



Utility Truck



SERVICE MANUAL

Your Manual Number Is **UT 7536**

This card must be filled out and returned to Alsport, Inc. in order to receive future mailings of material for this manual.

After the card at right is filled out and returned to Alsport, retain this portion in the manual. This is a record of your manual number.

Always refer to this number in all correspondence and inquiries concerning this manual or its mailings.

If you should change your mailing address, please notify Alsport, Inc., Service Publications Department immediately.

ALSPORT, INC.

84 Whittlesey, Norwalk, Ohio 44857



ALSPORT, INCORPORATED
84 Whittlesey, Norwalk, Ohio 44857
(419) 668-2571

12-3-74

Please reply to: SERVICE PUBLICATIONS DEPARTMENT

November 12, 1974

TO: All Utility Truck Sales & Service Manual Holders.

Enclosed are new pages for your Utility Truck Sales & Service Manual. Please add them immediately as follows:

SECTION

ADD PAGES

Parts & Service

UT-10 Transaxle Utility Truck
Illustrated Parts

ALSPORT, INC.
SERVICE PUBLICATIONS DEPARTMENT

ALSPORT

ALSPORT, INCORPORATED
84 Whittlesey, Norwalk, Ohio 44857
(419) 668-2571

11-12-74

Please reply to: SERVICE PUBLICATIONS DEPARTMENT

October 22, 1974

TO: ALL ALSPORT UTILITY TRUCK SALES & SERVICE MANUAL HOLDERS:

NOTE: Alsport Utility Truck Sales & Service Manuals are constructed at different times, therefore, your manual may currently include some of the below listed additions. For this reason, all of the material listed may not be included in your mailer.

Enclosed are new and revised pages for your Utility Truck Sales & Service Manual. Please add the necessary pages immediately as follows:

<u>SECTION</u>	<u>REMOVE PAGES</u>	<u>ADD PAGES</u>
Clothing	Clothing Price List	<i>yes</i> Clothing Price List dated 10-74
Parts & Service	Price List dated August 15, 1974	<i>yes</i> Price List dated November 1, 1974
Electrical		<i>yes</i> U.T. 10 Wiring Schematic

Alsport, Inc.
Service Publications Department



ALSPORT, INCORPORATED
84 Whittