. Clutch collar
- 16. Main drive shaft
- 17. Throwout bearing grease retainer
- 18. Clutch shifter yoke
- 19. Throwout finger retainer nut
- 20. Throwout finger retainer
- 21. Throwout finger
- 22. Clutch cover bolt
- 23. Clutch driven disc
- 24. Throwout finger pin

6.8

7.1

**7.8** 

8.0

2.5

3.3

	CLUTCH—Continued		
5-9	<b>CLUTCH HOUSING — REBUSH — HOUSING REMOVED</b> . — If necessary, add to operation 5-8. — All Models	.5	
5-10	CLUTCH SHIFTER YOKE, SHIFTER SHAFT AND/OR COUPLING — Remove and Install and Rebush — Housing Removed.  All Models	.7	
5-11	CLUTCH CROSSHAFT AND COUPLING LEVER, FELT SEAL, RETAINER OR RUBBER BUSHING — Remove and Install.  All Models	.5	
5-12	CLUTCH PEDAL LEVER SHAFT — Remove and Install.  All Models	1.0	
5-13	CLUTCH PEDAL LEVER SHAFT HOUSING ASSEMBLY — Rebush — Includes Remove and Install. — All Models	1.3	
5-14	CLUTCH THROWOUT BEARING, COLLAR OR OIL SEAL — Remove and Install. — Includes remove and install transmission.  All Models — Standard Transmission  With Drive-Master  With Overdrive  With Super-Matic	4.4 4.6 4.8 5.0	
	TRANSMISSION		
6-1	TRANSMISSION OPENING FLOOR COVER — Remove and Install.  All Models	1.1	
6-2	TRANSMISSION CASE COVER AND/OR GASKET — Remove and Install. Standard Transmission — All Models	1.3	
6-3	TRANSMISSION ASSEMBLY — Remove and Install. — All Models. Standard Transmission With Drive-Master With Overdrive With Super-Matic	4.3 4.6 4.8 5.0	
6.4	TRANSMISSION ASSEMBLY — Overhaul or Replace Case. — Includes Remove and Install, Disassembly — Replace Necessary Parts — Reassembling — All Models		

**Standard Transmission** 

TRANSMISSION OVERHAUL — When Removed from Car. —

Includes Disassembly — Replace Necessary Parts and Reassemble. —

With Drive-Master

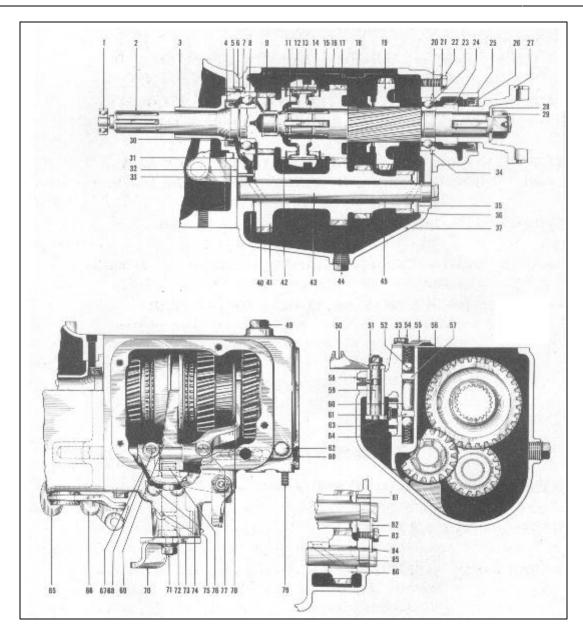
With Super-Matic

With Overdrive

All Models. Standard Transmission

With Overdrive

6.5



- 1. Pilot Bearing
- 2. Main Drive Gear
- 3. Bearing Retainer
- 4. Oil Seal
- 5. Locating Pin
- 6. Clutch Housing
- 7. Washer Pin
- 8. Drive Gear Bearing
- 9. Shaft Bearing Rollers
- 11. Hub Lock Ring
- 12. Synch. Sleeve Hub
- 13. Synch. Spring
- 14. Synch. Shift Plate
- 15. Synch. Shift Sleeve
- 16. Synch. Ring
- 17. Shaft Inter. Gear
- 18. Main Shaft
- 19. I. & R Gear
- 20. Gear Housing Gasket
- 21. Gear Housing Washer

- 22. Gear Housing Bolts
- 23. Shaft Rear Bearing
- 24. Speed. Gear
- 25. Gear Housing
- 26. Gear Housing Seal
- 27. Comp. Flange
- 28. Flange Washer
- 29. Flange Nut
- 30. Gear Lock Ring
- 31. Retainer Gasket
- 32. Case Gasket
- 33. C. S. Washer Pin
- 34. M. S. Snap Ring
- 35. Thrust Washer
- 36. Steel Washer 37. Trans. Case
- 40. C. S. Bushing Front
- 41. C. S. Gear Cluster
- 42. Main Drive Gear
- 43. Countershaft

- 44. Drain Plug
- 45. C. S. Bushing Rear
- 49. Filler Plug
- 50. Sel. Lever Outer
- 51. Sel. Shaft Nut
- 52. Rail Lock Ball
- 53. Lock Spring-L&R
- 54. Cover Screw
- 55. Trans. Cover
- 56. Cover Gasket
- 57. L&R Rail
- 58. Bushing Set Screw
- 59. Shift Sel. Lever
- 60. Rail Interlock
- 61. Sel. Shaft Bushing
- 62. Breather
- 63. H & I. Shift Rail
- 64. H & I. Ball Spring
- 65. Throwout Lever
- 66. H & I. Rail Stop Screw

- 67. L & R Shifter
- 68. L & R Set Screw
- 69. H & I Shift Fork
- 70. Shift Lever Outer
- 71. Shift Shaft Nut
- 72. Shift Shaft Seal
- 73. Shift Shaft
- 74. Shift Shaft Pin
- 75. Shifter Bracket Screw
- 76. Shift Lever Inner
- 77. L & R Set Screw
- 78. L & R Fork
- 79. Case Stud
- 80. Expansion Plug
- 81. Washer Pin Rear
- 82. C. S. Lock Plate
- 83. Lock Plate Screw
- 84. Idler Gear Bushing
- 85. Idler Gear Shaft
- 86. Reverse Idler Gear

#### TRANSMISSON—Continued

6-6	TRANSMISSION COMPANION FLANGE — Remove and Install. — Transmission in Car. — All Models	.8 _	
6-7	TRANSMISSION SPEEDOMETER HOUSING — Remove and Install.  All Models	1.0 _	
6-8	MAINSHAFT — Remove and Install. — Includes any Gear On Shaft. — Includes Synchronizer Assembly or Rear Bearing. — All Models.  Standard Transmission  With Drive-Master  With Overdrive  With Super-Matic	6.3 - 6.5 - 6.7 - 6.9 -	
6-9	MAINSHAFT OIL SEAL — Remove and Install.  All Models — Transmission in Car  Transmission Removed	1.1 _ .4 _	
6-10	MAINSHAFT REAR BEARING — Remove and Install.  All Models Transmission in Car.  Standard Transmission  With Overdrive	1.2 1.5	
6-11	MAIN DRIVE GEAR — Remove and Install. — Includes Remove and Install Transmission and Replace any Parts Including Main Drive Gear Bearing. — All Models. Standard Transmission With Drive-Master With Overdrive With Super-Matic	6.6 - 6.9 - 7.1 - 7.3 -	
6-12	TRANSMISSION MAIN DRIVE GEAR STOP RING — Remove and Install. — Add to operation 6-11. — All Models	.5 _	
6-13	TRANSMISSION MAIN DRIVE GEAR BEARING, RETAINER AND OIL SEAL — Remove and Install. — Includes Remove and Install Transmission. — All Models.  Standard Transmission With Drive-Master With Overdrive With Super-Matic	4.8 _ 5.1 _ 5.3 _ 5.5 _	
	COUNTERSHAFT AND SHIFT RAILS		
6-14	COUNTERSHAFT GEAR CLUSTER AND/OR COUNTERSHAFT  — Remove and Install. — Includes Remove and Install Transmission — Replace Countershaft and/or Thrust Washers. — All Models.  Standard Transmission  With Drive-Master  With Overdrive  With Super-Matic	7.1	

16			
OPERATION	DESCRIPTION DESCRIPTION	TIME	PRICE
	TRANMISSION—Continued		
6-15	COUNTERSHAFT BUSHINGS - Remove and Install Includes Line Ream and		
	Remove and Install Transmission.		
	All Models - Standard Transmission	6.8	
	With Drive-Master	7.1	
	With Overdrive	7.3	
	With Super-Matic	7.5	
6-16	<b>REVERSE IDLER GEAR, SHAFT OR BUSHINGS - Remove and Install</b> Includes		
	Remove and Install Transmission.		
	All Models - Standard Transmission	6.8	
	With Drive-Master	7.1	
	With Overdrive	7.3	
	With Super-Matic	7.5	
6-17	LOW AND REVERSE SHIFT RAIL AND/OR FORK - Remove and		
	<b>Install.</b> - Unnecessary to Remove Transmission.		
	All Models - Stanadard Transmission	2.9	
	With Drive-Master	3.1	
	With Overdrive - Includes Remove and		
	Install Transmission and Overdrive	6.3	
6-18	TRANSMISSION INTERLOCK PLUNGER - Remove and Install.		
	Includes Remove and Install floor boards.		
	All Models - Standard Transmission	3.0	
6-19	HIGH AND SECOND SHIFT RAIL AND FORK OR LOCK BALL		
	AND SPRING - Remove and Install Includes Remove and		
	Install Transmission.		
	All Models - Standard Transmission	4.7	
	With Drive-Master	5.0	
	With Overdrive	5.2	
	With Super-Matic	5.4	
6-20	TRANSMISSION SHIFT LEVER INNER OR OUTER OR SHIFT		
	SHAFT - Remove and Install Unnecessary to remove Transmission.		
	All Models - Standard Transmission	3.3	
	With Drive-Master	3.5	
	With Overdrive	3.7	
	With Super-Matic	3.6	
6-21	TRANSMISSION SHIFT SELECTOR LEVER (OUTER AND INNER)		
	AND BUSHING AND SET SCREW - Remove and Install.		
	All Models - Standard Transmission	4.8	
	With Drive-Master	5.1	
	With Overdrive	5.3	
	With Super-Matic	5.5	
	DEMOTE CONTROL		
	REMOTE CONTROL		
6-22	REMOTE CONTROL HAND SHIFT LEVER AND TUBE AND		
	STEERING JACKET TUBE - Remove and Install.		
	All Models - without direction indicator	2.2	
	with direction indicator add	.4	
6-23	REMOTE CONTROL, HAND SHIFT LEVER TUBE AND ROD		
	ASSEMBLY - Remove and Install.		
	All Models - without direction indicator	1.7	
	with direction indicator add	.4	
6-24	REMOTE CONTROL, HAND SHIFT LEVER - Remove and Install.		
	All Models	.4	
6-25	REMOTE CONTROL, HAND SHIFT LEVER AND FULCUM		
J <b>2</b> 0	BRACKET - Remove and Install.		
	All Models - without direction indicator	1.9	
	with direction indicator add	.4	
	with direction indicator add	•	

2.7 \_\_\_\_\_

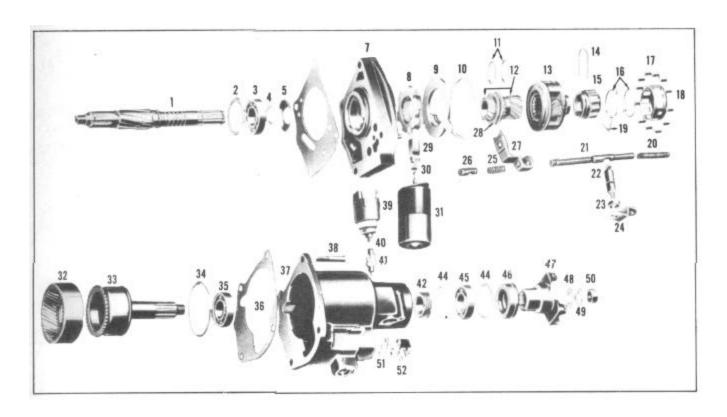
OPERATION	I DESCRIPTION	TIME PRICI
	TRANSMISSION — Continued	
6-26	EMOTE CONTROL TUBE (UPPER) BRACKET — Remove and Install. All Models — without direction indicator with direction indicator add	.7 .4
6-27	REMOTE CONTROL TUBE LOWER BRACKET. — Remove and Install. All Models	2.3
6-28	REMOTE CONTROL PUSH ROD — Remove and Install.  All Models	1.4
6-29	REMOTE CONTROL CABLE, CASING AND BRACKET ASSEMBLY — Remove and Install. — All Models with drive master	.8
6-30	REMOTE CONTROL BELL CRANK AND BUSHING ASSEMBLY - Remove and Install. — All Models	.6
6-31	REMOTE CONTROL BELL CRANK TO TRANSMISSION ROD AND GROMMET — Remove and Install. — All Models	.2
	OVERDRIVE	
7-1	TRANSMISSION AND OVERDRIVE ASSEMBLY — Remove and Install. All Models with drive-master add	5.1
7-2	TRANSMISSION AND OVERDRIVE—OVERHAUL (BOTH UNITS). Includes removing and replacing any necessary parts in both units. All Models with drive-master add	7.8
7-3	OVERDRIVE HOUSING AND/OR REAR BEARING — Remove and Install. — Includes removing and installing solenoid, governor switch and shift rail switch on new housing. — All Models	1.4
7-4	<b>OVERDRIVE ASSEMBLY</b> — <b>OVERHAUL.</b> — Includes disassembly and replacement of any parts — except the overdrive adaptor, bearing and transmission mainshaft. — All Models — Overdrive in Car	2.9
7-5	OVERDRIVE ASSEMBLY — Remove and Install. — Includes remove and install transmission, removing overdrive from transmission and installing a new overdrive All Models with drive-master add	7.2 .3
7-6	OVERDRIVE WIRING HARNESS — Remove and Install.  All Models  with drive-master	1.0 1.6
7-7	OVERDRIVE REAR OIL SEAL — Remove and Install.  All Models — Overdrive in car	.9
7-8	MAINSHAFT SPEEDOMETER DRIVE GEAR — Remove and Install.  All Models — Overdrive in car	2.1

All Models — Overdrive in car

Overdrive removed

SHIFT RAIL AND/OR FORK — Remove and Install.

7-9



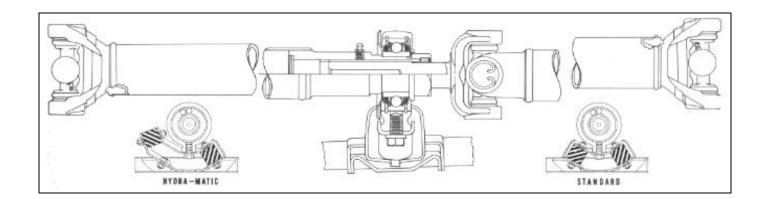
#### **OVERDRIVE ASSEMBLY**

1	T : : 1 G	27	C1 : C C 1
1.	Transmission mainshaft	27.	Shift fork
2.	Transmission mainshaft snap ring	28.	Stationary gear collar
3.	Transmission mainshaft bearing	29.	Stationary gear pawl
4.	Transmission snap ring	30.	Stationary gear pawl oil seal
5.	Bearing oil baffle	31.	Solenoid assembly
6.	Overdrive to transmission case gasket	32.	Overdrive mainshaft ring gear
7.	Overdrive housing adapter	33.	Overdrive mainshaft
8.	Stationary gear plate & balk ring	34.	Snap ring
9.	Stationary gear plate cover	35.	Overdrive mainshaft bearing - front
10.	Cover plate snap ring	36.	Overdrive housing gasket
11.	Stationary gear snap ring	37.	Overdrive housing
12.	Stationary cage assembly	38.	Overdrive housing to adapter bolt
13.	Pinion cage assembly	39.	Governor switch
14.	Pinion cage retainer clip	40.	Lock ring
15.	Cam assembly	41.	Governor pinion
16.	Cam roller retainer spring	42.	Speedometer drive gear
17.	Cam roller	44.	Shaft bearing snap ring
18.	Cam roller retainer	45.	Overdrive mainshaft bearing - rear
19.	Cam retainer clip	46.	Overdrive mainshaft oil seal
20.	Shift rail retractor spring	47.	Companion flange
21.	Shift rail	48.	Mainshaft plain washer
22.	Control shaft	49.	Mainshaft lockwasher
23.	Control shaft oil seal	50.	Mainshaft nut
24.	Control lever	51.	Control switch gasket
25.	Shift rail sleeve spring	52.	Control switch
26.	Shift rail sleeve		

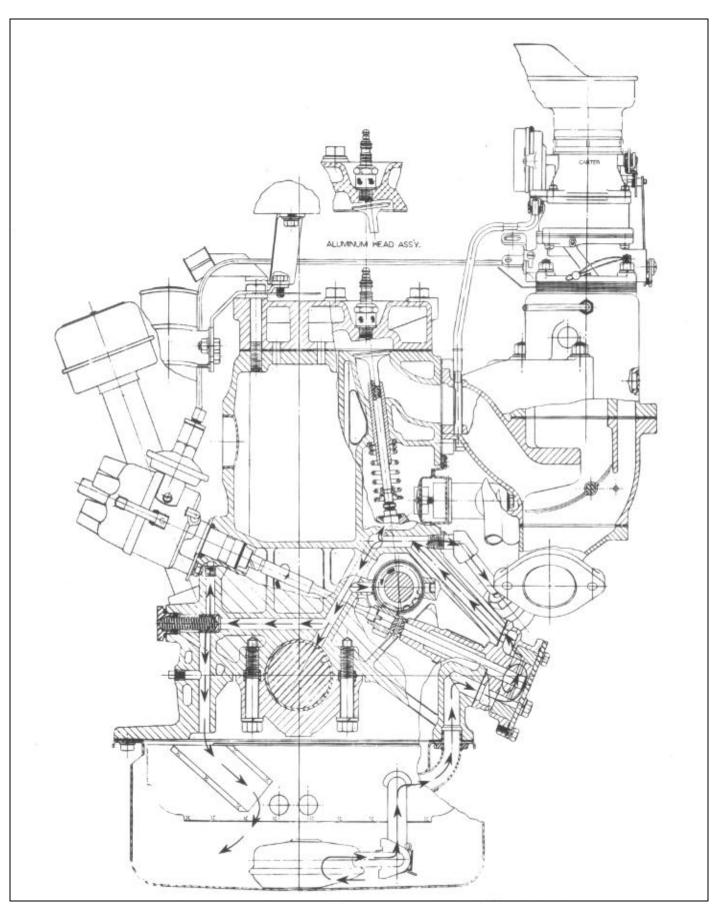
OPERATION	DESCRIPTION	TIME	PRICE
<b>7</b> 10	OVERDRIVE—Continued		
7-10	SOLENOID — Remove and Install. — All Models	.4	
7.11	SOLENOID STATIONARY GEAR PAWL — Remove and Install.	2.0	
	All Models — Overdrive in car Overdrive removed	2.9 .7	
7-12	GOVERNOR SWITCH — Remove and Install. — All Models	.4	
7-13	THROTTLE SWITCH — Remove and Install.  All Models — Includes Adjustment	.3	
7-14	SOLENOID WIRING HARNESS ASSEMBLY — Remove and Install.		
	All Models	.6	
7-15	CONTROL CABLE — Remove and Install and Adjust. — All Models	.6	<u>-</u>
7-16	SPEEDOMETER PINION OR SLEEVE — Remove and Install.  All Models	.5	
7-17	ADAPTOR TO TRANSMISSION GASKET — Remove and Install. Includes removing and installing transmission and Overdrive. All Models With Drive-Master Add	6.2	
7-18	ADAPTOR TO OVERDRIVE HOUSING GASKET — Remove and Install. All Models	2.5	
7-19	TRANSMISSION MAINSHAFT AND/OR MAINSHAFT REAR.  BEARING — Remove and Install. — All Models  With Drive-Master Add	7.0	
7-20	OVERDRIVE RELAY — Remove and Install. — All Models	.4	
7-21	SHIFT RAIL SWITCH Remove and Install. — All Models	.3	
7-22	OVERDRIVE HOUSING ADAPTOR — Remove and Install. — Includes remove and install transmission and overdrive assembly. All Models With Drive-Master Add	6.3	
7-23	STATIONARY GEAR AND/OR BALK RING — Remove and Install.  All Models — Overdrive in car	2.9	
	Overdrive removed	.7	
7-24	OVERDRIVE CONTROL SHAFT — Remove and Install.  All Models — Overdrive in car	2.3	
7-25	INTERLOCK PLUNGER — Remove and Install. — Includes remove and install		
	the overdrive unit.  All Models	5.6	
	With Drive-Master Add		
7-26	OVERDRIVE WIRING HARNESS CHECK. — All Models	.5	

#### **PROPELLER SHAFT**

8-1	PROPELLER SHAFT ASSEMBLY (FRONT) — Remove and Install. All Models	1.3	
8-2	PROPELLER SHAFT ASSEMBLY (REAR) — Remove and Install All Models	1.3	
8-3	PROPELLER SHAFTS AND THREE UNIVERSAL JOINTS ASSEMBLY — Remove and Install.  All Models	1.7	
84	PROPELLER SHAFT FRONT, INTERMEDIATE OR REAR UNIVERSAL JOINT — Remove and Install. All Models	1.0	
8-5	UNIVERSAL JOINTS (THREE) OVERHAUL — Includes remove and Install and replace necessary parts.  All Models	2.4	
8-6	PROPELLER SHAFT REAR SLEEVE YOKE — Remove and Install. 480-490-500 Models	.8	
8-7	PROPELLER SHAFT "U" BOLTS FRONT OR REAR — Remove and Install. All Models	1.0	
8-8	PROPELLER SHAFT "U" BOLTS — TIGHTEN. — All Models	.5	
8-9	PROPELLER SHAFT TRANSMISSION OR DIFFERENTIAL CARRIER COMPANION FLANGE — Remove and Install.  All Models	.6	
8-10	PROPELLER SHAFT COMPANION FLANGE (Rear end of Front Shaft) — Remove and Install. — 480-490-500 Models	.8	
8-11	PROPELLER SHAFT CENTER BEARING AND HOUSING ASSEMBLY — Remove and Install — All Models	1.1	

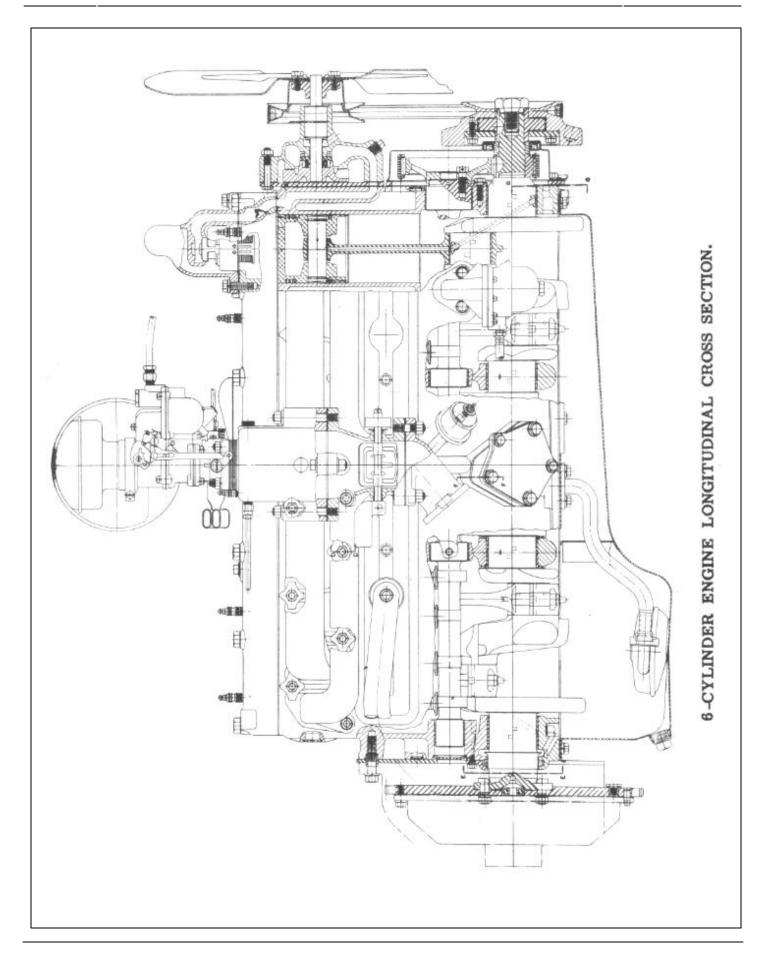


OPERATION	DESCRIPTION	TIME	PRICE
	PROPELLER SHAFT—Continued		
8-12	PROPELLER SHAFT CENTER BEARING — Remove and Install.  All Models	1.2	
8-13	PROPELLER SHAFT CENTER BEARING SUPPORT CUSHIONS (TWO) — Remove and Install. — All Models	.4	
8-14	PROPELLER SHAFT CENTER BEARING SUPPORT — Remove and Install. 480-490 Models only	.5	
8-15	PROPELLER SHAFT CENTER BEARING SUPPORT REAR CUSHION — Remove and Install. — 480-490 Models only	.7	
8-16	PROPELLER SHAFT SLIDING SLEEVE — Remove and Install.  "A" Models only	1.4	
	ENGINE		
9-1	ENGINE AND TRANSMISSION ASSEMBLY — Remove and Install.  All Models — 6 cyl. 8 cyl. With Drive-Master — Add With Overdrive — Add With Supermatic — Add	6.2 6.7 .8 .5 1.2	
9-2	ENGINE ASSEMBILY — Remove and Install. — Includes removing engine with transmission attached and remove and install — transmission, clutch, fuel and electrical equipment to new assembly and minor engine tune-up.  All Models — 6 cyl.  8 cyl.  With Drive-Master — Add With Overdrive — Add With Supermatic — Add	8.3 8.8 1.8 .5 2.2	
9.3	SKELETON ENGINE — Install includes removing old engine from car and remove and install all subassemb lies from old block to new and minor engine tune-up. Does not include reconditioning fuel or electrical systems.  All Models — 6 cyl.  8 cyl.  With Drive-Master — Add With Overdrive — Add With Supermatic — Add	15.8 16.4 1.8 .5 2.2	
9-4	CYLINDER BLOCK AND PISTON ASSEMBLY — Install. — Includes remove and install subassemblies from old to new block and refacing old/or new valves and seats, aligning rods and install piston and rod assemblies, reinstall new engine assembly and minor tune-up.  All Models — 6 cyl. 8 cyl. With Drive-Master — Add With Overdrive — Add With Supermatic — Add	21.2 23.2 1.8 .5 2.2	
9-5	<b>ENGINE</b> — <b>PAINT.</b> — Includes remove and install spark plugs and ignition wires. All Models Standard With Drive-Master	1.0 1.5	



6-CYLINDER OIL PRESSURE LUBRICATION DIAGRAM

OPERATION	DESCRIPTION	TIME	PRICE
	ENGINE—Continued		
9-6	ENGINE SUPPORT PLATE (FRONT) — Remove and Install.		
	All Models — 6 cyl.	3.6	
	8 cyl.	3.4	
9-7	ENGINE SUPPORT PLATE (REAR) — Remove and Install		
	All Models	5.5	
	With Drive-Master	.8	
	With Overdrive	.5	
	With Supermatic	1.2	
9-8	ENGINE MOUNTINGS (FRONT) — Remove and Install both.  All Models	1.0	
9-9	ENGINE MOUNTING (REAR) — Remove and Install.		
	All Standard Models	1.0	
	With Hydramatic (Two)	.6	
	CAMSHAFT, CONNECTING ROD AND MAIN BEARINGS		
9-10	<b>CAMSHAFT</b> — <b>Remove and Install.</b> — Includes remove and install cylinder head, adjusting tappets and setting valve timing.		
	All Models —6 cyl.	9.2	
	8 cyl.	9.8	
	With Drive-Master — Add	.8 _	
9-11	CAMSHAFT — EXPANSION PLUG AND /OR OIL GALLERY PLUG — Remove and Install.		
	All Models	5.6	
	With Drive-Master	.5 _	
9-12	CAMSHAFT BEARINGS —Remove and Install (using factory reamed bearings).		
	Includes removal and installation of engine.		
	All Models — 6 cyl.	11.9	
	8 cyl.	12.3	
	With Drive-Master	.8 _	
	With Overdrive	.5 _	
	With Supermatic	1.2	
9-13	CAMSHAFT BEARINGS — Remove and Install and line ream. — Includes remove and install engine.		
	All Models — 6 cyl.	15.4	
	8 cyl.	16.3	
	With Drive-Master — Add	.8	
	With Overdrive — Add	.5 _	
	With Supermatic — Add	1.2	
	To install when engine is disassembled.		
	All Models — 6 cyl.	3.5	
	8 cyl	4.0	
9-14	CONNECTING RODS — REPLACEABLE BEARING SHELLS — Remove and Install all. — Includes removing and installing oil pan.		
	All Models — 6 cyl.	3.7	
	With Drive-Master — Add	.2 _	
9-15	CONNECTING RODS — REPLACEABLE BEARING SHELLS —		
	Remove and Install all. — Engine removed from car.		
	All Models — 6 cyl.	1.9	



25 **OPERATION DESCRIPTION** TIME **PRICE ENGINE—Continued** 9-16 MAIN BEARINGS — Remove and Install. — With engine in car. — Includes removing and installing oil pan. All Models — 6 cvl. 3.3 With Drive-Master — Add 9-17 MAIN BEARINGS — Remove and Install all. — Engine removed from car — Using factory reamed bearings. 2.6 All Models — 6 cyl. 8 cyl. 2.8 9-18 MAIN BEARINGS — Remove and Install all. — Includes line ream — engine removed from car and crankshaft removed. All Models — 8 cyl. 3.9 9-19 MAIN BEARING (CENTER) #3 THRUST, UPPER AND LOWER **SHELLS** — **Replace with engine in car.** — Includes remove and install oil pan. All Models — 6 cyl. 2.2 8 cyl. 3.5 .2 With Drive-Master — Add 9-20 MAIN BEARING — OIL LEAK CORRECTION. — Includes remove and install oil pan and repacking cap. All Models — 6 cyl. — front 2.8 Includes Crankshaft seal — rear 2.3 Front and rear 3.1 All Models — 8 cyl. front 3.3 rear 2.8 Front and rear 3.6 With Drive-Master — Add .2 FLYWHEEL, CRANKSHAFT AND TIMING GEARS 9-21 CRANKSHAFT — Remove and Install. — Includes remove and install engine. All Models — 6 cyl. 10.9 8 cyl. 11.8 With Drive-Master — Add .8 With Overdrive — Add .5 With Supermatic — Add 1.2 9-22 **VIBRATION DAMPENER** — **Remove and Install.** — Includes remove and install radiator. — All Models 1.2 9-23 FLYWHEEL ASSEMBLY — Remove and Install — or tighten. All Models 5.2 With Drive-Master 5.8 With Overdrive 5.5 With Supermatic 6.3 9-24 **FLYWHEEL RING GEAR** — **Remove and Install.** — With flywheel on bench — if necessary add to operation 9-23 — All Models

TIMING COVER GASKET OR OIL SEAL AND SPACER — Remove

and Install. All Models

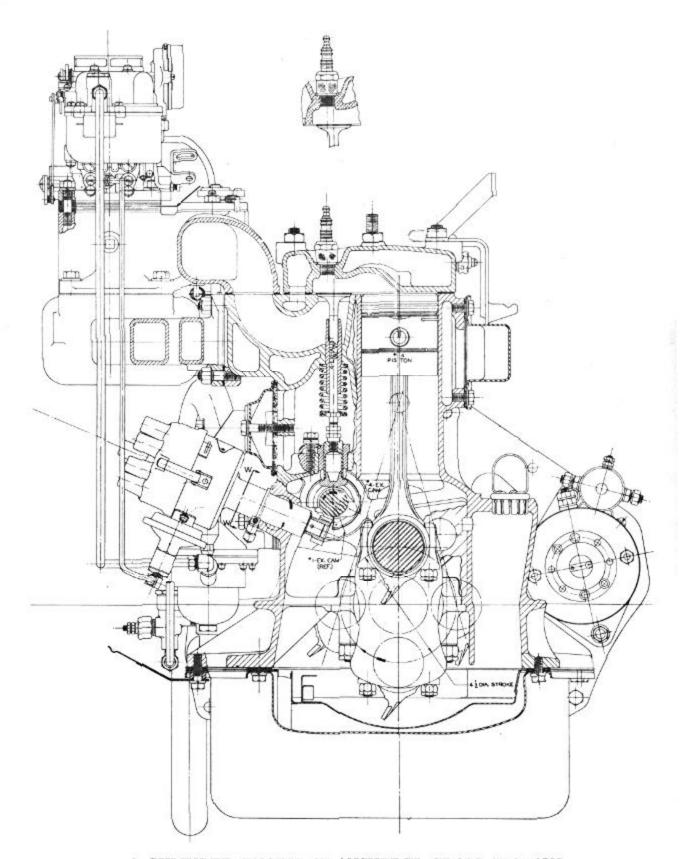
2.3

9-25

OPERATION	DESCRIPTION	TIME	PRICE
	ENGINE—Continued		
9-26	<b>TIMING CHAIN</b> — <b>Remove and Install.</b> — Includes checking timing. All Models — 6 cyl.	3.1	
9-27	<b>TIMING GEAR AND SPROCKET</b> — <b>Remove and Install.</b> —Includes remove and install vibration dampener. — All Models — 6 cyl	3.1	
9-28	<b>TIMING GEARS</b> — <b>Remove and Install.</b> — Includes remove and install vibration dampener. — All Models — 8 cyl.	2.6	
	CYLINDER BLOCK		
9-29	CYLINDER BLOCK — Hone all cylinders. — Does not include time for removing and installing, cylinder head and pistons.  All Models — 6 cyl.  8 cyl.	4.7 5.9	
9-30	<b>CYLINDER BLOCK</b> — <b>Hone one cylinder.</b> — When cylinder head and piston is removed.		
	All Models — 6 cyl. Each additional cyl — Add All Models — 8 cyl. Each additional cyl. — Add	1.0 .7 1.1 .8	
9-31	CYLINDER BLOCK — REBORE — All cylinders. — When cylinder head and pistons are removed. — Includes remove and install studs on 8 cyl. models.  All Models — 6 cyl. 8 cyl.	5.5 7.2	
9-32	CYLINDER BLOCK HEAD STUD — Remove and Install — All. All Models — 8 cyl.	1.0	
9-33	CYLINDER BLOCK HEAD STUD — Remove and Install (one) — broken stud. — All Models — 8 cyl.	.4	
	MANIFOLDS		
9-34	<b>EXHAUST MANIFOLD AND/OR GASKETS</b> — <b>Remove and Install.</b> All Models — 6 cyl. 8 cyl.	2.2 1.9	
9-35	<b>EXHAUST MANIFOLD HEAT TUBE</b> — <b>Remove and Install.</b> All Models	.3	
9-36	INTAKE MANIFOLD TO CARBURETOR GASKET—Remove and Install.  All Models	.4	
9-37	INTAKE MANIFOLD AND/OR GASKETS — Remove and Install.  All Models — 6 cyl.  8 cyl.	2.2 2.5	
	ENGINE LUBRICATION		
9-38	9-38 OIL CHECK VALVE — Remove and Install.  All Models — 6 cyl.  8 cyl.  With Drive-Master — 6 cyl.	.2 .4 1.1	

			27
OPERATION	DESCRIPTION	TIME	PRICE
	ENGINE—Continued		
9-39	OIL CHECK VALVE (BAKELITE) PRESSURE INDICATOR PIN		
	<b>ASSEMBLY</b> — <b>Remove and Install.</b> — All Models — 8 cyl	.2	
9-40	OIL PRESSURE INDICATOR — BLOCK UNIT—Remove and Install.		
	All Models — 8 cyl.	.2	
9-41	OIL PAN ASSEMBLY — Remove, Clean and Install. — Includes replacing gaskets.		
	All Models — 6 cyl.	1.6	
	8 cyl.	2.1	
	With Drive-Master — Add	.2	
9-42	OIL PUMP ASSEMBLY — Remove and Install. — Includes checking timing on six cylinder engines.		
	All Models — 6 cyl.	.6	
	8 cyl.	.8	
	With Drive-Master — 6 cyl.	.7	
9-43	OIL PUMP SUCTION PIPE — Remove and Install.		
	All Models — 8 cyl.	.2	
9-44	OIL PUMP TO CHECK VALVE PIPE — Remove and Install.		
<i>,</i>	All Models — 8 cyl.	.3	
9-45	OIL PRESSURE INDICATOR LIGHT — Remove and Install lens or bulb.		
<b>7-4</b> 3	All Models	.2	
9-46	OIL PRESSURE CHECK — Includes remove and Install — block indicator unit. — All Models — 6 cyl.	.4	
	CONNECTING RODS, PISTONS AND RINGS		
9-47	<b>CONNECTING RODS</b> — <b>Align all.</b> — Includes remove and install cyl. head and oil pan, remove ridge from walls and remove and install connecting rods, pistons and rings.		
	All Models — 6 cyl.	7.1	
	8 cyl.	8.4	
	With Drive-Master — Add	.8	
9-48	<b>CONNECTING RODS</b> — <b>Align all</b> . — When removed from engine includes installing new rings on pistons.		
	All Models 6 cyl.	1.6 2.0	
	8 cyl.	2.0	
9-49	<b>CONNECTING RODS.</b> — Remove and Install a complete set of new rods using old pistons — if necessary add to operation 9-48.		
	All Models — 6 cyl.	1.0	
	8 cyl.	1.3	
9-50	CONNECTING ROD — Remove and Install (one only). — Includes remove and install oil pan, cylinder head, remove ridge from wall and remove and install connecting rod		
	piston and rings.  All Models — 6 cyl.	4.6	
	8 cyl.	5.6	
	With Drive-Master	.8 _	

For each additional rod — Add



8-CYLINDER ENGINE TRANSVERSE CROSS SECTION

4.5

5.5

.8

## PISTON — Remove and Install one with rings. — When oil pan and cylinder head are Removed. — All Models ## PISTONS AND RINGS — Remove and Install (All). — Includes remove and install oil pan and cylinder head. Remove ridge from walls and remove carbon. Fit new pistons and rings and align rods.  All Models — 6 cyl.	OPERATION	N DESCRIPTION	TIME	PRICE
9-51 PISTON — Remove and Install one with rings. — When oil pan and cylinder head are Removed. — All Models  9-52 PISTONS AND RINGS — Remove and Install (All). — Includes remove and install oil pan and cylinder head. Remove ridge from walls and remove carbon. Fit new pistons and rings and align rods.  All Models — 6 cyl.  8 cyl.  With Drive-Master — Add If necessary to hone cylinders — 6 cyl. Add Seyl. Add Seyl. Add Seyl.  9-53 PISTON AND RINGS — Remove and Install (one). — Includes remove and install—oil pan and cylinder head and remove and install piston, rings and aligning rod.  All Models — 6 cyl.  8 cyl.  8 cyl.  8 cyl.  8 cyl.  9-54 PISTON PINS — Remove and Install (All). — Includes and remove and install cylinder head, oil pan, connecting rod bushings and aligning rods using old pistons, remove carbon and remove ridge from walls.  All Models — 6 cyl.  8 cyl.  9-55 PISTON PIN — Remove and Install (one) pin and bushings. — Includes remove and install cylinder head and oil pan, remove ridge from walls and align rods.  All Models — 6 cyl.  8 cyl.  9-56 PISTON PIN — Remove and Install (one) pin and bushings. — Includes remove and install cylinder head and oil pan, remove ridge from walls and align rods.  All Models — 6 cyl.  8 cyl.  9-56 PISTON PIN — Remove and Install (one) pin and bushings. — Includes remove and install cylinder head and oil pan, remove ridge from walls and align rods.  All Models — 6 cyl.  8 cyl.  9-56 PISTON PIN — Remove and Install (one) — When piston and rod is removed.  Includes ream bushings, fit pin and align rod.  All Models — Each Pin  9-57 PISTON RINGS — Remove and Install (All) — Includes remove and install cylinder head and oil pan, removing carbon and ridge from walls, align rods.  All Models — 6 cyl.  8 cyl.  9-57 PISTON RINGS — Remove and Install (All) — Includes remove and install cylinder head and oil pan, removing carbon and ridge from walls, align rods.  All Models — 6 cyl.  8 cyl.  9-57 PISTON RINGS — Remove and Install (All) — Includes remove and install cylinder head a				
are Removed. — All Models  9-52 PISTONS AND RINGS — Remove and Install (All), — Includes remove and install oil pan and cylinder head. Remove ridge from walls and remove carbon. Fit new pistons and rings and align rods.  All Models — 6 cyl.  8 cyl.  8 cyl.  With Drive-Master — Add If necessary to hone cylinders — 6 cyl. Add 8 cyl. Add 5.9  9.53 PISTON AND RINGS — Remove and Install (one). — Includes remove and install—oil pan and cylinder head and remove and install piston, rings and aligning rod.  All Models — 6 cyl.  8 cyl.  8 cyl.  8 cyl.  8 cyl.  With Drive-Master — Add If necessary to hone one cylinder — Add 7 If necessary to hone one cylinder — Add 1.0  1.0  9-54 PISTON PINS — Remove and Install (All). — Includes and remove and install cylinder head, oil pan, connecting rod bushings and aligning rods using old pistons, remove carbon and remove ridge from walls.  All Models — 6 cyl.  8 cyl.  With Drive-Master — Add 8 cyl.  9-55 PISTON PIN — Remove and Install (one) pin and bushings. — Includes remove and install cylinder head and oil pan, remove ridge from walls and align rods.  All Models — 6 cyl.  8 cyl.  With Drive-Master — Add 8 cyl.  9-56 PISTON PIN — Remove and Install (one) pin and bushings. — Includes remove and install cylinder head and oil pan, remove ridge from walls and align rods.  All Models — 6 cyl.  8 cyl.  9-56 PISTON PIN — Remove and Install (one) — When piston and rod is removed.  Includes ream bushings, fit pin and align rod.  All Models — Each Pin .  4 9-57 PISTON RINGS — Remove and Install (All). — Includes remove and install cylinder head and oil pan, removing carbon and ridge from walls, align rods.  All Models — 6 cyl.  8 cyl.  9-2 9-2 9-2 9-2 9-2 9-2 9-2 9-2 9-2 9-2		ENGINE—Continued		
oil pan and cylinder head. Remove ridge from walls and remove carbon. Fit new pistons and rings and align rods.  All Models — 6 cyl.	9-51		.8 _	
S cyl.   S.8   With Drive-Master — Add   If necessary to hone cylinders — 6 cyl. Add   8 cyl. Add   8 cyl. Add   5.9	9-52	oil pan and cylinder head. Remove ridge from walls and remove carbon. Fit new		
With Drive-Master — Add If necessary to hone cylinders — 6 cyl. Add 8 cyl. Add 5.5    PISTON AND RINGS — Remove and Install (one). — Includes remove and install — oil pan and cylinder head and remove and install piston, rings and aligning rod.  All Models — 6 cyl.   8 cyl.   9-54 PISTON PINS — Remove and Install (All). — Includes and remove and install cylinder head, oil pan, connecting rod bushings and aligning rods using old pistons, remove carbon and remove ridge from walls.  All Models — 6 cyl.   8 cyl.    9-55 PISTON PIN — Remove and Install (one) pin and bushings. — Includes remove and install cylinder head and oil pan, remove ridge from walls and align rods.  All Models — 6 cyl.   8 cyl.   9-55 PISTON PIN — Remove and Install (one) pin and bushings. — Includes remove and install cylinder head and oil pan, remove ridge from walls and align rods.  All Models — 6 cyl.   8 cyl.   6.0   9-56 PISTON PIN — Remove and Install (one). — When piston and rod is removed. Includes ream bushings, fit pin and align rod.  All Models — Each Pin   4   9-57 PISTON RINGS — Remove and Install (All). — Includes remove and install cylinder head and oil pan, removing carbon and ridge from walls, align rods.  All Models — Each Pin   9-57 PISTON RINGS — Remove and Install (All). — Includes remove and install cylinder head and oil pan, removing carbon and ridge from walls, align rods.  All Models — 6 cyl.   7.3   9-2   9-2   9-3   9-56 PISTON RINGS — Remove and Install (All). — Includes remove and install cylinder head and oil pan, removing carbon and ridge from walls, align rods.				
PISTON PINS — Remove and Install (all). — Includes and remove and install cylinder head and remove and install primare and aligning rod.  PISTON PIN — Remove and Install (all). — Includes and aligning rod.  PISTON PIN — Remove and Install (all). — Includes remove and install cylinder head and oil pan, removing carbon and ridge from walls, align rods.  PISTON PIN — Remove and Install (one) — When piston and rods.  All Models — 6 cyl.  B cyl.  PISTON PIN — Remove and Install (one) — When piston and rod is removed.  All Models — 6 cyl.  B cyl.  With Drive-Master — Add  PISTON PIN — Remove and Install (one) — When piston and rod is removed.  Includes ream bushings, fit pin and align rod.  All Models — Each Pin  PISTON RINGS — Remove and Install (one) . — When piston and rod is removed.  All Models — Each Pin  PISTON RINGS — Remove and Install (one) . — When piston and rod is removed.  All Models — Each Pin  PISTON RINGS — Remove and Install (one) . — Includes remove and install cylinder head and oil pan, remove ridge from walls, align rods.  All Models — Each Pin  PISTON RINGS — Remove and Install (one) . — When piston and rod is removed.  Includes ream bushings, fit pin and align rod.  All Models — Each Pin  All Models — Each Pin  PISTON RINGS — Remove and Install (one) . — Includes remove and install cylinder head and oil pan, removing carbon and ridge from walls, align rods.  All Models — 6 cyl  PISTON RINGS — Remove and Install (one)  PISTON RINGS — Remove and Install (one)  PISTON RINGS — Remove and Install (one)  Remove and remove ridge from walls, align rods.  All Models — 6 cyl  Remove and remove ridge from walls, align rods.  All Models — 6 cyl  Remove and remove ridge from walls, align rods.  All Models — 6 cyl  Remove and remove ridge from walls, align rods.  Remove and remove ridge from walls, align rods.  Remove and remove ridge from walls, align rods.  Remove and remove remove and remove and install remove and remove and remove and remove and rem				
9.53 PISTON AND RINGS — Remove and Install (one). — Includes remove and install — oil pan and cylinder head and remove and install piston, rings and aligning rod.  All Models — 6 cyl.  8 cyl.  8 cyl.  5.8  With Drive-Master For each additional piston — Add If necessary to hone one cylinder — Add To hone each additional cylinder of using rods using old pistons, remove carbon and remove ridge from walls.  All Models — 6 cyl.  8 cyl.  9.55 PISTON PIN — Remove and Install (one) pin and bushings. — Includes remove and install cylinder head and oil pan, remove ridge from walls and align rods.  All Models — 6 cyl.  8 cyl.  All Models — 6 cyl.  8 cyl.  With Drive-Master — Add For each additional pin — Add  9-56 PISTON PIN — Remove and Install (one) . — When piston and rod is removed.  Includes ream bushings, fit pin and align rod.  All Models — Each Pin  9-57 PISTON RINGS — Remove and Install (All) . — Includes remove and install cylinder head and oil pan, removing carbon and ridge from walls, align rods.  All Models — 6 cyl.  8 cyl.  9-57 PISTON RINGS — Remove and Install (All) . — Includes remove and install cylinder head and oil pan, removing carbon and ridge from walls, align rods.  All Models — 6 cyl.  9-57 PISTON RINGS — Remove and Install (All) . — Includes remove and install cylinder head and oil pan, removing carbon and ridge from walls, align rods.  All Models — 6 cyl.  9-58 PISTON RINGS — Remove and Install (All) . — Includes remove and install cylinder head and oil pan, removing carbon and ridge from walls, align rods.  All Models — 6 cyl.  9-59 PISTON RINGS — Remove and Install (All) . — Includes remove and install cylinder head and oil pan, removing carbon and ridge from walls, align rods.  All Models — 6 cyl.  9-59 PISTON RINGS — Remove and Install (All) . — 10 cludes remove and install cylinder head and oil pan, removing carbon and ridge from walls.				
9.53 PISTON AND RINGS — Remove and Install (one). — Includes remove and install — oil pan and cylinder head and remove and install piston, rings and aligning rod.  All Models — 6 cyl.  8 cyl.  8 cyl.  With Drive-Master For each additional piston — Add If necessary to hone one cylinder — Add To hone each additional cylinder — Add To hone each additional cylinder — Add Cylinder head, oil pan, connecting rod bushings and aligning rods using old pistons, remove carbon and remove ridge from walls.  All Models — 6 cyl.  With Drive-Master  9-55 PISTON PIN — Remove and Install (one) pin and bushings. — Includes remove and install cylinder head and oil pan, remove ridge from walls and align rods.  All Models — 6 cyl.  8 cyl.  With Drive-Master — Add For each additional pin — Add  9-56 PISTON PIN — Remove and Install (one) . — When piston and rod is removed.  Includes ream bushings, fit pin and align rod.  All Models — Each Pin  9-57 PISTON RINGS — Remove and Install (All) . — Includes remove and install cylinder head and oil pan, removing carbon and ridge from walls, align rods.  All Models — 6 cyl.  8 cyl.  9-57 PISTON RINGS — Remove and Install (All) . — Includes remove and install cylinder head and oil pan, removing carbon and ridge from walls, align rods.  All Models — 6 cyl.  9-57 PISTON RINGS — Remove and Install (All) . — Includes remove and install cylinder head and oil pan, removing carbon and ridge from walls, align rods.  All Models — 6 cyl.  9-58 PISTON RINGS — Remove and Install (All) . — Includes remove and install cylinder head and oil pan, removing carbon and ridge from walls, align rods.  All Models — 6 cyl.  9-58 PISTON RINGS — Remove and Install (All) . — Includes remove and install cylinder head and oil pan, removing carbon and ridge from walls, align rods.  All Models — 6 cyl.  9-59 PISTON RINGS — Remove and Install (All) . — Includes remove and install cylinder head and oil pan, removing carbon and ridge from walls, align rods.				
oil pan and cylinder head and remove and install piston, rings and aligning rod.  All Models — 6 cyl.  8 cyl.  8 cyl.  8 cyl.  8 cyl.  10		8 cyl. Add	5.9	
8 cyl. With Drive-Master For each additional piston — Add If necessary to hone one cylinder — Add If necessary to hone each additional cylinder — Add To hone each additional cylinder move and install cylinder head, oil pan, connecting rod bushings and aligning rods using old pistons, remove carbon and remove ridge from walls.  All Models — 6 cyl. B cyl. With Drive-Master  PISTON PIN — Remove and Install (one) pin and bushings. — Includes remove and install cylinder head and oil pan, remove ridge from walls and align rods. All Models — 6 cyl. B cyl. With Drive-Master — Add B cyl. All Models — Each Pin A ——  PISTON PIN — Remove and Install (one) . — When piston and rod is removed. Includes ream bushings, fit pin and align rod. All Models — Each Pin A ——  PISTON RINGS — Remove and Install (All) . — Includes remove and install cylinder head and oil pan, removing carbon and ridge from walls, align rods. All Models — 6 cyl. B cyl.  PISTON RINGS — Remove and Install (All) . — Includes remove and install cylinder head and oil pan, removing carbon and ridge from walls, align rods. All Models — 6 cyl. B	9.53			
With Drive-Master For each additional piston — Add If necessary to hone one cylinder — Add To hone each additional cylinder move and install cylinder head, oil pan, connecting rod bushings and aligning rods using old pistons, remove carbon and remove ridge from walls.  All Models — 6 cyl. B		All Models — 6 cyl.		
For each additional piston — Add If necessary to hone one cylinder — Add To hone each additional cylinder and install cylinder head, oil pan, connecting rod bushings and aligning rods using old pistons, remove carbon and remove ridge from walls.  All Models — 6 cyl. B cyl. With Drive-Master Add S cyl. With Drive-Master — Add For each additional pin — Add S — PISTON PIN — Remove and Install (one). — When piston and rod is removed. Includes ream bushings, fit pin and align rod. All Models — Each Pin A — PISTON RINGS — Remove and Install (All). — Includes remove and install cylinder head and oil pan, removing carbon and ridge from walls, align rods. All Models — 6 cyl. S cyl. All Models — 6 cyl. S cyl.				
If necessary to hone one cylinder — Add To hone each additional cylinder — Add  PISTON PINS — Remove and Install (All). — Includes and remove and install cylinder head, oil pan, connecting rod bushings and aligning rods using old pistons, remove carbon and remove ridge from walls.  All Models — 6 cyl. 8 cyl. 9.2 8 cyl. 11.1 With Drive-Master 8  PISTON PIN — Remove and Install (one) pin and bushings. — Includes remove and install cylinder head and oil pan, remove ridge from walls and align rods. All Models — 6 cyl. 8 cyl. 6.0 With Drive-Master — Add For each additional pin — Add 8  PISTON PIN — Remove and Install (one). — When piston and rod is removed. Includes ream bushings, fit pin and align rod. All Models — Each Pin  4  PISTON RINGS — Remove and Install (All). — Includes remove and install cylinder head and oil pan, removing carbon and ridge from walls, align rods. All Models — 6 cyl. 8 cyl. 7.3 8 cyl. 7.3 8 cyl. 9.2				
PISTON PINS — Remove and Install (All). — Includes and remove and install cylinder head, oil pan, connecting rod bushings and aligning rods using old pistons, remove carbon and remove ridge from walls.  All Models — 6 cyl.  8 cyl.  With Drive-Master  PISTON PIN — Remove and Install (one) pin and bushings. — Includes remove and install cylinder head and oil pan, remove ridge from walls and align rods.  All Models — 6 cyl.  8 cyl.  8 cyl.  6.0  With Drive-Master — Add  For each additional pin — Add  Poston PIN — Remove and Install (one). — When piston and rod is removed.  Includes ream bushings, fit pin and align rod.  All Models — Each Pin  PISTON RINGS — Remove and Install (All). — Includes remove and install cylinder head and oil pan, removing carbon and ridge from walls, align rods.  All Models — 6 cyl.  8 cyl.  7.3  8 cyl.  7.3  8 cyl.  9.2				
PISTON PINS — Remove and Install (All). — Includes and remove and install cylinder head, oil pan, connecting rod bushings and aligning rods using old pistons, remove carbon and remove ridge from walls.  All Models — 6 cyl.  8 cyl.  With Drive-Master  PISTON PIN — Remove and Install (one) pin and bushings. — Includes remove and install cylinder head and oil pan, remove ridge from walls and align rods.  All Models — 6 cyl.  8 cyl.  8 cyl.  With Drive-Master — Add For each additional pin — Add  PISTON PIN — Remove and Install (one). — When piston and rod is removed.  Includes ream bushings, fit pin and align rod.  All Models — Each Pin  PISTON RINGS — Remove and Install (All). — Includes remove and install cylinder head and oil pan, removing carbon and ridge from walls, align rods.  All Models — 6 cyl.  8 cyl.  7.3  8 cyl.  7.3  8 cyl.				
cylinder head, oil pan, connecting rod bushings and aligning rods using old pistons, remove carbon and remove ridge from walls.  All Models — 6 cyl.  8 cyl.  11.1  With Drive-Master  9.55  PISTON PIN — Remove and Install (one) pin and bushings. — Includes remove and install cylinder head and oil pan, remove ridge from walls and align rods.  All Models — 6 cyl.  8 cyl.  8 cyl.  6.0  With Drive-Master — Add For each additional pin — Add  8  9-56  PISTON PIN — Remove and Install (one). — When piston and rod is removed.  Includes ream bushings, fit pin and align rod.  All Models — Each Pin  9-57  PISTON RINGS — Remove and Install (All). — Includes remove and install cylinder head and oil pan, removing carbon and ridge from walls, align rods.  All Models — 6 cyl.  8 cyl.  7.3  8 cyl.		To hone each additional cylinder — Add	.7 _	
9-55 PISTON PIN — Remove and Install (one) pin and bushings. — Includes remove and install cylinder head and oil pan, remove ridge from walls and align rods.  All Models — 6 cyl.	9-54	cylinder head, oil pan, connecting rod bushings and aligning rods using old pistons, remove carbon and remove ridge from walls.  All Models — 6 cyl.  8 cyl.	11.1	
and install cylinder head and oil pan, remove ridge from walls and align rods.  All Models — 6 cyl.  8 cyl.  6.0  With Drive-Master — Add For each additional pin — Add  9-56  PISTON PIN — Remove and Install (one). — When piston and rod is removed.  Includes ream bushings, fit pin and align rod.  All Models — Each Pin  9-57  PISTON RINGS — Remove and Install (All). — Includes remove and install cylinder head and oil pan, removing carbon and ridge from walls, align rods.  All Models — 6 cyl.  8 cyl.  7.3  9.2				
Includes ream bushings, fit pin and align rod. All Models — Each Pin  9-57 PISTON RINGS — Remove and Install (All) . — Includes remove and install cylinder head and oil pan, removing carbon and ridge from walls, align rods. All Models — 6 cyl. 8 cyl. 7.3 9.2	9-55	and install cylinder head and oil pan, remove ridge from walls and align rods. All Models — 6 cyl. 8 cyl. With Drive-Master — Add	6.0	
cylinder head and oil pan, removing carbon and ridge from walls, align rods.  All Models — 6 cyl.  8 cyl.  7.3  9.2	9-56	Includes ream bushings, fit pin and align rod.	.4	
•	9-57	cylinder head and oil pan, removing carbon and ridge from walls, align rods.  All Models — 6 cyl.		
		· · · · · · · · · · · · · · · · · · ·		

PISTON RINGS — Remove and Install on one piston (only). — Includes remove

All Models — 6 cyl.

PISTON RINGS — Remove and Install piston out of car.

With Drive-Master — Add

All Models — One Piston

and install — cylinder head and oil pan, removing carbon and ridge from wall

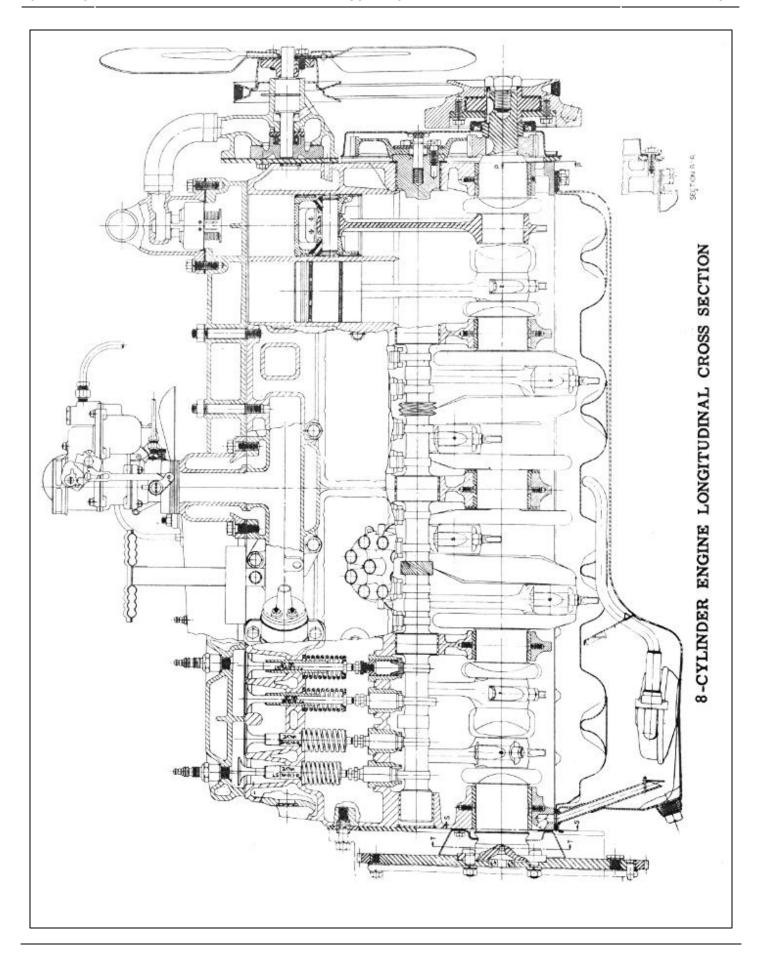
8 cyl.

For each additional piston — Add

9-58

9-59

and aligning rods.



OPERATION	DESCRIPTION	TIME	PRICE
	ENGINE—Continued		
	CYLINDER HEADS		
9-60	CYLINDER HEAD — Tighten all studs or cap screws.		
	All 480-490 Models — 6 cyl.	.3	
	8 cyl All 500 and "A" Models — 6 cyl.	.4 .7	<del></del> -
	8 cyl.	.5	
9-61	CYLINDER HEAD — COMPRESSION TEST — All cylinders.		
	All Models — 6 cyl.	.8	
	8 cyl.	.9	
9-62	CYLINDER HEAD AND/OR GASKET — Remove and Install. —		
	Includes removing carbon.	1.0	
	All Models — 6 cyl. 8 cyl.	1.8 2.3	<del></del>
	With Drive-Master — Add		
	To drill out and replace a broken stud or cap screw — Add	.4	
	VALVES, SPRINGS, TAPPETS AND GUIDES		
9-63	TAPPETS — ADJUST ALL. — Includes remove and install left front wheel and both		
	valve tappet covers.		
	All Models — 6 cyl. 8 cyl.	1.5 1.9	
	8 Cy1.	1.9	
9-64	TAPPET ASSEMBLIES—Remove and Install all, including guides.		
	Includes remove and install cylinder head and adjusting tappets.		
	All Models — 8 cyl.	4.8	
9-65	TAPPET ASSEMBLIES—Remove and Install all, including guides.		
	Includes remove and install cylinder head and oil pan, valve tappet covers, camshaft and adjusting tappets.		
	All Models — 6 cyl.	9.8	
	With Drive-Master — Add	.8	
9-66	TAPPET ASSEMBLY — Remove and Install one—unnecessary to remove cylinder head.		
	— Includes remove and install valve covers.		
	All Models — 8 cyl.	1.1	
9-67	TAPPET ASSEMBLY — Remove and Install one—including guide.		
	Includes remove and install cylinder head and oil pan, valve tappet covers, camshaft and adjusting tappets.		
	All Models — 6 cyl.	9.4	
	With Drive-Master — Add	.8	
9-68	VALVE TAPPET COVERS — Remove and Install. — Includes replacing gasket.		
	All Models — 6 cyl. — front	.3	
	8 cyl.	.3	
	Rear all Models — 6 cyl. 8 cyl.	.4 .5	
9-69	VALVES — GRIND. — Includes remove carbon, adjust tappets and minor engine		
	tune up.	6.1	
	All Models — 6 cyl. 8 cyl.	6.4 7.1	
	With Drive-Master — Add	.6	

32			
OPERATION	DESCRIPTION	TIME	PRICE
	ENGINE—Continued		
9-70	VALVES Remove and Install one. — Includes remove and install cylinder head,		
	tappet covers and checking tappet adjustment also refacing valve and seat.		
	All Models — 6 cyl.	3.3	
	8 cyl. For each additional valve — Add	3.4	
	With Drive-Master — Add	.2 .8	
9-71	VALVE GUIDES — Remove and Install. — All when valves are removed.		
	All Models — 6 cyl.	1.6	
	8 cyl.	1.8	
	To remove and install one guide	.3	
9-72	VALVE SPRINGS — Remove and Install all. — Includes remove and		
	install cylinder head, valve tappet covers and adjusting tappets.		
	All Models — 6 cyl.	4.2	
	8 cyl.	3.8	
	With Drive-Master — Add	.8v	
9-73	VALVE SPRING — Remove and Install one with valve cover removed. — Includes checking adjustment.		
	All Models — 8 cyl.	.8	
	Each additional spring — Add	.2	
9-74	VALVE SPRING — Remove and Install one. — Includes remove and install		
	cylinder head, valve covers and checking adjustment		
	All Models — 6 cyl.	3.3	
	With Drive-Master	4.1	
	For each additional spring — Add	.2	
	ENGINE COMBINATION OPERATION #1		
9-75	MINOR ENGINE TUNE-UP. — Includes clean and regap or replace		
	spark plugs, adjust or replace distributor points, check flywheel timing, adjust		
	carburetor and climatic control, clean fuel pump sediment bowl, clean and/or reoil air cleaner.		
	All Models — 6 cyl.	1.5	
	8 cyl.	1.7	
	With Drive-Master — 6 cyl.	1.6	
	<b>ENGINE COMBINATION OPERATION #2</b>		
9-76	MAJOR ENGINE TUNE-UP. — Includes check battery gravity, battery cables and		
	load test battery, clean and regap or replace spark plugs, check engine compression		
	and engine vacuum, test and adjust distributor mechanical and vacuum advance and		
	dwell angle. Test condenser capacity, make coil first and secondary test, check engine		
	timing at flywheel, check generator output, check generator regulator, clean and adjust		
	carburetor and climatic control, check fuel pump pressure and clean sediment bowl, clean air cleaner.		
	Note: If necessary to overhaul carburetor add operation 18-2.		
	All Models — 6 cyl.	3.3	
	With Drive-Master	3.5	
	All Models — 8 cyl.	3.7	

.1 \_\_\_\_\_

PRICE **OPERATION DESCRIPTION** TIME

	ENGINE—Continued		
	ENGINE COMBINATION OPERATION #3		
9-77	VALVES AND/OR SPRINGS AND TAPPET ASSEMBLIES. — Includes remove and install cylinder head, valve covers, refacing valves and seats, adjusting tappets and minor engine tune-up — on 6 cylinder Models camshaft removal and replacement is included.  All Models — 6 cyl.  8 cyl.	12.3 8.8	
	With Drive-Master — Add	.8	
	ENGINE COMBINATION OPERATION #4		
9-78	VALVES AND/OR VALVE SPRINGS, PISTONS, PINS, RINGS AND MAIN AND CONNECTING ROD BEARINGS — Remove and Install. — Includes remove and install cylinder head, oil pan, main and connecting rod bearings, aligning rods, refacing valves and seats, replacing piston rings and minor engine tune-up operation 9-75.  All Models — 6 cyl.  8 cyl.  With Drive-Master — Add  If necessary to hone cylinders — 6 cyl. — Add	15.3 .8 4.7	
	—8 cyl. — Add	5.9	
	BODY AND HARDWARE		
	DOORS		
10-1	DOOR ASSEMBLY — Complete, Remove and Install.  All Models — front	1.5	
	rear  Door outer panel lower moulding — Remove and Install.  All Models — front or rear		
10-2	<b>DOOR ASSEMBLY — SKELETON — Remove and Install.</b> — Does not Include Painting.		
	All Models — front rear	3.0 2.5	
10-3	DOOR (FRONT) WINDOW REGULATOR ASSEMBLY—Remove and Install. All Models	1.6	
10-4	DOOR (REAR) WINDOW REGULATOR ASSEMBLY — Remove and Install. All Models	1.3	
10-5	DOOR VENTILATING WING REGULATOR ASSEMBLY (CRANK TYPE) — Remove and Install.  All Models	1.5	
10-6	DOOR VENTILATING WING REGULATOR ASSEMBLY (FRICTION TYPE) — Remove and Install. — All Models	1.2	
10-7	DOOR WINDOW REGULATOR HANDLES — Remove and Install (one). All Models	.2	
10-8	DOOR ARM RESTS — Remove and Install (one) — All Models	.2	
10-9	DOOR HANDLE (Inside) — Remove and Install (one). All Models	.2	
10-10	DOOR HANDLE (Outside) — Remove and Install (one)	1	

All Models

OPERATION	DESCRIPTION	TIME	PRICE
	BODY AND HARDWARE—Continued		
10-11	DOOR LOCK CYLINDER AND HOUSING — Remove and Install.  All Models-	.2	
10-12	<b>DOOR LOCK COMPLETE ASSEMBLY</b> — <b>Remove and Install</b> . — Includes remove and install trim panels and regulator handles.		
	All Models — front rear	1.7 1.2	
10-13	DOOR LOCK STRIKER PLATE — Remove, Install and Adjust.  All Models	.3	
10-14	<b>DOOR CHECK STRAP</b> — <b>Remove and Install.</b> — All Models	1.3	
10-15	DOOR HINGE AND/OR HINGE PIN — Remove and Install. — Front upper and lower and rear lower all Models Upper rear all Models	.6 .2	
	WEATHERSTRIPPING		
10.16	FRONT DOOR OPENING WEATHERSTRIP (UPPER) — Right or left — Remove and Install. — All Models	.4	
10-17	FRONT DOOR OPENING WEATHERSTRIP (LOWER END) — Right or left — Remove and Install. — All Models	.2	
10-18	FRONT DOOR OPENING WEATHERSTRIP—Front Pillar (dog-leg) — Remove and Install. — All Models	.4	
	FRONT DOOR (FRONT) WEATHERSTRIP AT BELT LINE (S-Rubber) — Remove and Install. — All Models	.3	
10-20	FRONT DOOR (FRONT) WEATHERSTRIP — Remove and Install (LOWER) — Right or left. — All Models	.3	
10-21	FRONT DOOR VENTILATING WING (CRANK TYPE) WEATHER-STRIP — Remove and Install. — All Models	2.2	
10-22	FRONT DOOR VENTILATING WING (FRICTION TYPE) WEATHERSTRIP — Remove and Install. — All Models	2.0	
10-23	DOOR BOTTOM WEATHERSTRIP — Remove and Install.  All Models — Sedans  Proughers and Course	.5	
10-24	Broughams and Coupes  REAR DOOR OPENING WEATHERSTRIP (FRONT) — Remove and Install (one). — All Models	.0	
10-25	REAR DOOR WEATHERSTRIP (REAR) — Remove and Install. All Models	.2	
10-26	REAP COMPARTMENT DOOR WEATHERSTRIP — Remove and Install. All Models If necessary to touch up paint — Add	.9 .8	

**OPERATION DESCRIPTION** TIME PRICE **BODY AND HARDWARE—Continued QUARTER WINDOW** — WEATHERSTRIP—Remove and Install. 10-27 All Models — Sedans **Broughams and Coupes DOOR LINERS** 10-28 FRONT DOOR INNER PANEL LINER (INNER) —Remove and Install one. All Models — Sedans **Broughams and Coupes** 10-29 FRONT DOOR INNER PANEL LINER (OUTER) — Remove and Install one. All Models — Sedans 2.6 **Broughams and Coupes** 2.7 10.30 REAR DOOR INNER PANEL LINER (INNER) — Remove and Install. All Models — Sedans REAR DOOR INNER PANEL LINER (OUTER) — Remove and 10-31 Install. All Models — Sedans 1.9 10-32 **QUARTER WINDOW INNER PANEL LINER (OUTER) — Remove** and Install. All Models — Broughams and Coupes 3.7 **OUARTER WINDOW WATER BAFFLE** — Remove and Install. 10-33 All Models — Sedans 3.1 SEATS, SEAT TRACK AND UPHOLSTERY FRONT SEAT AND SEAT TRACK ASSEMBLY — Remove and 10.34 Install. All Models 10-35 REAR SEAT AND SEAT BACK ASSEMBLY — Remove and Install. All Commodore Models (3 sections) Super Models (1 section) 10-36 FRONT SEAT BACK ROBE HANGERS — Remove and Install. All Models — Sedans (one) .5 Broughams and Coupes (two) 10-37 **SEAT CUSHION** — **UPHOLSTERY.** — Includes remove and install seat covering — factory cut to size. — All Model Sedans 1.0 10-38 **SEAT BACKS** — **UPHOLSTERY.** — Includes remove and install covering factory cut to size. All Super Models — front or rear Commodore Models — rear 1.4 10-39 FRONT SEAT BACK — UPHOLSTERY. — Includes remove and install covering — factory cut to size. — All Models 10-40 REAR SEAT CENTER ARM REST — UPHOLSTERY—Remove and Install. Commodore Models (only) — cloth trim

OPERATION	DESCRIPTION	TIME	PRICE
	BODY AND HARDWARE—Continued		
	WINDSHIELD		
10-41	WINDSHIELD DRAIN TUBES — Install. — All Models	.6	
10-42	WINDSHIELD GLASS AND/OR WEATHERSTRIP—Remove and Install.  All Models — one side both sides  Radio equipped — one side both sides	1.5 2.9 1.9 3.3	
10-43	WINDSHIELD — Reseal to eliminate leaks. — All Models	.5	
10-44	WINDSHIELD GARNISH MOULDING RIGHT OR LEFT—Remove and Install. All Models	.3	
10-45	WINDSHIELD WIPER ARMS — Adjust travel. — All Models	.3	
10-46	WINDSHIELD WIPER CONTROL KNOB ASSEMBLY — Remove and Install.  All Models	.3	<u> </u>
10-47	WINDSHIELD WIPER CABLE — Remove and Install.  All Models — one cable	.6	
1048	WINDSHIELD WIPER MOTOR — Remove and Install. All Models	.3	
10-49	WINDSHIELD WIPER PULLEY HOUSING AND CABLE — Remove and Install. — All Models	.4	
10-50	WINDSHIELD WIPER CABLE TENSION PULLEY—Remove and Install.  All Models	.4	
10-51	WINDSHIELD WIPER AND WASHER CONTROL KNOB ASSEMBLY — Remove and Install. — All Models	.4	
	WINDOWS, REGULATORS AND MOULDINGS		
10-52	WINDOWS, REGULATORS AND MOULDINGS DOOR GLASS — Remove and Install.		
	All Models — Sedans — front rear	1.8 1.3	
	Broughams and Coupes	2.0	
10-53	DOOR VENTILATING WING GLASS — Remove and Install. All Models	1.8	
10-54	QUARTER WINDOW GLASS — Remove and Install.  All Models — Sedans  Broughams and Coupes	.6 .7	
10-55	REAR WINDOW (SINGLE) GLASS AND/OR WEATHERSTRIP  — Remove and Install. — All Models	1.8	
10-56	REAR WINDOW (DOUBLE) GLASS AND/OR WEATHERSTRIP  — Remove and Install.		
	All Models — one side both sides	2.8 3.0	

**OPERATION DESCRIPTION** TIME PRICE **BODY AND HARDWARE—Continued** 10-57 DOOR GLASS RUN CHANNEL — Remove and Install. All Models — Sedan — front 1.8 1.3 Sedan — rear **Broughams and Coupes** 1.9 10-58 DOOR WINDOW REGULATOR ASSEMBLY — Remove and Install. 1.7 All Models — Sedan — front Sedan — rear 1.4 **Broughams and Coupes** 1.9 10-59 WINDOW REGULATOR ASSEMBLIES (FREE UP).—Includes remove .5 Moulding to oil mechanism. — All Models 10-60 WINDOW REGULATOR HANDLES OR ESCUTCHEONS — Remove and Install. — All Models. .2 DOOR VENTILATING WING REGULATOR ASSEMBLY—Remove 10-61 1.5 **and Install.** All Models — crank type 1.2 friction type 10-62 **QUARTER WINDOW REGULATOR ASSEMBLY — Remove and** 2.0 **Install.** All Models — Broughams and Coupes 10-63 **QUARTER WINDOW GARNISH MOULDING—Remove and, Install.** .3 \_\_\_\_\_ All Models — Broughams and Coupes 10-64 DOOR WINDOW GARNISH MOULDING — Remove and Install. .3 All Models — front or rear 10-65 FRONT DOOR REVEAL MOULDING — Remove and Install. All Models — Sedans 1.3 10-66 REAR DOOR REVEAL MOULDING — Remove and Install. All Models — Sedans .3 10-67 **DOOR REVEAL MOULDING** — **Remove and Install.** — Right or left. All Models — Broughams 1.4 **BODY INTERIOR TRIM** 10-68 **DOOR WINDLACE** — **Remove and Install.** — Complete. All Models — Sedans 1.5 **Broughams and Coupes** 1.0 10-69 **QUARTER TRIM PANEL** — Remove and Install. All Models — Sedans Super Series .6 **Sedans Commodore Series Broughams and Coupes** 10-70 FLOOR MAT (FRONT) — Remove and Install. — All Models 10-71 FLOOR MAT (REAR) — Remove and Install. — All Models 10-72 **REAR COMPARTMENT FLOOR MAT** — All Models .3

OPERATION	DESCRIPTION	TIME	PRICE
	BODY AND HARDWARE—CONVERTIBLE BODY—Continued		
10-73	COWL KICK PANEL — Remove and Install. — All Models	.6	
10-74	DOOR POCKET TRIM PANEL — Remove and Install.  All Models	.7	
10-75	DOOR TRIM PANEL (OUTER) — Remove and Install. All Models	.2	
10-76	DOOR POCKET MOULDING — Remove and Install.  All Models — each	.3	
10-77	DOOR PILLAR POST TRIM PANEL — Remove and Install.  All Models — Sedans	.4	
10-78	HEADLINING — Remove and Install.  All Models — Sedans and Broughams  Coupes	7.5 6.9	
10-79	SUN VISOR — Remove and Install (one). — All Models	.2	
10-80	ROOF PANEL INSULATION — Replace or Install new.  All Models — Sedans  Broughams and Coupes	7.9 7.3	
	REAR COMPARTMENT DOOR		
10-81	REAR COMPARTMENT DOOR — Remove and Install and align All Models	1.0	·
10-82	REAR COMPARTMENT DOOR WEATHERSTRIP — Remove and Install. All Models If necessary to touch up paint — Add	.9 .8	
10-83	REAR COMPARTMENT DOOR NAME PLATE—Remove and Install.  All Models	.3	
10-84	REAR COMPARTMENT DOOR LOCK ASSEMBLY — Remove and Install. All Models — 480-490-500	.5	
10-85	REAR COMPARTMENT DOOR LOCK HANDLE AND/OR CYLINDER — Remove and Install.		
	All Models — 480-490-500 Lock and Cylinder "A" Series	.3 .5	
10-86	REAR COMPARTMENT DOOR LATCH OPERATING LEVER —		
	Remove and Install — one. All Models — 480-490-500	.3	
10-87	REAR COMPARTMENT DOOR HINGE AND/OR SPRING — Remove and Install. — All Models	.5	<u></u>
10-88	REAR COMPARTMENT DOOR STRIKER — Remove and Install. All Models	.2	
	INSTRUMENT PANEL AND INSTRUMENTS		
10-89	INSTRUMENT PANEL ASSEMBLY COMPLETE — Remove and Install.		
	All Models — Commodores — 480-490-500 and "A" Series Supers — 480-490-500 Series	4.6 4.0	
	Instrument panel top covering (leather) — Remove and Install.  "A" Series Models	1.3	
10-90	INSTRUMENT FINISH PANEL (CENTER SECTION) — Remove and Install.  All Models — 480-490-500  Left Section — All Models — 480-490-500	.7 .3	
	Lott Section 1 in Models Too T/O 500	•	

OPERATION	DESCRIPTION	TIME	PRICE
	BODY AND HARDWARE—Continued		
10-91	LOCKER BOX DOOR — Remove and Install.		
	Any Model — Right or Left door	.3	
10-92	LOCKER BOX — Remove and Install. — All Models	.5	
10-93	LOCKER BOX — LOCK AND CYLINDER — Remove and Install. All Models	.3	
10-94	HEADLIGHT SWITCH AND/OR CIRCUIT BREAKER—Remove and Install.  All Models	.3	
10-95	RHEOSTAT LIGHT SWITCH — Remove and Install.  Commodore Models only	.2	
10-96	STARTER MOTOR SWITCH — Remove and Install. — All Models.	.2	
10-97	SPEEDOMETER HEAD — Remove and Install.		
	All Models — 480-490-500 "A" Series	.5	
10-98	SPEEDOMETER LENS — Remove and Install.	••	
10-98	All Models — 480-490-500	.6	
	"A" Series	.8	
10-99	SPEEDOMETER CABLE OR HOUSING — Remove and Install.  All Models	.6	
10.100		.6	
10-100	SPEEDOMETER PINION — Remove and Install. — All Models		
10-101	CLOCK — ANY STYLE — Remove and Install.  All Models — 480-490-500	.6	
	"A" Series	.8	
10-102	REMOVE AND REPLACE ANY INSTRUMENT PANEL LIGHT BULB. All Models	.2	
10-103	REMOVE AND REPLACE THE FUEL OR TEMPERATURE GAUGE.		
	All Models — 480-490-500 "A" Series	.7	
	CONVERTIBLE BODY		
	TOP COVERING, MOTOR AND PUMP ASSEMBLY AND OPERATING CYLINDERS		
10-104	<b>TOP, COMPLETE ASSEMBLY,— Remove and Install</b> —and adjust. Bows, top covering and curtain attached. — All Models	5.5	
10-105	TOP COVERING — Remove and Install. — Includes rear curtain.  All Models	7.4	
10-106	TOP COVERING — Remove and Install. — Less rear curtain. All Models	5.5	
10-107	TOP REAR CURTAIN AND EXTENSION — Remove and Install. All Models	4.3	
10-108	REAR CURTAIN (ONLY) — Remove and Install. — All Models	1.0	
10-109	REAR CURTAIN WINDOW FRAME — Remove and Install.  All Super Models	.7	

OPERATION	DESCRIPTION	TIME	PRICE
	BODY AND HARDWARE—CONVERTIBLE BODY—Continued		
10-110	REAR CURTAIN WINDOW FRAME WEATHERSTRIP — Remove and Install. — All Super Models	.7	
10-111	REAR CURTAIN LOWER MOULDING — Remove and Install. All Models	.4	
10-112	HYDRAULIC MOTOR AND PUMP ASSEMBLY — Drain and refill system. All Models	1.5	
10-113	REAR QUARTER WINDOW REGULATOR — CYLINDER — Remove and Install. — Includes draining and refilling system.  All Models	3.5	
10-114	HYDRAULIC MOTOR AND PUMP ASSEMBLY Remove and Install. All Models	2.2	
10-115	HYDRAULIC MOTOR AND PUMP ASEMBLY — Refill. All Models	.6	
10-116	TOP CONTROL VALVE ASSEMBLY — Remove and Install. All Models	1.0	
10-117	TOP OPERATING CYLINDER AND YOKE ASSEMBLY — Remove and Install. — All Models — one side	1.5	
10-118	OPERATING CYLINDER ANCHOR, CLEVIS PIN — Remove and Install. All Models — one side	1.5	
10-119	QUARTER PILLAR ASSEMBLY — Remove and Install. All Models — one side	.8	
10-120	TOP QUARTER PILLAR UPPER BRACKET—Remove and Install. Right or Left Hand — All Models — one — two	1.5 2.9	
10-121	QUARTER PILLAR RAIL — Remove and Install.  Right or Left Hand — All Models	1.0	
	TOP HEADER, BOWS, SIDERAILS, AND MOULDINGS		
10-122	TOP FRONT HEADER ASSEMBLY — Remove and Install. All Models	2.5	
10-123	HEADER TO SIDE RAIL BRACKET — Remove and Install.  Right or Left Hand — All Models	2.0	
10-124	<b>HEADER FRONT LOWER MOULDING — Remove and Install.</b> All Models	.4	
10-125	<b>HEADER FRONT UPPER MOLDING — Remove and Install.</b> All Models	.4	
10-126	<b>HEADER MOULDING</b> — <b>REAR</b> — <b>Remove and Install.</b> —All Models	.4	
10-127	TOP REAR ROW MOULDING — Remove and Install — All Models	4	

## **BODY AND HARDWARE—CONVERTIBLE BODY—Continued**

10-128	TOP PADS (two) — Remove and Install. — All Models	4.5
10-129	QUARTER FLAP RETAINER — Remove and Install.	
10 12)	All Models — Right or Left Hand	.2
10-130	TOP HOLD-DOWN CLAMP ASSEMBLY — Remove and Install.	.2
	All Models — Right or Left Hand	.2
10-131	TOP FRONT SIDE RAIL HINGE — Remove and Install.	
	All Models — Right or Left Hand	1.0
10-132	FRONT SIDE RAIL #2 BOW CONTROL LINK BRACKET — Remove and	
10-132	Install. — All Models — Right or Left Hand	.3
	5	
10-133	#2 BOW CONTROL LINK ASSEMBLY — Remove and Install.	
	All Models — Right or Left Hand	.4
10-134	#2 BOW CONTROL LINK ASSEMBLY REAR — Remove and	
	Install. All Models — Right or Left Hand	.7
40.40	Na DOVY.	
10-135	#3 BOW — Remove and Install. — All Models	2.2
10-136	TOP PIVOT BRACKET BRACE — Remove and Install.	
	All Models — Right or Left Hand	.8
10-137	TOD DAT ANCE LINIV Demove and Install	
10-13/	TOP BALANCE LINK — Remove and Install.  All Models — Right or Left Hand	.2
	The fire of the fi	<del>-</del>
	DOOR WINDOWS, AND REGULATORS, SWITCHES	
10-138	DOOR WINDOW REGULATOR ASSEMBLY (HYDRAULIC) —	
	Remove and Install. — All Models — Right or Left Hand	1.8
19-139	DOOR WINDOW REGULATOR ASSEMBLY MANUAL CONTROL —	
17-137	Remove and Install. All. Models — Right or Left Hand	2.0
10-140	DOOR WINDOW REGULATOR ROLLER GUIDE TIE BAR ASSEMBLY —	2.0
	Remove and Install. — All Models Right or Left Hand	2.0
10-141	DOOR WINDOW REGULATOR CROSS ARM ASSEMBLY (MANUAL) —	
	Remove and Install. — All Models — Right or Left Hand	2.0
10-142	DOOR WINDOW STOP BUMPER — Remove and Install.	
10-142	All Models — Right or Left Hand	.4
	· ·	
10-143	DOOR WINDOW STOP BUMPERS — Adjust.	2
	All Models — Right or Left Hand	.3
10-144	DOOR WING FRAME AND GLASS ASSEMBLY — Remove and	
	Install. — All Models — Right or Left Hand	1.0

10-160

**OPERATION DESCRIPTION** TIME PRICE **BODY AND HARDWARE—CONVERTIBLE BODY—Continued** 10-145 **DOOR WING GLASS** — Remove and Install. All Models — Right or Left Hand .4 10-146 DOOR WINDOW CENTER BAR GLASS RUN — Remove and Install. — All Models — Right or Left Hand 2.0 . \_\_\_ 10-147 WINDOW REGULATOR SWITCH ASSEMBLY (MULTIPLE) — Remove and Install. — All Models .5 10-148 WINDOW REGULATOR SWITCH ASSEMBLY (SINGLE) — Remove and Install. — All Models 10-149 **QUARTER WINDOW GLASS** — Remove and Install. All Models — Right or Left Hand 1.1 10-150 **QUARTER WINDOW HINGE** — Remove and Install. All Models — Right or Left Hand .8 10-151 **QUARTER WINDOW HINGE BRACKET** — Remove and Install. All Models — Right or Left Hand .8 10-152 OUARTER WINDOW REGULATOR ASSEMBLY MANUAL CONTROL — Remove and Install. All Models — Right or Left Hand 1.5 10-153 QUARTER WINDOW REGULATOR ASSEMBLY (HYDRAULIC) — Remove and Install. — All Models 1.8 10-154 **QUARTER WINDOW REGULATOR GUIDE—Remove and Install.** All Models — Right or Left Hand 1.4 10-155 **QUARTER WINDOW REGULATOR PANEL ASSEMBLY — Remove and Install.** — All Models — Right or Left Hand 10-156 **QUARTER WINDOW ASSEMBLY — Remove and Install.** All Models — Right or Left Hand .7 \_\_\_\_\_ DOOR HINGES, LOCKS AND MOULDINGS 10-157 DOOR WINDOW VALANCE — Remove and Install. All Models — Right or Left Hand 10-158 FRONT SEAT BACK VALANCE — Remove and Install. All Models — Right or Left Hand 10-159 10-159 QUARTER BELT MOULDING — Remove and Install. All Models — Right or Left Hand

**10-160 REAR BELT MOULDING — Remove and Install.** — All Models

4.3

## **BODY AND HARDWARE—CONVERTIBLE BODY—Continued**

10-161	DOOR BELT MOULDING — Remove and Install.  All Models — Right or Left Hand	1.3
10-162	DOOR HINGE ASSEMBLY UPPER — Remove and Install.  All Models — Right or Left Hand	.6
10-163	DOOR HINGE ASSEMBLY LOWER — Remove and Install. All Models — Right or Left Hand	.6
10-164	DOOR LOCK ASSEMBLY — Remove and Install.  All Models — Right or Left Hand	1.7
10-165	DOOR REMOTE CONTROL ASSEMBLY — Remove and Install.  All Models — Right or Left Hand	1.6
	BODY INTERIOR TRIM AND SEATS	
10-166	PILLAR WINDLACE ASSEMBLY — FRONT — Remove and Install. — All Models — Right or Left Hand	.2
10-167	PILLAR WINDLACE ASSEMBLY — REAR — Remove and Install.  All Models — Right or Left Hand	.3
10-168	REAR FLOOR SIDE CARPET ASSEMBLY — Remove and Install.  All Models — Right or Left Hand	.4
10-169	REAR FLOOR MAT AND PAD ASSEMBLY — Remove and Install.  All Models	.6
10-170	FRONT SEAT FRAME AND BACK — COMPLETE — Remove and Install. — All Models	.4
10-171	REAR SEAT BACK SUPPORT — Remove and Install.  All Models — Right or Left Hand	.8
10-172	REAR SEAT CENTER ARM REST — UPHOLSTER — Includes Remove and Install. — All Models — Leather trim	1.5
10-173	QUARTER TRIM SUPPORT PANEL ASSEMBLY — FRONT — Remove and Install. — All Models — Right or Left Hand	.3
10-174	QUARTER TRIM SUPPORT PANEL ASSEMBLY — REAR — Remove and Install. — All Models — Right or Left Hand	.7
	WEATHERSTRIPPING	
10-17 <b>5</b>	DOOR OPENING WEATHERSTRIP — Remove and Install.  All Models — Right or Left Hand	.3
10-17 <b>6</b>	DOOR OPENING BELT WEATHERSTRIP — Remove and Install.  All Models — Right or Left Hand	.2

10-192

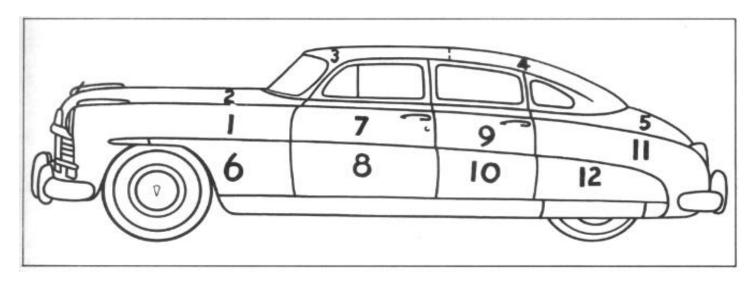
PERATION	I DESCRIPTION	TIME	PRICE
	BODY AND HARDWARE—CONVERTIBLE BODY—Continued		
10-177	DOOR BOTTOM WEATHERSTRIP — Remove and Install.  All Models — Right or Left Hand	.6	
10-178	DOOR REAR WEATHERSTRIP — Remove and Install.  All Models — Right or Left Hand	.3	
10-179	DOOR WING RETAINER AND WEATHERSTRIP — Remove and Install. — All Models — Right or Left Hand	1.5	
10-180	DOOR WING WEATHERSTRIP — Remove and Install.  All Models — Right or Left Hand	.6	
10-181	CENTER BAR AND WEATHERSTRIP ASSEMBLY — Remove and Install. All Models	1.7	
10-182	CENTER BAR VENT WING WEATHERSTRIP — Remove and Install. — All Models — Right or Left Hand	2.0	
10-183	DOOR WINDOW MOULDING AND WEATHERSTRIP ASSEMBLY — Remove and Install. — All Models — Right or Left Hand	.2	
10-184	QUARTER WINDOW MOULDING AND WEATHERSTRIP ASSEMBLY — Remove and Install. — All Models — Right or Left Hand	.1	
10-185	QUARTER WINDOW WEATHERSTRIP FRONT — Remove and Install. — All Models — Right or Left Hand	.2	
10-186	QUARTER WINDOW BELT WEATHERSTRIP — Remove and Install. — All Models — Right or Left Hand	.7	
10-187	FOLDING TOP HEADER JOINT WEATHERSTRIP (UPPER) — Remove and Install. — All Models	.4	
10-188	FOLDING TOP HEADER JOINT WEATHERSTRIP (LOWER) — Remove and Install. — All Models	.5	
10-189	WINDSHIELD FRONT PILLER WEATHERSTRIP — Remove and Install. All Models	.2	
10-190	TOP SIDE RAIL WEATHERSTRIP — FRONT — Remove and Install. — All Models — Right or Left Hand	.3	
10-191	TOP SIDE RAIL WEATHERSTRIP — INTERMEDIATE — Remove and Install. — All Models — Right or Left Hand	.3	

**TOP SIDE RAIL WEATHERSTRIP** — **REAR** — **Remove and Install.** — All Models — Right or Left Hand

# BODY REFINISHING INSTRUCTIONS

The necessary time for each operation is shown after the area locations as indicated by numbers on the car paint sketch below.

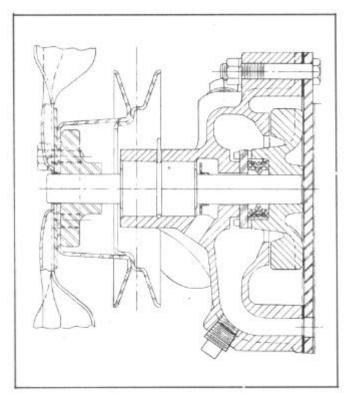
The flat rate times shown are for completely sanding, priming and refinishing the area as indicated on the sketch.

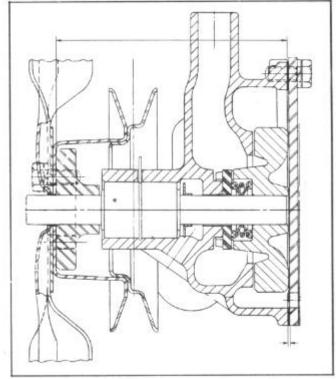


OPERATION NO.	AREA	
1	FRONT FENDER — (upper one side) — Refinish All Models	1.5
2	<b>HOOD</b> — (complete area) — Refinish All Models	3.0
3	ROOF PANEL — (front) — Refinish All Models	2.0
4	ROOF PANEL — (rear) — Refinish All Models	2.0
5	REAR COMPARTMENT DOOR — (complete area) — Refinish All Models	2.0
6	FRONT FENDER LOWER — (one side) — Refinish All Models	1.0
7	<b>FRONT DOOR UPPER PANEL</b> — (one side) — Refinish All Models.	1.0
8	FRONT DOOR LOWER PANEL — (one side) — Refinish All Models.	1.0
9	<b>REAR DOOR UPPER PANEL</b> — (one side) — Refinish All Models	1.0
10	<b>REAR DOOR LOWER PANEL</b> — (one side) — Refinish All Models	1.0
11	<b>REAR FENDER UPPER PANEL</b> — (one side) — Refinish All Models	1.5

## **BODY REFINISHING** — Continued

_	RATION NO.	AREA	F	PRICE
1	12	<b>REAR FENDER LOWER PANEL</b> — (one side) — Refinish All Models	1.0	
Sec Brou Co Conve	ETE CAR dans ghams upes ertibles	ONE COLOR 30. 29. 28. 24. g must be estimated according to local s.	TV	30.5 29.5 28.5 24.5
NOIL. 5	pot remisimi	g must be estimated according to local s.		
		COOLING SYSTEM		
11-1	COOLING	SYSTEM — Flush and Refill. — All Models	.5	
11-2	WATER J	ACKET COVER OR GASKET — Remove and Install.  All Models — 8 cylinder  With Drive-Master	1.4 2.4	
11-3	CYLINDE	R WATER JACKET PLUGS — Remove and Install.  All Models — 6 cyl. (3 plugs) front plug center plug rear plug	1.5 .7 .6 .4	
11-4	RADIATO	R CORE — Remove and Install. — All Models	.8	
11-5	RADIATO	PR DRAIN COCK — Remove and Install. — All Models	.3	
11-6	RADIATO	OR INLET HOSE — Remove and Install. — All Models	.4	
11-7	RADIATO	R OUTLET HOSE — Remove and Install. — All Models.	.5	
11-8		OR HOSE — WATER PUMP TO WATER JACKET — Remove stall. — All Models — 8 cylinder	.3	
11-9	RADIATO	PR BY-PASS HOSE — Remove and Install. All Models — 8 cylinder	.3	
11-10	RADIATO	R HOSES (all) — Remove and Install. — All Models	1.1	
11-11	THERMO	STAT HOUSING AND/OR GASKET—Remove and Install. All Models	.5	





**6-CYLINDER WATER PUMP** 

**8-CYLINDER WATER PUMP** 

## **COOLING SYSTEM — Continued**

## **WATER PUMP AND FAN**

11-12	WATER PUMP ASSEMBLY — Remove and Install. — All Models	1.0	
11-13	<b>WATER PUMP</b> — <b>OVERHAUL</b> . — Includes removal and installation, disassembly and inspection and replacement of any necessary parts.		
	All Models	1.7	
11-14	FAN BLADES — Remove and Install. — All Models	.3	
11-15	FAN BELT — Remove and Install and Adjust. — All Models .	.3	
11-16	FAN BELT — ADJUST only. — All Models	.2	
11-17	WATER DISTRIBUTING TUBE — Remove and Install.		
	All Models	3.0	
11-18	TEMPERATURE INDICATOR ELEMENT—Remove and Install.—		
	(Cylinder head unit). — All Models	.3	
	With Drive-Master — Add	.7	

## **EXHAUST SYSTEM**

12-1	EXHAUST MANIFOLD AND/OR GASKETS — Remove and Install. All Models — 8 cylinder 6 cylinder	1.9
	When necessary to drill out and replace broken stud — Add	.4
12-2	INTAKE MANIFOLD AND/OR GASKETS — Remove and Install.  All Models — 8 cylinder 6 cylinder	2.5
12-3	EXHAUST MANIFOLD DAMPER VALVE — Remove and Install.  All Models — 8 cylinder 6 cylinder	.3
12-4	EXHAUST MANIFOLD OUTLET ELBOW AND/OR GASKET — Remove and Install. — All Models	.8
12-5	EXHAUST PIPE FLANGE AND/OR GASKET — Remove and Install. All Models — 8 cylinder	.9
12-6	EXHAUST PIPE FLANGE GASKET — Remove and Install.  All Models — 6 cylinder	.8
12-7	EXHAUST PIPE (FRONT) — Remove and Install.  All Models — 8 cylinder  6 cylinder	2.0 1.2
12-8	EXHAUST PIPE (REAR) — Remove and Install. — All Models	.8
12-9	EXHAUST PIPE FRONT CLAMP — Remove and Install.  All Models	.5
12-10	EXHAUST MUFFLER — Remove and Install. — All Models	.7
12-11	MUFFLER CLAMP SUPPORT TO ENGINE REAR SUPPORT PLATE — Remove and Install. — All Models	.5
12-12	MUFFLER CLAMP REAR — Remove and Install. — All Models	.3
	ELECTRICAL	
13-1	<b>BATTERY</b> — <b>Remove and Install</b> — New or Charging. — Does not include recharge time. — All Models	.3
13-2	<b>BATTERY COVER</b> — Remove and Install. — All Models	.2
13-3	<b>BATTERY DRIP TRAY</b> — <b>Remove and Install.</b> — All Models	.4
13-4	BATTERY TO FRAME SUPPORT AND/OR BOLTS — Remove and Install. — Includes Breaking Welds on late 500 Series Cars.  All Models	.6

OPERATION	N DESCRIPTION	TIME	PRIC
	ELECTRICAL— Continued		
13.5	BATTERY CABLE TO STARTER MOTOR — Remove and Install.  All Models	.2	
13.6	BATTERY GROUND STRAP — Remove and Install. — All Models .	.2	
13.7	BATTERY TO STARTER CABLE AND GROUND STRAP — Remove and Install both. — All Models	.5	
13-8	BATTERY TERMINALS — Clean and apply a coating of grease.  All Models	.3	
	GENERATOR		
13-9	GENERATOR ASSEMBLY — Remove and Install. — All Models	.4	
13-10	GENERATOR BRACKET — Remove and Install. — All Models	.5	
13-11	GENERATOR — Check charging rate. — All Models.	.3	
13-12	GENERATOR COMMUTATOR — Clean commutator and brushes and adjust charging rate. — All Models	.5	
13-13	<b>GENERATOR OVERHAUL</b> — <b>Remove and Install.</b> — Clean, repair and replace any necessary parts and test — does not include turning armature or undercutting mica. — All Models	1.6	
13-14	<b>GENERATOR ARMATURE</b> — <b>Remove and Install.</b> — Includes turning armature on lathe and undercutting mica. — All Models	1.2	
13-15	GENERATOR VOLTAGE REGULATOR — Remove and Install.  All Models	.4	
	HORN		
13-16	HORN ASSEMBLY — Remove and Install.  All Models — one two	.3 .5	
13-17	HORN ASSEMBLY — Clean and adjust contacts without removing horn. All Models	.4	
13-18	HORN RING — Remove and Install. 480-490 Models 500 Custom Wheel	.2 .6	

13-19   HORN BUTTON WIRE — Remove and Install. — All Models       13-20   HORN RELAY — Remove and Install. — All Models       13-21   COIL — Remove and Install. — All Models       13-22   COIL — Test, make first and secondary check. — Includes remove and install. — All Models       13-23   DISTRIBUTOR ASSEMBLY — Remove and Install. — Includes checking flywheel timing.	PERATIO	N DESCRIPTION	TIME	PRIC
13-29   HORN BUTTON WIRE — Remove and Install. — All Models   2		EWHATIOT CVOTENA		
13-20   HORN RELAY — Remove and Install. — All Models   ELECTRICAL     13-21   COIL — Remove and Install. — All Models   3     13-22   COIL — Test, make first and secondary check. — Includes remove and install. — All Models   7     13-23   DISTRIBUTOR ASSEMBLY — Remove and Install. — Includes checking flywheel timing. All Models — 6 cyl. — With Drive-Master   7   8 cyl. — 7     13-24   DISTRIBUTOR ASSEMBLY — OVERHAUL — Includes remove and Install. — Disassembly and reassembly, replace any necessary parts, checking mechanical and vacuum advance, condenser, rotor, cap and setting flywheel timing. All Models — 6 cyl.   8 cyl.   1.6     13-25   DISTRIBUTOR POINTS — Clean or replace and adjust. — Includes checking flywheel timing. All Models — 8 cyl.   1.6     13-26   DISTRIBUTOR CAP — Remove and Install. — All Models   2   2     13-27   DISTRIBUTOR CONDENSER — Remove and Install. — All Models   2   3   3   6 cyl.   3   3   3   3     13-28   DISTRIBUTOR CONDENSER — Remove and Install. — All Models — 8 cyl.   3   3   3   3   3   3   3   3   3			_	
13-21   COIL — Remove and Install. — All Models	13-19	HORN BUTTON WIRE — Remove and Install. — All Models	.3	
13-21   COIL — Remove and Install. — All Models       13-22   COIL — Test, make first and secondary check. — Includes remove and install. — All Models       13-23   DISTRIBUTOR ASSEMBLY — Remove and Install. — Includes checking flywheel timing.	13-20	HORN RELAY — Remove and Install. — All Models	.2	
13-22   COIL — Test, make first and secondary check. — Includes remove and install. — All Models		ELECTRICAL		
13-23   DISTRIBUTOR ASSEMBLY — Remove and Install. — Includes checking flywheel timing. All Models — 6 cyl. — With Drive-Master	13-21	COIL — Remove and Install. — All Models	.3	
Section   Company   Comp	13-22		.7	
13-24   DISTRIBUTOR ASSEMBLY — OVERHAUL — Includes remove and Install. — Disassembly and reassembly, replace any necessary parts, checking mechanical and vacuum advance, condenser, rotor, cap and setting flywheel timing.    All Models — 6 cyl.	13-23	DISTRIBUTOR ASSEMBLY — Remove and Install. — Includes checking		
13-24   DISTRIBUTOR ASSEMBLY — OVERHAUL — Includes remove and Install. — Disassembly and reassembly, replace any necessary parts, checking mechanical and vacuum advance, condenser, rotor, cap and setting flywheel timing.    All Models — 6 cyl.			.6	
13-24   DISTRIBUTOR ASSEMBLY — OVERHAUL — Includes remove and Install. — Disassembly and reassembly, replace any necessary parts, checking mechanical and vacuum advance, condenser, rotor, cap and setting flywheel timing.    All Models — 6 cyl.			.7	
Disassembly and reassembly, replace any necessary parts, checking mechanical and vacuum advance, condenser, rotor, cap and setting flywheel timing.   All Models — 6 cyl.   8 cyl.   1.6		o cyi.	•/	
13-25   DISTRIBUTOR POINTS — Clean or replace and adjust. — Includes checking flywheel timing. All Models With Drive-Master   .7       13-26   DISTRIBUTOR CAP — Remove and Install. — All Models   .2       13-27   DISTRIBUTOR CONDENSER — Remove and Install.	13-24	Disassembly and reassembly, replace any necessary parts, checking mechanical		
13-25   DISTRIBUTOR POINTS — Clean or replace and adjust. — Includes checking flywheel timing. All Models With Drive-Master		All Models — 6 cyl.		
13-26   DISTRIBUTOR CAP — Remove and Install. — All Models   .6   .7       13-27   DISTRIBUTOR CONDENSER — Remove and Install. All Models — 8 cyl.		8 cyl.	1.6	
13-26   DISTRIBUTOR CAP — Remove and Install. — All Models   .2       13-27   DISTRIBUTOR CONDENSER — Remove and Install.	13-25	<b>DISTRIBUTOR POINTS</b> — Clean or replace and adjust. — Includes checking		
13-26   DISTRIBUTOR CAP — Remove and Install. — All Models   .2       13-27   DISTRIBUTOR CONDENSER — Remove and Install.		•	.6	
13-27   DISTRIBUTOR CONDENSER — Remove and Install.		With Drive-Master	.7	
All Models — 8 cyl.   3   3   3   3   3   4   5   6 cyl.   3   3   5   5   5   5   5   5   5   5	13-26	<b>DISTRIBUTOR CAP</b> — <b>Remove and Install.</b> — All Models	.2	
13-28   DISTRIBUTOR VACUUM ADVANCE UNIT—Remove and Install.   Includes setting flywheel timing. — All Models   .7       13-29   DISTRIBUTOR DRIVE SHAFT — Remove and Install. — Includes setting flywheel timing. — All Models   .8       13-30   IGNITION CABLES — Complete set — Remove and Install.   All Models — 6 cyl.   .5       8 cyl.   .6       13-31   IGNITION SWITCH AND/OR LOCK — Remove and Install.   All Models   .4       13-32   SPARK PLUGS — Remove and Install.   All Models — 6 cyl.   .8 cyl.   .3       13-33   SPARK PLUGS — Remove, Clean, Adjust and Reinstall.	13-27	DISTRIBUTOR CONDENSER — Remove and Install.		
13-28   DISTRIBUTOR VACUUM ADVANCE UNIT—Remove and Install.   Includes setting flywheel timing. — All Models   .7    13-29   DISTRIBUTOR DRIVE SHAFT — Remove and Install. — Includes setting flywheel timing. — All Models   .8    13-30   IGNITION CABLES — Complete set — Remove and Install.   All Models — 6 cyl.   .5    8 cyl.   .6    13-31   IGNITION SWITCH AND/OR LOCK — Remove and Install.   All Models		·		
13-28 DISTRIBUTOR VACUUM ADVANCE UNIT—Remove and Install. Includes setting flywheel timing. — All Models  13-29 DISTRIBUTOR DRIVE SHAFT — Remove and Install. — Includes setting flywheel timing. — All Models  13-30 IGNITION CABLES — Complete set — Remove and Install. All Models — 6 cyl. 8 cyl.  13-31 IGNITION SWITCH AND/OR LOCK — Remove and Install. All Models To replace ignition switch cable — Add  13-32 SPARK PLUGS — Remove and Install. All Models — 6 cyl. 8 cyl. 3 8 cyl.  13-33 SPARK PLUGS — Remove, Clean, Adjust and Reinstall.		· · · · · · · · · · · · · · · · · · ·	.3	
Includes setting flywheel timing. — All Models  13-29 DISTRIBUTOR DRIVE SHAFT — Remove and Install. — Includes setting flywheel timing. — All Models  13-30 IGNITION CABLES — Complete set — Remove and Install.  All Models — 6 cyl.  8 cyl.  13-31 IGNITION SWITCH AND/OR LOCK — Remove and Install.  All Models  To replace ignition switch cable — Add  13-32 SPARK PLUGS — Remove and Install.  All Models — 6 cyl.  8 cyl.  3  8 cyl.  13-33 SPARK PLUGS — Remove, Clean, Adjust and Reinstall.		With Drive-Master — 6 cyl.	.4	
13-29 DISTRIBUTOR DRIVE SHAFT — Remove and Install. — Includes setting flywheel timing. — All Models	13-28	DISTRIBUTOR VACUUM ADVANCE UNIT—Remove and Install.		
setting flywheel timing. — All Models  13-30 IGNITION CABLES — Complete set — Remove and Install.  All Models — 6 cyl.  8 cyl.  13-31 IGNITION SWITCH AND/OR LOCK — Remove and Install.  All Models  To replace ignition switch cable — Add  13-32 SPARK PLUGS — Remove and Install.  All Models — 6 cyl.  8 cyl.  3  8 cyl.  13-33 SPARK PLUGS — Remove, Clean, Adjust and Reinstall.		Includes setting flywheel timing. — All Models	.7	
setting flywheel timing. — All Models  13-30 IGNITION CABLES — Complete set — Remove and Install.  All Models — 6 cyl.  8 cyl.  13-31 IGNITION SWITCH AND/OR LOCK — Remove and Install.  All Models  To replace ignition switch cable — Add  13-32 SPARK PLUGS — Remove and Install.  All Models — 6 cyl.  8 cyl.  3  8 cyl.  13-33 SPARK PLUGS — Remove, Clean, Adjust and Reinstall.	13-29	DISTRIBUTOR DRIVE SHAFT — Remove and Install. — Includes		
All Models — 6 cyl. 8 cyl.  13-31 IGNITION SWITCH AND/OR LOCK — Remove and Install. All Models To replace ignition switch cable — Add  13-32 SPARK PLUGS — Remove and Install. All Models — 6 cyl. 8 cyl. 3 8 cyl.  13-33 SPARK PLUGS — Remove, Clean, Adjust and Reinstall.	10 2		.8	
All Models — 6 cyl. 8 cyl.  13-31 IGNITION SWITCH AND/OR LOCK — Remove and Install. All Models To replace ignition switch cable — Add  13-32 SPARK PLUGS — Remove and Install. All Models — 6 cyl. 8 cyl. 3 8 cyl.  13-33 SPARK PLUGS — Remove, Clean, Adjust and Reinstall.	12.20	AGNITIVON GARVEG. G. J. J. J. B. J.		
13-31 IGNITION SWITCH AND/OR LOCK — Remove and Install.  All Models To replace ignition switch cable — Add  13-32 SPARK PLUGS — Remove and Install.  All Models — 6 cyl. 8 cyl. 3 13-33 SPARK PLUGS — Remove, Clean, Adjust and Reinstall.	13-30		5	
13-31 IGNITION SWITCH AND/OR LOCK — Remove and Install.  All Models To replace ignition switch cable — Add  13-32 SPARK PLUGS — Remove and Install.  All Models — 6 cyl. 8 cyl.  3 8 cyl.  13-33 SPARK PLUGS — Remove, Clean, Adjust and Reinstall.			.6	
All Models				
To replace ignition switch cable — Add  13-32 SPARK PLUGS — Remove and Install.  All Models — 6 cyl. 8 cyl.  3 13-33 SPARK PLUGS — Remove, Clean, Adjust and Reinstall.	13-31		4	
13-32 SPARK PLUGS — Remove and Install.  All Models — 6 cyl. 8 cyl.  3  8 cyl.  13-33 SPARK PLUGS — Remove, Clean, Adjust and Reinstall.			.6 .6	
All Models — 6 cyl.		·		
8 cyl4  13-33 SPARK PLUGS — Remove, Clean, Adjust and Reinstall.	13-32		2	
13-33 SPARK PLUGS — Remove, Clean, Adjust and Reinstall.			.3 .4	
, , <b>,</b>		5 5,	••	
All Models — 6 cyl5	13-33		-	
		•	.5	

PRICE **OPERATION** DESCRIPTION TIME

## **ELECTRICAL**— Continued

	LIGHTS	
13-34	<b>HEADLIGHT ASSEMBLY — Remove and Install one</b> — Adjust two All Models	.8
13-35	HEADLIGHT SEALED BEAM UNIT — Remove and Install one. — Includes adjusting beam	.3
13-36	HEADLIGHTS — Adjust. — All Models	.2
13-37	PARKING LIGHTS — Remove and Install.  All Models — one two Light Bulb (only) one	.2 .3 .1
13-38	FENDER LIGHTS OR BULB OR LENS — Remove and Install.  All Models	.3
13-39	HOOD LIGHT CREST OR LENS — Remove and Install.  All Models — 480-490-500  "A" Series  Bulb 480-490-500  "A" Series	.3 .5 .1 .2
13-40	STOPLIGHT — SWITCH — Remove and Install. — All Models	.3
13-41	TAILSLIGHT GLASS OR BULB — Remove and Install.  All Models	.2
13-42	COURTESY LIGHT — Remove and Install lens or bulb. —All Models	.2
13-43	DOME LIGHT — Remove and Install Lens or Bulb. All Models	.2
	STARTER MOTOR	
13-44	STARTER MOTOR ASSEMBLY — Remove and Install.  All Models  With Drive-Master	.5 1.9
13-45	STARTER MOTOR ASSEMBLY — OVERHAUL. — Includes remove and install, clean, replace any necessary parts.  All Models  With Drive-Master	1.9 3.3
13-46	STARTER MOTOR SOLENOID ASSEMBLY—Remove and Install. All Models — 480-490-500 With Drive-Master All Model "A" Series	.4 .5 .2
13-47	STARTER BUTTON AND SWITCH ASSEMBLY — Remove and Install. All Models	.2
13-48	STARTER BENDIX DRIVE — Remove and Install with starter removed. All Models	.3
13-49	STARTER BENDIX COVER. — Install all Standard Models With Drive-Master	.5 1.3

## **ACCESSORIES**

14-1	BACK-UP LIGHT — Install.  All Models — one two	1.6 1.8
14-2	BATTERY FILLER — Install. — All Models	.5
14-3	CIGARETTE LIGHTER — Install. — On models not so equipped	.7
14-4	CIGARETTE LIGHTER ELEMENT — Remove and Install.  All Models	.2
14-5	CURB SIGNALS — Install. — All Models	.3
14-6	<b>CLOCK</b> — <b>ELECTRIC</b> — <b>Install.</b> — Includes removing old clock and installing electric type. — All Models	.6
14-7	<b>DIRECTION INDICATOR</b> — <b>Install.</b> — All Models	.5
14-8	DIRECTION INDICATOR SWITCH AND WIRES ASSEMBLY — Remove and Install. — All Models	.6
14-9	EXHAUST DEFLECTOR — Install. — All Models	.1
14-10	FOG LIGHTS (two) — Install. — All Models	1.0
14-11	FRONT FENDER TOP ORNAMENT KIT — Install. — All Models	.6
14-12	FRONT DOOR VENT WING SHIELDS — Install. — All Models.	1.2
14-13	GAS TANK LOCKING CAP — ELECTRIC — Install. — All Models	.1
14-14	GLARE PROOF MIRROR — Install. — All Models	2.5
14-15	HILL HOLD KIT — Install. — All Models	.2
14-16	HUB CAP KIT (large) — Install. — All Models	.5
14-17	KARVISOR — Install. — All Models Paint Traffic Light Viewer	1.0 .2
14-18	KLEENEX TISSUE DISPENSER — Install. — All Models	.2
14-19	LICENSE PLATE FRAME — Install.  All Models — adjustable custom	.2
14-20	MOULDING KITS — FENDER AND SIDE BODY PANELS — Install. All Models — Sedans Broughams and Coupes	2.0 1.8
14-21	OIL FILTERS — Install.  All Models — 6 cyl.  8 cyl.  With Drive-Master — 6 cyl.	.5 1.5 1.9
14-22	OUTSIDE REAR VIEW MIRROR — Install. — All Models	.3
		<del>-</del>

OPERATION	DESCRIPTION	TIME PRICE		
ACCESSORIES — Continued				
14-23	RADIO ANTENNA — Install. — All Models	.9		
14-24	RADIO ANTENNA — Remove and Install. — All Models	.4		
14-25	RADIO ASSEMBLY — Install (installation initial). — Includes antenna and speaker installation. — All Models	2.3		
14-26	RADIO ASSEMBLY — Install. — All Models	1.4		
14-27	RADIO DIAL LIGHT BULB — Install. — All Models	1.0		
14-28	RADIO REAR SEAT SPEAKER — Install. — All Models	2.5		
14-29	<b>RADIO RECEIVER</b> — <b>Remove and Install.</b> — All Models	1.0		
14-30	RADIO SPEAKER ASSEMBLY — Install. — All Models	.3		
14-31	RADIATOR GRILLE GUARD — Install. — All Models	.5		
14-32	REAR BUMPER GUARD — Install. — All Models	.7		
14-33	REAR WINDOW WIPER — Install. — All Models	1.7		
14-34	SEAT COVERS — Install.  Commodore Series — Broughams and Coupes Sedans  Super Series — Broughams and Coupes Sedans	2.2 2.0 1.8 1.6		
14-35	SPARE TIRE VALVE EXTENSION — Install. — All Models	.3		
14-36	SPOT LIGHT — Install. — All Models	1.0		
14-37	STEERING WHEEL KIT (DELUXE) — Remove and Install. All Models	.6		
14-38	UNDER SEAT HEATER — Install. — All Models	3.0		
14-39	UTILITY LIGHT KIT (3 UNITS) — Install. — All Models	1.5		
14-40	WEATHER CONTROL — COMPLETE UNIT — Install. All Models	2.3		
14-41	WEATHER CONTROL MOTOR — Remove and Install.  All Models	1.3		
14-42	WEATHER CONTROL CORE — Remove and Install. All Models	1.5		
14-43	WHEEL TRIM RINGS KIT — Install. — All Models	.5		
14-44	WHITE SIDE WALL TIRES (Five) — Install. — All Models	1.7		
14-45	WINDOW VENT SHADES — Doors and Quarter Windows.  All Models — Broughams and Coupes Sedans	.6 .9		
14-46	WINDSHIELD WASHER — Install. — All Models	1.0		

## FRAME AND SHEET METAL

## FENDERS AND DOOR MOULDING

15-1	engine frame from underbody. Breaking welds at #3 and #4 crossmembers and removing bolts at #4 crossmember and installing a new engine frame, welding and replacing bolts. —	
	Does not include any engine or sheet metal work. — All Models	6.8
15-2	<b>FRONT FRAME #2 CROSSMEMBER</b> — <b>Remove and Install.</b> —Includes disconnect lower support arms, removing shock absorbers, coil springs, five bolts each side of crossmember to engine frame and center steering arm bracket. — All Models	.2
15-3	<b>FRONT FRAME #3 CROSSMEMBER</b> — <b>Remove and Install.</b> —Includes disconnect hand brake, removing bolts at rear engine supports and frame. All Models with Hydra-matic Transmissions	1.4
15-4	FRONT FENDER — Remove and Install. — All Models — one side	3.3
15-5	FRONT FENDER ORNAMENT — Remove and Install.  Commodore Models	.3
15-6	FRONT FENDER NAME PLATE — Remove and Install (one) . All 480-490 Models	.2
15-7	FRONT FENDER SIDE DUST SHIELD — Remove and Install.  All Models	.7
15-8	FRONT FENDER SIDE DUST SHIELD EXTENSION — Remove and Install.  All Models	.4
15-9	FRONT FENDER MOULDING AND NAME PLATE—Remove and Install (one). 500 Series or "A" Series — All Models — Pacemakers	.5 .2
15-10	DOOR (UPPER) MOULDINGS — Remove and Install on any door.  All Models	.2
15-11	FRONT FENDER EXTENSION—Remove and. Install. — All Models	.6
15-12	FRONT FENDER STONE GUARD — Remove and Install.  All Models	.4
15-13	REAR FENDER — Remove and Install.  All Models — Sedans — Right Hand Sedans — Left Hand Broughams and Coupes — Right Hand Broughams and Coupes — Left Hand	2.3 2.5 3.2 3.4
15-14	REAR FENDER MOULDING AND ORNAMENT — Remove and Install (one) on 500 Series or "A" Series. — All Models	.3
15-15	REAR FENDER GAS TANK FILLER DOOR—Remove and Install. All Models	.2
15-16	GAS TANK FILLER DOOR SPRINGS (two) —Remove and Install All Models	.2
15-17	GAS TANK FILLER NECK GROMMET — Remove and Install. All Models	.2

## FRAME AND SHEET METAL — Continued

	TRAME AND SHEET METAL — Continued	
15-18	REAR FENDER WATER BAFFLE AND DRAIN TROUGH — Remove and Install. — All Models — one side	1.8
	ROCKER PANELS AND MOULDINGS	
15-19	ROCKER PANEL — Remove and Install one. — All Models  Moulding — "A" Series ("V" Type) — Remove and  Install — All Models  Moulding — All Other Models — Remove and Install.	.7 .6 .6
15-20	ROCKER PANEL EXTENSION — Remove and Install one.  All Models  Moulding — Remove and Install one — All Models	.3
15-21	ROCKER PANEL LOWER MOULDING — Remove and Install one All Models	.2
15-22	FENDER (FRONT) LOWER MOULDING — Remove and Install one.  All Models	.2
15-23	ROCKER PANEL UPPER AND LOWER MOULDING — Remove and Install one. — All Models	.3
15-24	FENDER (REAR) LOWER MOULDING — Remove and Install one.  All Models	.2
15-25	ROCKER PANEL (REAR) LOWER MOULDING—Remove and Install one. All Models	.2
15-26	REAR WHEEL COVER AND ROD ASSEMBLY — Remove and Install one. All Models	.2
15-27	REAR WHEEL COVER — UPPER MOULDING — Remove and Install one. All Models	.4
15-28	REAR WHEEL COVER — LOWER MOULDING — Remove and Install one. All Models	.3
15-29	<b>DOOR SCUFF PLATE</b> — <b>Remove and Install</b> . — Front or Rear. All Models	.3
	HOOD	
15-30	<b>HOOD</b> — Remove and Install and Adjust. — All Models	.6
15-31	HOOD — Adjust. — Includes adjusting lock lower support plate.  All Models	.4
15-32	HOOD LOCK LOWER SUPPORT PLATE — Remove, Install and Adjust. All Models	.3
15-33	<b>HOOD LOCK</b> — <b>UPPER</b> — <b>Remove and Install</b> . — All Models	.3
15-34	HOOD PROP — Remove and Install — Right or Left. All Models	.2

OPERATION	DESCRIPTION	TIME	PRICE
	FRAME AND SHEET METAL — Continued		
15-35	HOOD PROP SPRING — Remove and Install — Right or Left.  All Models	.3	
15-36	HOOD HINGE — Remove and Install. — All Models	.9	
15-37	HOOD HINGE RETURN SPRING — Remove and Install.  All Models	.9	
15-38	HOOD CONTROL KNOB AND WIRE ASSEMBLY — Remove and Install. All Models	.3	
15-39	HOOD CREST, LIGHT BULB OR LENS — Remove and Install All 480, 490 and 500 Models	.4	
	HOOD CREST LIGHT BULB, SOCKET OR WIRE — Remove and Install.  All "A" Series Models	.5	
15-41	HOOD LOUVRE (UPPER) Remove and Install — Right or Left All 480, 490 and 500 Series	.2	
15-42	HOOD LOUVRE (LOWER) Remove and Install — Right or Left. All 480, 490 and 500 Series	.3	
	GRILLE		
	GRILLE LOUVRE (UPPER) AND FENDER TIE PANEL COMPLETE ASSEMBLY — Remove and Install.  All "A" Series Models	.6	
15-44	GRILLE LOUVRE (UPPER) Right or Left — Remove and Install.  All "A" Series Models — Includes operation 15-40	.7	
15-45	GRILLE LOUVRE (CENTER) Right or Left—Remove and Install. With grille assembly removed. All "A" Series Models	.7	
15-46	GRILLE LOUVRE (LOWER) Right or Left — Remove and Install. With grille assembly removed.		
	All "A" Series Models	.7	
15-47	GRILLE — LOWER SPLASH APRON — Remove and Install. — All "A" Series Models. With grille assembly removed	.3	
	With bumper removed	.3	
	FENDER TIE PANEL AND HOOD LOCK LOWER SUPPORT— Remove and Install. — 480, 490 and 500 Models	.6	
	RADIATOR GRILLE CENTER BAR (UPPER OR LOWER) — Remove and Install. — All 480-490 Models	.3	
15-50	GRILLE BAFFLE OR MOULDING — Remove and Install. — Center or Lower — Right or Left.	_	
	All 480, 490 Models — one six	.2 .5	

## FRAME AND SHEET METAL — Continued

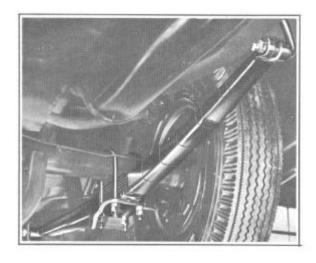
15-51	GRILLE TO RADIATOR DEFLECTOR AND BAFFLE SUPPORT  — Remove and Install.	
	All 500 and "A" Series Models	1.1
15-52	<b>GRILLE COMPLETE ASSEMBLY</b> — <b>Remove and Install.</b> —Includes removing and installing fender tie panel, hood crest, parking lights, and disassembling and replacing any louvre, baffle, lower splash apron or struts. All "A" Series Models	3.5
15-53	PARKING LIGHTS — Remove and Install.  All Series Models — one — two	.3 .5
15-54	GRILLE STRUT CAP — Remove and Install.  All "A" Series — one — two With grille removed — two	.3 .5 .2
15-55	GRILLE STRUT ASSEMBLY — Remove and Install. — With grille removed. All "A" Series Models	.2
15-56	GRILLE STRUT CAP — Remove and Install. All 500 Series Models	.2
15-57	GRILLE STRUT ASSEMBLY — Remove and Install.  All 500 Series Models — one side — both sides Grille strut moulding (one only)	.7 1.1 .2
15-58	GRILLE FRONT SPLASH GUARD AND MOULDING — Remove and Install.  All 480 and 490 Models	.4
15-59	GRILLE FRONT SPLASH GUARD, CENTER STRUTS AND MOULDING — Remove and Install.  All 500 Series	.9
15-60	GRILLE LOUVRES (LOWER) Right or Left — Remove and Install. 501, 502, 503, 504 Models	.6
15-61	GRILLE MOULDING (LOWER) — Remove and Install. 500 Model only	.3
15-62	GRILLE MOULDING — UPPER OR INTERMEDIATE — Right or Left — Remove and Install.  500 Series	.4
15-63	GRILLE BAFFLE — UPPER, INTERMEDIATE OR LOWER — Remove and Install.  All 500 Series	.6
15-64	COWL VENTILATOR ASSEMBLY — Remove and Install.  All Models	.8

## **BUMPERS**

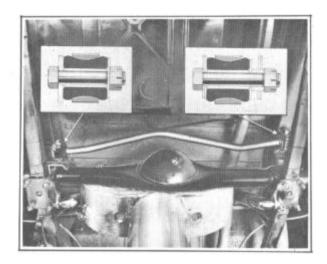
16-1	FRONT BUMPER ASSEMBLY — Remove and Install.  All Models	.6
16-2	FRONT BUMPER IMPACT BAR — Remove and Install. All Models	.8
16-3	FRONT BUMPER TO FRAME BRACKET — Remove and Install. All Models	.6
16-4	FRONT BUMPER GUARD ASSEMBLY (INNER) —Remove and Install. All Models — right or left	.3
16-5	FRONT OR REAR BUMPER GUARD — Remove and Install.  All Models — right or left hand	.3
16-6	FRONT BUMPER LICENSE GUARD (LOWER) — Remove and Install. All Models	.2
16-7	FRONT BUMPER LICENSE GUARD (UPPER) — Remove and Install. All Models	.3
16-8	REAR BUMPER ASSEMBLY — Remove and Install. — All Models	.7
16-9	REAR BUMPER IMPACT BAR — Remove and Install. All Models	.5
16-10	REAR BUMPER GUARD AND LICENSE LIGHT — Remove and Install. 500 Model Commodores — one	.6
16-11	REAR BUMPER STONE GUARD — Remove and Install.  All Models	.3
16.12	REAR LICENSE PLATE BRACKET ASSEMBLY — Remove and Install. All Models	.2
	REAR SUSPENSION	
17-1	REAR SPRING — Remove and Install.	
	All Models — one	1.4
	two	2.3
17-2	REAR SPRING COVER (METAL) — Remove and Install.	2.0
	All Models — one spring two springs	2.0 3.6
17 2	REAR SPRING LEAF — Remove and Install.	
17-3	All Models — one spring	2.2
	two springs	3.8
17-4	REAR SPRING SHACKLE AND/OR BUSHING — Remove and	
-	Install. All Models — one spring	.4
	two springs	.8

two springs

**REAR SPRING MOUNTING CLIPS (TIGHTEN).** — All Models



17-7



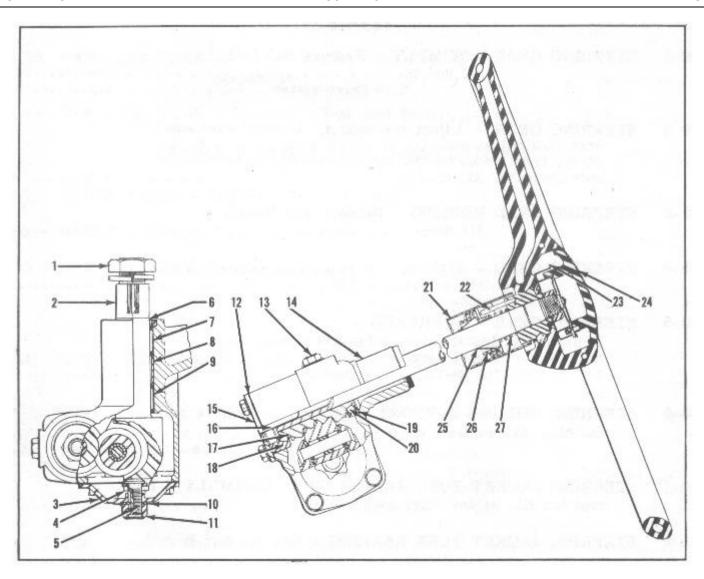
### **REAR SPRING MOUNTING**

### **REAR STABILIZER MOUNTING**

17-8	SPRING SHACKLE BUSHINGS AND SPRING CLIPS — Tighten both.  All Models	.6
17-9	<b>REAR SPRINGS</b> — <b>Remove and Install</b> — <b>both</b> . — Replace shackle bushings and shackle "U" bolts and lubricate. — All Models	3.5
17-10	REAR SPRING REMOVAL AND LUBRICATION — Remove and Install. — Includes springs, spring covers, cleaning springs and lubrication. — All Models — two	4.1
17-11	REAR SHOCK ABSORBERS AND/OR RUBBER BUSHINGS — Remove and Install.	.5
17-12	All Models — one two	.8
	REAR STABILIZER AND/OR RUBBER BUSHINGS — Remove and Install. All Models	
	FUEL SYSTEM	
18-1	CARBURETOR ASSEMBLY — Remove and Install. — All Models	.4
18-2	CARBURETOR ASSEMBLY — OVERHAUL. — When removed from engine.	2.0

18-3 CARBURETOR ASSEMBLY — Remove and Install. — I assembly, clean and overhaul, replace necessary parts and  18-4 CARBURETOR ASSEMBLY — CHECK WITH VACUU All Models  18-5 CARBURETOR FLOAT OR NEEDLE VALVE—Remove Includes adjusting float level, remove and install carburete All Models  18-6 CARBURETOR AUTOMATIC CHOKE — Remove and Includes cleaning and overhaul. — All Models  18-7 CARBURETOR AIR CLEANER — Remove and Install. All Models — oil bath refill dry clean  18-8 CARBURETOR TO EXHAUST MANIFOLD HEAT TUE Remove and Install. All Models — 8 cyl.  18-9 CARBURETOR IDLE PORT PLUGS AND METERING Install. — All Models  18-10 STANDARD FUEL PUMP AND/OR GASKET — Remove Install. — All Models — 6 cyl.	Includes disassembly and disadjust. — All Models  2.4 UM GAUGE  .3	
18-4 CARBURETOR ASSEMBLY — CHECK WITH VACUU All Models  18-5 CARBURETOR FLOAT OR NEEDLE VALVE—Remove Includes adjusting float level, remove and install carburete All Models  18-6 CARBURETOR AUTOMATIC CHOKE — Remove and Includes cleaning and overhaul. — All Models  18-7 CARBURETOR AIR CLEANER — Remove and Install. All Models — oil bath refill dry clean  18-8 CARBURETOR TO EXHAUST MANIFOLD HEAT TUE Remove and Install.  All Models — 8 cyl.  18-9 CARBURETOR IDLE PORT PLUGS AND METERING Install. — All Models  18-10 STANDARD FUEL PUMP AND/OR GASKET — Remove	2.4 UM GAUGE 3	
All Models  18-5 CARBURETOR FLOAT OR NEEDLE VALVE—Remove Includes adjusting float level, remove and install carburete All Models  18-6 CARBURETOR AUTOMATIC CHOKE — Remove and Includes cleaning and overhaul. — All Models  18-7 CARBURETOR AIR CLEANER — Remove and Install. All Models — oil bath refill dry clean  18-8 CARBURETOR TO EXHAUST MANIFOLD HEAT TUE Remove and Install.  All Models — 8 cyl.  18-9 CARBURETOR IDLE PORT PLUGS AND METERING Install. — All Models  18-10 STANDARD FUEL PUMP AND/OR GASKET — Remove	.3	
Includes adjusting float level, remove and install carburete All Models  18-6 CARBURETOR AUTOMATIC CHOKE — Remove and Includes cleaning and overhaul. — All Models  18-7 CARBURETOR AIR CLEANER — Remove and Install. All Models — oil bath refill dry clean  18-8 CARBURETOR TO EXHAUST MANIFOLD HEAT TUE Remove and Install.  All Models — 8 cyl.  18-9 CARBURETOR IDLE PORT PLUGS AND METERING Install. — All Models  18-10 STANDARD FUEL PUMP AND/OR GASKET — Remove	17 / 11	
Includes cleaning and overhaul. — All Models  18-7 CARBURETOR AIR CLEANER — Remove and Install.  All Models — oil bath refill dry clean  18-8 CARBURETOR TO EXHAUST MANIFOLD HEAT TUE Remove and Install.  All Models — 8 cyl.  18-9 CARBURETOR IDLE PORT PLUGS AND METERING Install. — All Models  18-10 STANDARD FUEL PUMP AND/OR GASKET — Remove		
All Models — oil bath refill dry clean  18-8 CARBURETOR TO EXHAUST MANIFOLD HEAT TUE Remove and Install.  All Models — 8 cyl.  18-9 CARBURETOR IDLE PORT PLUGS AND METERING Install. — All Models  18-10 STANDARD FUEL PUMP AND/OR GASKET — Remove	Install7	
Remove and Install.  All Models — 8 cyl.  18-9 CARBURETOR IDLE PORT PLUGS AND METERING Install. — All Models  18-10 STANDARD FUEL PUMP AND/OR GASKET — Remov	.4	
<ul> <li>18-9 CARBURETOR IDLE PORT PLUGS AND METERING Install. — All Models</li> <li>18-10 STANDARD FUEL PUMP AND/OR GASKET — Remov</li> </ul>	BE — .3	
8 cyl.	ve and .6 1.4	
18-11 STANDARD FUEL PUMP — OVERHAUL—When remo car. All Models	oved from .8	
18-12 COMBINATION FUEL PUMP AND/OR GASKET — ReInstall.  All Models — 6 cyl. 8 cyl.	.7 1.5	
18-13 COMBINATION FUEL PUMP — OVERHAUL — When from car. All Models	n removed 1.0	
18-14 FUEL PUMP SEDIMENT BOWL AND SCREEN — Rem and Install. All Models	nove, Clean .4	
18-15 FUEL PUMP FLEXIBLE HOSE — Remove and Install.  All Models	.4	
18-16 GAS LINE, FUEL PUMP TO TANK — Remove and Insta	all7	
18-17 GAS LINE, FUEL PUMP TO CARBURETOR—Remove All Models	and Install2	
<b>18-18</b> GASOLINE GAUGE DASH UNIT — Remove and Install 480-490 Models — 500 Series	.7	
18-19 GASOLINE TANK GAUGE — Remove and Install. — Al	ll Models6	
18-20 GASOLINE TANK — Remove, Clean and Install. — All N	Models 1.8	
LUBRICATION AND I	INSDECTION	
19-1 <b>LUBRICATION</b> — <b>COMPLETE.</b> — All Models	INSPECTION	

**DESCRIPTION** TIME PRICE **OPERATION FUEL SYSTEM — Continued** 19-2 VACUUM CLEAN CAR. — All Models .2 PRE-DELIVERY INSPECTION AND ADJUSTMENTS. 19-3 All 6 cylinder Models All 8 cylinder Models 19-4 1,000 MILE INSPECTION AND ADJUSTMENT. 2.0 \_\_\_\_\_ 2.1 \_\_\_\_ All 6 cylinder Models All 8 cylinder Models 19-5 2,000 MILE INSPECTION AND ADJUSTMENT. 4.0 \_\_\_\_\_ 4.9 \_\_\_\_ All 6 cylinder Models All 8 cylinder Models **CLUTCH** — **Drain, Flush and Refill.** — All Models 19-6 .4 19-7 **DIFFERENTIAL** — **Drain, Flush and Refill.** — All Models .4 19-8 FRONT WHEEL BEARINGS — Remove, Clean, Repack, Install and Adjust. All Models .6 REAR WHEEL BEARINGS — Remove, Clean, Repack, Install and 19-9 1.7 Adjust. All Models 19-10 REAR SPRINGS — LUBRICATE. All Models — one spring two springs .3 19-11 STEERING GEAR — LUBRICATE. — All Models .4 \_\_\_\_\_ 19-12 TRANSMISSION — Drain, Flush and Refill (Standard Transmission) 19-13 TRANSMISSION — Drain and Refill (Hydramatic ) .7 \_\_\_\_\_ 19-14 VACUMOTIVE DRIVE POWER CYLINDER—Fill with one ounce of shock absorber fluid. — 480-490 Models .3 STEERING 20-1 STEERING GEAR ASSEMBLY — Remove and Install. 3.9 \_\_\_\_\_ All Models 4.2 With Drive-Master 20-2 STEERING GEAR — Adjust throughout. — Includes disconnect drag link, adjust end play of sector shaft, adjust front wheel toe-in, set gear on high spot and lubricate. — All Models 1.6 \_\_\_\_\_ 20-3 STEERING GEAR HOUSING — Remove and Install. — All Models .7 \_\_\_\_\_ 20-4 STEERING GEAR — Tighten (To frame side member) . All Models .3 \_\_\_\_\_ 20-5 STEERING GEAR — OVERHAUL ON BENCH. — Includes disassemble and reassemble, renew any necessary parts and adjust.—Add to operation 20-1. — All Models 1.2 20-6 STEERING COLUMN SUPPORT BRACKET—Remove and Install. All Models — upper half lower half 20-7 STEERING JACKET TUBE AND BEARING ASSEMBLY — Remove 1.2 and Install. — All Models



## Steering Gear

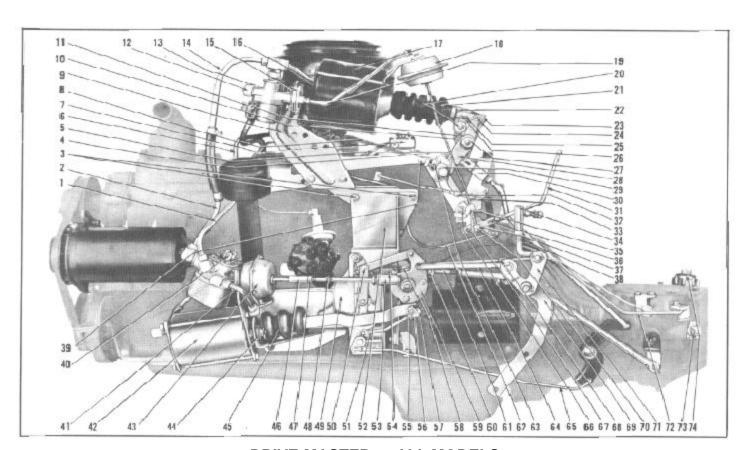
1.	Gear shaft nut	15.	Worm shaft cover
2.	Gear shaft	16.	Grease retainer tube
3.	Gear shaft cover	17.	Worm shaft lower bearing
4.	Adjusting screw thrust plate	18.	Worm shaft lower bearing cup
5.	Adjusting screw	19.	Worm shaft upper bearing cup
6.	Oil retainer	20.	Worm shaft upper bearing
7.	Needle bearing	21.	Jacket tube
8.	Spacer	22.	Direction indicator cancelling pin
9.	Needle bearing	23.	Horn button contact cup
10.	Adjusting screw lock plate	24.	Horn button
11.	Adjusting screw lock nut	25.	Jacket tube bearing spacer
12.	Worm cover shims	26.	Jacket tube bearing
13.	Oil filler plug	27.	Jacket tube spring
14.	Main column tube		

OPERATION	DESCRIPTION	TIME	PRICE
	STEERING — Continued		
20-8	STEERING JACKET TUBE BEARING — Remove and Install. All Models	.8	
20-9	STEERING GEAR SECTOR SHAFT — Remove and Install.  All Models  With Drive-Master (includes adjustment)  To replace oil seal — Add	1.3 2.7 .2	
20-10	STEERING GEAR SECTOR SHAFT— Adjust end play. All Models	.6	
20-11	STEERING GEAR WORM AND TUBE ASSEMBLY — Remove and Install. — Includes adjustment.  All Models With Drive-Master	5.1 5.4	
	With steering gear removed	1.2	
20-12	STEERING WHEEL — Remove and Install. — All Models	.6	
20-13	STEERING WHEEL — TIGHTEN ONLY. — All Models	.3	
20-14	STEERING WHEEL HORN RING OR HORN BUTTON — Remove and Install.  All Models	.2	
20-15	STEERING PITMAN ARM — Remove and Install. All Models With Drive-Master	.7 2.0	
	VACUMOTIVE DRIVE		
21- <b>1</b>	VACUMOTIVE DRIVE — Install on cars not so equipped. All 480 and 490 Models	3.8	
21- <b>2</b>	VACUMOTIVE DRIVE — Adjust and Lubricate. All 480 and 490 Models	.6	
21-3	VACUMOTIVE POWER CYLINDER — Remove and Install. — Includes adjusting. — All 480 and 490 Models	1.8	
21- <b>4</b>	VACUMOTIVE POWER CYLINDER — Overhaul. — Includes removing and installing and adjusting. — All 480-490 Models	2.6	
21-5	MOUNTING BRACKET — Remove and Install. All 480 and 490 Models	.8	
21 <b>-6</b>	SOLENOID VALVE AND/OR GASKET — Remove and Install. All 480 and 490 Models	.3	
21- <b>7</b>	BELLCRANK— Remove and Install. — All 480 and 490 Models	1.0	
21-8	VALVE LEVER OR COMPENSATOR LEVER—Remove and Install. All 480 and 490 Models	.8	
21 <b>-9</b>	VALVE LEVER CAM — Remove and Install. All 480 and 490 Models	.2	
21-10	VALVE LEVER CAM PIVOT — Remove and Install. All 480 and 490 Models	.4	
21-11	BELLCRANK TO COUPLING LEVER ROD AND/OR PLAY LINK  — Remove, Install and Adjust. — All 480 and 490 Models	1.2	

OPERATION	DESCRIPTION	TIME PRICE

### VACUMOTIVE DRIVE — Continued 21-12 **COMPENSATOR TRIP LEVER SPRING** — Remove and Install. All 480 and 490 Models .7 \_\_\_\_\_ 21-13 PISTON ROD BOOT — Remove and Install. .9 All 480 and 490 Models 21-14 PISTON ROD END, PIN AND/OR LINK — Remove and Install All 480 and 490 Models 21-15 ACCELERATOR CROSS SHAFT AND LEVER ASSEMBLY — Remove, **Install and Adjust.** — All 480 and 490 Models 21.16 VALVE LEVER CAM THREADED SLEEVE ROD ASSEMBLY — Remove, Install and Adjust. — All 480 and 490 Models 21-17 **INSTRUMENT PANEL SWITCH — Remove and Install.** .3 All 480 and 490 Models 21-18 SHIFT RAIL SWITCH — Remove and Install. All 480 and 490 Models .3 \_\_\_\_\_ 21-19 GOVERNOR SWITCH AND/OR PINION — Remove and Install All 480 and 490 Models 21-20 ACCELERATOR SWITCH — Remove, Install and Check Adjustment. All 480 and 490 Models 21-21 VACUMOTIVE WIRE HARNESS CHECK. —All 480 and 490 Models

With Overdrive — Add



OPERATION DESCRIPTION TIME PRICE

#### **DRIVE-MASTER**

22-1 DRIVE -MASTER ADJUSTMENT - Includes bell crank yoke, clutch power cylinder piston travel, cushion point test for clutch engagement, throttle lock cable, power cylinder rod, transfer diaphragm rod, check for free movement at throttle linkage, throttle cross rod, shift shaft transfer key ball socket, check all rod retainer clips, wire terminals, transmission switch boot, governor switch boot, position remote control shift lever and tighten set screw in transfer key hub, check all vacuum line connections and hoses.

All Models .9

## **DRIVE -MASTER CHECK-UP** - With test lamp and test

harness. All Models 1.5

#### **DRIVE-MASTER LEGEND**

1.	Power Unit Air Intake Pipe Assy.	38.	Bellcrank Rod and Ball Joint Assy.
2.	Power Unit Vacuum Pipe Assy.	39.	Valve Lever Cam Adjusting Screw Nut
3.	Power Unit Mounting Bracket Studs	40.	Transfer Diaphragm Solenoids
4.	Clutch Unit Bellcrank Bracket Assy.	41.	Solenoids to Power Cylinder Tube Assy.
5.	Accelerator Switch to Cross Shaft Rod	42.	Power Cylinder Assembly
6.	Power Unit to Air Cleaner Pipe Assy.	43.	Transfer Diaphragm Assembly
7.	Accelerator Switch	44.	Power Cylinder Mounting Stud
8.	Clutch Power Cylinder Tension Spring	45.	Power Cylinder Piston Guard
9.	Clutch Power Unit Mounting Bracket	46.	Transfer Diaphragm and Rod Assy.
10.	Clutch Unit Compensator Trip Lever	47.	Transfer Rod Lock Nut
11.	Clutch Unit Compensator Lever Spring	48.	Transfer Diaphragm Engaging Rod Assy.
12.	Clutch Unit Solenoid Valve Assy.	49.	Transmission Control Switch Assy.
13.	Throttle Lock Solenoid Valve Assy.	50.	Selector Switch Lever
14.	Solenoid to Power Shift Pipe Assy.	51.	Neutral and Limit Switch Rod Assy.
15.	Clutch Power Unit Solenoid Gasket	52.	Power Unit Mounting Bracket Assy.
16.	Vacuum Pipe Assy.	53.	Transfer Rod Ball Joint
17.	Clutch Power Unit Cylinder Assembly	54.	Transfer Key
18.	Throttle Lock Diaphragm Cylinder Assy.	55.	Neutral and Limit Switch Rod Lock Nut
19.	Throttle Lock Solenoid Tube Assy.	56.	Neutral and Limit Switch Trunnion Block
20.	Clutch Unit Compensator Lever Shaft	57.	Neutral and Limit Switch Rod Lock Nut
21.	Clutch Power Unit Piston Rod Guard	58.	Shift Shaft Transfer Key, Hub Assy.
22.	Clutch Power Unit Piston Rod Assy.	59.	Shift Shaft (Hand Shift) Lever Assy.
23.	Clutch Unit piston Rod Pivot Bolt	60.	Shift Rod to Power Shift Lever pin
24.	Clutch Unit Piston Valve Link Pin	61.	Transmission Shift Rod Assembly
25.	Clutch Unit Piston Valve Link	62.	Accelerator Cross Shaft Operating Rod
26.	Clutch Unit piston Valve, Rod Assy.	63.	Valve Lever Cam Adjusting Screw
27.	Clutch Power Unit Valve Lever Bushing	64.	Bellcrank to Shift Shaft Lever Rod
28.	Clutch Unit Bellcrank and Compensator Assy.	65.	Off-On Switch Operating Rod
29.	Valve Lever Cam	66.	Accelerator Link Bellcrank Shaft
30.	Bellcrank to Clutch Coupling Lever Rod	67.	Throttle Lock Diaphragm Rod Swivel
31.	Accelerator Pedal to Bellcrank Rod Assy.	68.	Cross-Over Switch Rod Clip
32.	Threaded Sleeve Rod Swivel	69.	Hand Shift Bellcrank Support
33.	Threaded Sleeve Rod Assy.	70.	Throttle Lock Cable Lock Nut
34.	Control Lever to Bellcrank Rod Ball Joint	71.	Hand Shift Bellcrank
35.	Accelerator Pedal Link Bellcrank Stop	72.	Cross-Over Switch Rod
36.	Accelerator Pedal Link Bellcrank Bracket	73.	Shift Rail Switch
37.	Throttle Lock Diaphragm Rod Check Nut	74.	Governor Switch

**OPERATION DESCRIPTION** TIME PRICE **DRIVE-MASTER** — Continued 22-3 POWER CYLINDER ASSEMBLY — Remove, Install and Adjust. All Models 1.0 22-4 POWER CYLINDER SOLENOID VALVES AND TRANSFER **DIAPHRAGM** — **Remove and Install.** — All Models 1.3 22-5 TRANSFER DIAPHRAGM — Install. — All Models .5\_\_\_\_ 22-6 POWER CYLINDER MOUNTING BRACKET — Remove and **Install.** — Includes removing, replacing and adjustment. — All Models 2.6 TRANSFER DIAPHRAGM ENGAGING ROD AND/OR ROD END 22-7 **AND SLEEVE** — **Remove, Install and Adjust.** — All Models. .3 TRANSFER DIAPHRAGM ENGAGING ROD RUBBER BOOT — 22-8 .4 **Remove and Install.** — All Models .5<sub>\_\_\_\_</sub> 22-9 **POWER UNIT SHIFT STRAP** — **Remove and Install.** — All Models If necessary to replace bushing — Add .6\_\_\_\_ 22-10 **POWER CYLINDER BOOT** — **Remove and Install.** — All Models **VACUUM LINE OR ELBOW** — **Remove and Install** — one. 22-11 .3\_\_\_\_ All Models 22-12 SHIFT SHAFT — Remove and Install. All Models .5\_\_\_\_ 22-13 SHIFT SHAFT TRANSFER KEY AND/OR PIN — Remove and **Install.** — All Models 22-14 SHIFT SHAFT TRANSFER KEY HUB AND/OR BUSHING — Remove and Install. All Models .7 SHIFT SHAFT POWER LEVER STOP AND LOCK SCREW — Remove 22-15 and Install. — All Models 22-16 22-16 SHIFT SHAFT HAND SHIFT LEVER — Remove and Install. All Models If necessary to replace bushing 22-17 SHIFT SHAFT POWER SHIFT LEVER — Remove and Install. All Models If necessary to replace bushing — Add SHIFT SHAFT LEVER DETENT BALL AND/OR SPRING — Remove 22-18 and Install. — All Models 1.0 22-19 DRIVE-MASTER TO REMOTE CONTROL TUBE BELLCRANK ROD ASSEMBLY AND/OR BALL JOINT — Remove and Install. — All Models .2 22-20 DRIVE-MASTER TRANSMISSION SWITCH—Remove, Install and 1.8 Adjust. All Models 22-21 POWER CYLINDER SHIFT STRAP — Remove and Install. .2 All Models 22-22 SELECTOR SWITCH OPERATING ROD OR TRANSFER SWITCH **OPERATING ROD** — **Remove and Install.** — All Models .3

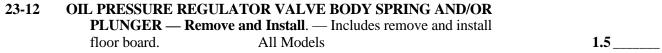
OPERATION DESCRIPTION TIME PRICE

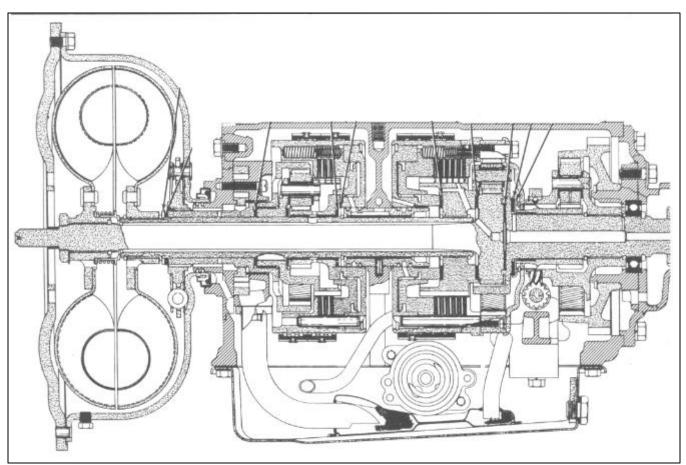
	DRIVE-MASTER — Continued	
22-23	GOVERNOR SWITCH AND/OR PINION — Remove and Install.  All Models	.3
22-24	NEUTRAL AND LIMIT SWITCH ROD ASSEMBLY — Remove, Install and Adjust. — All Models	.4
22-25	CLUTCH SWITCH OPERATING ROD OR DRIVE-MASTER TRANS-MISSION SHIFT ROD — Remove and Install. — All Models.	.3
22-26	THROTTLE LOCK DIAPHRAGM CYLINDER — Remove and Install. All Models	.3
22-27	THROTTLE LOCK DIAPHRAGM — Remove and Install.  All Models	.4
22-28	THROTTLE LOCK SOLENOID — Remove and Install. All Models	.2
22-29	SHIFT RAIL SWITCH — Remove and Install. — All Models	.4
22-30	ACCELERATOR SWITCH — Remove, Install and Adjust. All Models	.4
22-31	INSTRUMENT PANEL SWITCH — Remove and Install. All Models	.3
22-32	<b>DRIVE-MASTER WIRE HARNESS CHECK.</b> — All Models With Overdrive	.9 1.2
22-33	DRIVE-MASTER WIRE HARNESS — Remove and Install.  All 480, 490 and 500 Models  With Drive-Master and Overdrive —  All 480 and 490 Models  All 500 Series and "A" Series Models	.8 1.8 2.5
	<b>HYDRA-MATIC TRANSMISSION</b>	
23-1	HYDRA-MATIC TRANSMISSION — Remove and Install.  All Models  To remove and replace torus members or cover — Add	42
23-2	<b>HYDRA-MATIC TRANSMISSION</b> — <b>Overhaul.</b> — Includes remove, install, disassembly, inspections and reassembly (by units).  All Models	4.3 .5 8.3
23-3	<b>TRANSMISSION ASSEMBLY</b> — <b>Overhaul.</b> — Includes remove and install, disassembly, inspection of each individual unit of transmission and adjustments. — All Models	12.3
234	<b>HYDRA-MATIC TRANSMISSION</b> — <b>Drain and Refill.</b> — All Models	.7
23-5	HYDRA-MATIC TRANSMISSION — #3 Frame Crossmember — Remove and Install. — All Models	1.4
23-6	<b>TRANSMISSION ASSEMBLY</b> — <b>Inspection.</b> Includes remove and install oil pan, inspect drums and rear pump drive gear, oil pan for metal shavings — does not include any other disassembly.  NOTE: Cancel this operation if other work is authorized.  All Models	1.5

**OPERATION DESCRIPTION** TIME PRICE

# **HYDRA-MATIC—Continued**

	FLYWHEEL AND HOUSING	
23-7	<b>REMOVE AND INSTALL FLYWHEEL.</b> — When transmission is removed. All Models	.5
23-8	<b>REMOVE AND INSTALL FLYWHEEL HOUSING.</b> — When transmission is removed. — All Models	.7
23-9	<b>REMOVE AND INSTALL MAINSHAFT BUSHING.</b> — When transmission is removed. — All Models	.7
23-10	<b>REMOVE AND INSTALL FLYWHEEL HOUSING.</b> — Includes remove and install transmission, torus members, torus cover and aligning and doweling flywheel housing to engine support plate. — All Models	5.1
	REGULATOR VALVE, OIL PUMPS AND GOVERNOR	
23-11	OIL PRESSURE CHECK. — Includes remove and install floor mat and inspection hole cover. — All Models	.6





**HYDRA-MATIC TRANSMISSION** 

8.5

**OPERATION DESCRIPTION** TIME PRICE **HYDRA-MATIC—Continued** 23-13 FRONT OIL PUMP ASSEMBLY — Remove and Install. — Includes making necessary adjustments. — All Models 5.7 \_\_\_\_\_ 23-14 FRONT OIL PUMP ASSEMBLY — OVERHAUL. — Includes remove and install transmission and necessary adjustments. — All Models 6.4 23-15 REAR OIL PUMP AND GOVERNOR ASSEMBLY — Remove and 2.0 **Install**. — Includes making necessary adjustments. — All Models REAR OIL PUMP ASSEMBLY AND GOVERNOR OVERHAUL. — 23-16 Includes clean side cover and oil pan, remove and install valve body and reverse anchor, replace any necessary parts in rear pump and governor, reinstall and check governor run out, and adjust reverse anchor. — All Models 3.1 \_\_\_\_\_ 23-17 TRANSMISSION BOTTOM OIL PAN AND / OR GASKET — Remove and .7 \_\_\_\_\_ .7 \_\_\_\_ **Install.** — All Models Side cover and/or gasket — All Models 23-18 FRONT PUMP COVER OIL SEAL — Replace. — Includes remove 5.4 \_\_\_\_\_ and install transmission. — All Models 23-19 TRANSMISSION OIL PUMP ASSEMBLIES (FRONT AND REAR) — Overhaul. — Includes remove and install transmission and disassembly and reassembly of both pumps and governor, cleaning oil pan and making necessary adjustments. — 9.5 All Models 23-20 TRANSMISSION GOVERNOR — Overhaul. — Includes remove and install side cover, valve body and governor, replace necessary parts and check governor runout. — All Models 2.6 **CONTROL VALVE** 23-21 CONTROL VALVE ASSEMBLY — Remove and Install. — Includes remove and install valve body and adjusting manual and throttle lever linkage. — 2.6 \_\_\_\_\_ All Models 23-22 CONTROL VALVE ASSEMBLY — OVERHAUL. — Includes check oil pressure, adjust control linkage and neutral safety switch. .9 All Models 1.8 \_\_\_\_\_ 23-2 **REAR OIL SEAL** — **Remove and Install.** — All Models **PLANETARY UNITS** 23-24 TRANSMISSION CLUTCH PLATE ASSEMBLIES — Overhaul. — Includes removal, disassembly, assembly and installing transmission, and making necessary adjustments. — All Models 9.1 **INTERMEDIATE SHAFT** — **Remove and Install.** — Includes remove, 23-25 disassemble, assemble and reinstall transmission and make necessary adjustments, does not include disassembly of any units.—All Models 8.8 FRONT PLANETARY UNIT DRIVE GEAR — Remove and Install. 23-26

Includes remove and install transmission and servo units and adjusting servos. —

All Models

OPERATION	DESCRIPTION	TIME	PRICE
	HYDRA-MATIC—Continued		
23-27	REVERSE GEAR ANCHOR BRACKET AND/OR BELLCRANK — Remove and Install. — Includes checking backlash. — All Models	2.5	
23-28	<b>REVERSE GEAR ASSEMBLY — OVERHAUL.</b> — Includes remove and install side cover and oil pan, rear pump and governor assembly All Models	7.3	
	SERVOS		
23-29	SERVO — FRONT OR REAR — Remove and Install. — Includes remove and install the bottom oil pan and adjustment of both servos.  All Models	1.7	
23-30	SERVO — FRONT — OVERHAUL. — Includes remove, install, cleaning bottom oil pan and install new gasket and adjust both servos.  All Models	2.0	
23-31	SERVO — REAR — OVERHAUL. — Includes remove, install, cleaning bottom oil pan and install new gasket and adjust both servos.  All Models	2.0	
23-32	<b>SERVOS (BOTH) OVERHAUL.</b> — Includes remove, install and adjust, cleaning bottom oil pan and install new gasket. — All Models	2.5	
23-33	SERVO BANDS — Replace one or both. Includes remove and install transmission and units necessary to enable band replacement and adjustment of band. — All Models	8.1	
	SHIFT CONTROL LEVER		
23-34	REMOTE CONTROL. SHIFT LEVER — Remove and Install.  All Models	.3	
23-35	<b>REMOTE CONTROL SHIFT LEVER AND HOUSING.</b> — Includes remove and install steering wheel and setting quadrant with selector switch.  All Models	2.3	
	ADJUSTMENTS		
23-36	ENGINE IDLE SPEED ADJUSTMENT. — All Models	.1	
23-37	THROTTLE LINKAGE ADJUSTMENT.  Lever at transmission — All Models  Lever at engine	.4 .1	
23-38	SHIFTER ROD ADJUSTMENT. — All Models	.2	
23-39	NEUTRAL LIMIT SWITCH ADJUSTMENT. — All Models	.1	
23-40	EXTERNAL BAND ADJUSTMENT (WITH GAUGE). All Models	.6	
23-41	INTERNAL BAND ADJUSTMENT. — All Models	1.3	

			/ ]
OPERATION	DESCRIPTION	TIME	PRICE
	HYDRA-MATIC—Continued		
23-42	CHECK OIL LEVEL AND BAND ADJUSTING SCREWS. All Models	.2	
23-43	CHECK FOR OIL LEAKS. — All Models	.2	
23-44	ROAD TEST. — All Models	.6	
23-45	CHECK MANUAL CONTROL AND THROTTLE CONTROL ADJUST-MENTS. — All Models	.2	
23-46	SERVOS — ADJUST FRONT AND REAR. — All Models	.4	
	NOTES		
			_

#### **CONVERSION TABLE**

	\$ 2.50	\$ 2.75	\$ 3.00	\$ 3.25	\$ 3.50	\$ 3.75	\$ 4.00
.1	.25	.28	.30	.33	.35	.38	.40
.2	.50	.55	.60	.65	.70	.75	.80
.3	.75	.83	.90	.98	1.05	1.13	1.20
.4	1.00	1.10	1.20	1.30	1.40	1.50	1.60
.5	1.25	1.38	1.50	1.63	1.75	1.88	2.00
.6	1.50	1.65	1.80	1.95	2.10	2.25	2.40
.7	1.75	1.93	2.10	2.28	2.45	2.63	2.80
.8	2.00	2.20	2.40	2.60	2.80	3.00	3.20
.9	2.25	2.48	2.70	2.93	3.15	3.38	3.60
1.0	2.50	2.75	3.00	3.25	3.50	3.75	4.00
1.1	2.75	3.03	3.30	3.58	3.85	4.13	4.40
1.2	3.00	3.30	3.60	3.90	4.20	4.50	4.80
1.3	3.25	3.58	3.90	4.23	4.55	4.88	5.20
1.4	3.50	3.85	4.20	4.55	4.90	5.25	5.60
1.5	3.75	4.13	4.50	4.88	5.25	5.63	6.00
1.6	4.00	4.40	4.80	5.20	5.60	6.00	6.40
1.7	4.25	4.68	5.10	5.53	5.95	6.38	6.80
1.8	4.50	4.95	5.40	5.85	6.30	6.75	7.20
1.9	4.75	5.23	5.70	6.18	6.65	7.13	7.60
2.0	5.00	5.50	6.00	6.50	7.00	7.50	8.00
2.1	5.25	5.78	6.30	6.83	7.35	7.88	8.40
2.2	5.50	6.05	6.60	7.15	7.70	8.25	8.80
2.3	5.75	6.23	6.90	7.48	8.05	, 8.63	9.20
2.4	6.00	6.60	7.20	7.80	8.40	9.00	9.60
2.5	6.25	6.88	7.50	8.13	8.75	9.38	10.00
2.6	6.50	7.15	7.80	8.45	9.10	9.75	10.40
2.7	6.75	7.43	8.10	8.78	9.45	10.13	10.80
2.8	7.00	7.70	8.40	9.10	9.80	10.50	11.20
2.9	7.25	7.98	8.70	9.43	10.15	10.88	11.60
3.0	7.50	8.25	9.00	9.75	10.50	11.25	12.00
3.1	7.75	8.53	9.30	10.08	10.85	11.63	12.40
3.2	8.00	8.80	9.60	10.40	11.20	12.00	12.80
3.3	8.25	9.08	9.90	10.73	11.55	12.38	13.20
3.4	8.50	9.35	10.20	11.05	11.90	12.75	13.60
3.5	8.75	9.63	10.50	11.38	12.25	13.13	14.00
3.6	9.00	9.90	10.80	11.70	12.60	13.50	14.40
3.7	9.25	10.18	11.10	12.03	12.95	13.88	14.80
3.8	9.50	10.45	11.40	12.35	13.30	14.25	15.20
3.9	9.75	10.73	11.70	12.68	13.65	14.63	15.60
4.0	10.00	11.00	12.00	13.00	14.00	15.00	16.00
4.1	10.25	11.28	12.30	13.33	14.35	15.38	16.40
4.2	10.50	11.55	12.60	13.65	14.70	15.75	16.80
4.3	10.75	11.83	12.90	13.98	15.05	16.13	17.20
4.4	11.00	12.10	13.20	14.30	15.40	16.50	17.60
4.5	11.25	12.38	13.50	14.63	15.75	16.88	18.00
4.6	11.50	12.65	13.80	14.95	16.10	17.25	18.40
4.7	11.75	12.93	14.10	15.28	16.45	17.63	18.80
4.8	12.00	13.20	14.40	15.60	16.80	18.00	19.20
4.9	12.25	13.48	14.70	15.93	17.15	18.38	19.60
	12.20	10.10	11.70	10.75	17.10	10.50	17.00

## CONVERSION TABLE—Continued

	\$ 2.50	\$ 2.75	\$ 3.00	\$ 3.25	\$ 3.50	\$ 3.75	\$ 4.00
5.0	12.50	13.75	15.00	16.25	17.50	18.75	20.00
5.1	12.75	14.03	15.30	16.58	17.85	19.13	20.40
5.2	13.00	14.30	15.60	16.90	18.20	19.50	20.80
5.3	13.25	14.58	15.90	17.23	18.55	19.88	21.20
5.4	13.50	14.85	16.20	17.55	18.90	20.25	21.60
5.5	13.75	15.13	16.50	17.88	19.25	20.63	22.00
5.6	14.00	15.40	16.80	18.20	19.60	21.00	22.40
5.7	14.25	15.68	17.10	18.53	19.95	21.38	22.40
5.8	14.50	15.95	17.40	18.85	20.30	21.75	23.20
5.8 5.9	14.75	16.23	17.40	19.18	20.65	22.13	23.60
6.0	15.00	16.50	18.00	19.50	21.00	22.50	24.00
6.1	15.25	16.78	18.30	19.83	21.35	22.88	24.40
6.2	15.50	17.05	18.60	20.15	21.70	23.25	24.80
6.3	15.75	17.33	18.90	20.48	22.05	23.63	25.20
6.4	16.00	17.60	19.20	20.80	22.40	24.00	25.60
6.5	16.25	17.88	19.50	21.13	22.75	24.38	26.00
6.6	16.50	18.15	19.80	21.45	23.10	24.75	26.40
6.7	16.75	18.43	20.10	21.78	23.45	25.13	26.80
6.8	17.00	18.70	20.40	22.10	23.80	25.50	27.20
6.9	17.25	18.98	20.70	22.43	24.15	25.88	27.60
7.0	17.50	19.25	21.00	22.75	24.50	26.25	28.00
7.1	17.75	19.53	21.30	23.08	24.85	26.63	28.40
7.2	18.00	19.80	21.60	23.40	25.20	27.00	28.80
7.3	18.25	20.08	21.90	23.73	25.55	27.38	29.20
7.4	18.50	20.35	22.20	24.05	25.90	27.75	29.60
7.5	18.75	20.63	22.50	24.38	26.25	28.13	30.00
7.6	19.00	20.90	22.80	24.70	26.60	28.50	30.40
7.7	19.25	21.18	23.10	25.03	26.95	28.88	30.80
7.8	19.50	21.45	23.40	25.35	27.30	29.25	31.20
7.9	19.75	21.73	23.70	25.68	27.65	29.63	31.60
8.0	20.00	22.00	24.00	26.00	28.00	30.00	32.00
8.1	20.25	22.28	24.30	26.33	28.35	30.38	32.40
8.2	20.50	22.55	24.60	26.65	28.70	30.75	32.80
8.3	20.75	22.83	24.90	26.98	29.05	31.13	33.20
8.4	21.00	23.10	25.20	27.30	29.40	31.50	33.60
8.5	21.25	23.38	25.50	27.63	29.75	31.88	34.00
8.6	21.50	23.65	25.80	27.95	30.10	32.25	34.40
8.7	21.75	23.93	26.10	28.28	30.45	32.63	34.80
8.8	22.00	24.20	26.40	28.60	30.80	33.00	35.20
8.9	22.25	24.48	26.70	28.93	31.15	33.38	35.60
9.0	22.50	24.75	27.00	29.25	31.50	33.75	36.00
9.1	22.75	25.03	27.30	29.58	31.85	34.13	36.40
9.2	23.00	25.30	27.60	29.90	32.20	34.50	36.80
9.3	23.25	25.58	27.90	30.23	32.55	34.88	37.20
9.4	23.50	25.85	28.20	30.50	32.90	35.25	37.60
9.5	23.75	26.13	28.50	30.88	33.25	35.63	38.00
9.6	24.00	26.40	28.80	31.20	33.60	36.00	38.40
9.7	24.25	26.68	29.10	31.53	33.95	36.38	38.80
9.8	24.50	26.95	29.40	31.85	34.30	36.75	39.20
9.9	24.75	27.23	29.70	32.18	34.65	37.13	39.60
10.0	25.00	27.50	30.00	32.50	35.00	37.50	40.00

#### SUGGESTED CHANGE IN FLAT RATE TIME

Mail to Service Department: Hudson Motor Car Company, Detroit, Michigan

	R DEALER			
We Suggest the F	Following Change on Op	eration No		
Description of Op	eration		Year and Model	
	nges are based on our actorises to be:	tual shop experience.	We find the time requi	red in performing this
	Second Time Study	Third Time Study	Present Time	Suggested Time
,,	,			
	dure in performing this o			
	S	Service Manager		
		or vice manager		
	SUGGESTED	CHANGE IN FL	AT RATE TIME	
	Ma	il to Service Departm	nent:	
	Ma		nent:	
DISTRIBUTOR OF	Ma Hudson Moto	il to Service Departm or Car Company, Def	nent: troit, Michigan	
	Ma	il to Service Departm or Car Company, Def	nent: troit, Michigan	
CITY AND STATE. We Suggest the Fo	Ma Hudson Moto R DEALER Ollowing Change on Ope	il to Service Departmor Car Company, Det	nent: troit, Michigan	
CITY AND STATE. We Suggest the Fo	Ma Hudson Moto	il to Service Departmor Car Company, Det	nent: troit, Michigan	
CITY AND STATE. We Suggest the Fo Description of Ope These char	Ma Hudson Moto R DEALER  Dillowing Change on Operation	il to Service Departm or Car Company, Def	nent: troit, Michigan  Year and Model	
CITY AND STATE. We Suggest the Form Description of Ope  These char operation as shown by First Time Study	Ma Hudson Moto R DEALER  Dillowing Change on Operation  nges are based on our act three time studies to be: Second Time Study	il to Service Departmor Car Company, Defended in the company of th	nent: troit, Michigan  Year and Model  We find the time requi	red in performing this Suggested Time
CITY AND STATE. We Suggest the Form Description of Ope  These char operation as shown by First Time Study	Ma Hudson Moto R DEALER  Dillowing Change on Operation  nges are based on our act three time studies to be: Second Time Study	il to Service Departmor Car Company, Deformance Company, Deformance Car Company, Deformance Car Company, Deformance Car Company, Deformance Car	nent: troit, Michigan  Year and Model  We find the time requi	red in performing this Suggested Time
CITY AND STATE. We Suggest the Form Description of Ope  These char operation as shown by First Time Study  Our process	Ma Hudson Moto R DEALER  Dillowing Change on Operation  nges are based on our act three time studies to be: Second Time Study  dure in performing this of	il to Service Departmor Car Company, Deformance Car Company, Deformance Caracterian No	Year and Model  Present Time  ggestions are as follow	red in performing this Suggested Time
CITY AND STATE. We Suggest the Form Description of Ope  These char operation as shown by First Time Study  Our process	Ma Hudson Moto R DEALER  Dillowing Change on Operation  nges are based on our act three time studies to be: Second Time Study	il to Service Departmor Car Company, Deformance Car Company, Deformance Caracterian No	Year and Model  Present Time  ggestions are as follow	red in performing this Suggested Time
CITY AND STATE. We Suggest the Form Description of Ope  These char operation as shown by First Time Study  Our process	Ma Hudson Moto R DEALER  Dillowing Change on Operation  nges are based on our act three time studies to be: Second Time Study  dure in performing this of	il to Service Departmor Car Company, Deformance Car Company, Deformance Car Company, Deformance Caration No	rent: troit, Michigan  Year and Model  We find the time requi  Present Time  ggestions are as follow	red in performing this Suggested Timews:
CITY AND STATE. We Suggest the Form Description of Ope  These char operation as shown by First Time Study  Our process.	Ma Hudson Moto R DEALER  Dillowing Change on Operation  Inges are based on our act three time studies to be: Second Time Study  dure in performing this of the study	il to Service Departmor Car Company, Deformance Company, Deformance Car Company, Deformance Caration No	rent: troit, Michigan  Year and Model  We find the time requi  Present Time  ggestions are as follow	red in performing this  Suggested Time  ws:
CITY AND STATE. We Suggest the Form Description of Ope  These char operation as shown by First Time Study  Our process.	Ma Hudson Moto R DEALER  Dillowing Change on Operation  nges are based on our act three time studies to be: Second Time Study  dure in performing this of	il to Service Departmor Car Company, Deformance Company, Deformance Car Company, Deformance Caration No	rent: troit, Michigan  Year and Model  We find the time requi  Present Time  ggestions are as follow	red in performing this  Suggested Time  ws:

Service Manager.....

# **ADDITIONAL REMARKS:** ..... ..... ..... ..... ..... ..... ..... ..... ..... **ADDITIONAL REMARKS:** ..... ..... ..... .....

## SUGGESTED CHANGE IN FLAT RATE TIME

Mail to Service Department: Hudson Motor Car Company, Detroit, Michigan

CITY AND STATE We Suggest the F	R DEALER Enlowing Change on Op	peration No		
Description of Op	eration		Year and Model	
	nges are based on our ac three time studies to be:	tual shop experience.	We find the time requ	ired in performing this
First Time Study	Second Time Study	Third Time Study	Present Time	Suggested Time
	dure in performing this o			
	S	Service Manager		
		CHANGE IN FL.		
	Ma	OCHANGE IN FL ail to Service Departn or Car Company, De	nent:	
DIOTRIBUTOR OF	Ma Hudson Mot	ail to Service Departn or Car Company, De	nent: troit, Michigan	
	Ma Hudson Mot R DEALER	ail to Service Departn or Car Company, De	nent: troit, Michigan	
CITY AND STATE. We Suggest the Fo	Ma Hudson Mot R DEALER Ollowing Change on Ope	ail to Service Departn or Car Company, De	nent: troit, Michigan	
CITY AND STATE. We Suggest the Fo	Ma Hudson Mot R DEALER	ail to Service Departn or Car Company, De	nent: troit, Michigan	
CITY AND STATE. We Suggest the Form Description of Ope These char	Ma Hudson Mot R DEALER Ollowing Change on Ope	ail to Service Departn or Car Company, De	nent: troit, Michigan  Year and Model	
CITY AND STATE. We Suggest the Form Description of Ope These char operation as shown by First Time Study	Ma Hudson Mot R DEALER  Dillowing Change on Operation  nges are based on our act three time studies to be: Second Time Study	ail to Service Departn or Car Company, De  eration No  tual shop experience.  Third Time Study	nent: troit, Michigan  Year and Model  We find the time requ  Present Time	ired in performing this Suggested Time
CITY AND STATE. We Suggest the Form Description of Ope  These char operation as shown by	Ma Hudson Mot  R DEALER  Dillowing Change on Operation  nges are based on our according three time studies to be:	ail to Service Departn or Car Company, De eration No tual shop experience.	nent: troit, Michigan  Year and Model  We find the time requ	ired in performing this
CITY AND STATE. We Suggest the Form Description of Ope  These char operation as shown by First Time Study	Ma Hudson Mot R DEALER  Dillowing Change on Operation  nges are based on our act three time studies to be: Second Time Study	ail to Service Departn or Car Company, De  eration No  tual shop experience.  Third Time Study	nent: troit, Michigan  Year and Model  We find the time requ  Present Time	ired in performing this Suggested Time
CITY AND STATE. We Suggest the Form Description of Ope  These char operation as shown by First Time Study  Our process	Hudson Mot  R DEALER  Dillowing Change on Operation  nges are based on our act three time studies to be:  Second Time Study  dure in performing this common three times to the study	ail to Service Departnor Car Company, De eration No  tual shop experience.  Third Time Study  operation and tool su	rent: troit, Michigan  Year and Model  We find the time requested Present Time	ired in performing this Suggested Timews:
CITY AND STATE. We Suggest the Form Description of Ope  These char operation as shown by First Time Study  Our proces	Hudson Mot  R DEALER  Dillowing Change on Operation  nges are based on our act three time studies to be:  Second Time Study  dure in performing this of	ail to Service Departnor Car Company, De eration No  tual shop experience.  Third Time Study  operation and tool su	nent: troit, Michigan  Year and Model  We find the time requ  Present Time  ggestions are as follow	ired in performing this Suggested Timews:
CITY AND STATE. We Suggest the Form Description of Operation as shown by First Time Study Our process	Ma Hudson Mot R DEALER  Dillowing Change on Operation  nges are based on our act three time studies to be: Second Time Study  dure in performing this of	ail to Service Departn or Car Company, De eration No  tual shop experience.  Third Time Study  operation and tool su	nent: troit, Michigan  Year and Model  We find the time requ  Present Time  ggestions are as follow	ired in performing this Suggested Time ws:
CITY AND STATE. We Suggest the Form Description of Operation as shown by First Time Study Our process	Hudson Mot  R DEALER  Dillowing Change on Operation  nges are based on our act three time studies to be: Second Time Study  dure in performing this of	ail to Service Departn or Car Company, De eration No  tual shop experience.  Third Time Study  operation and tool su	nent: troit, Michigan  Year and Model  We find the time requ  Present Time  ggestions are as follow	ired in performing this Suggested Time ws:

Service Manager.....

# **ADDITIONAL REMARKS:** ..... ..... ..... ..... ..... ..... ..... ..... ..... **ADDITIONAL REMARKS:** ..... ..... ..... .....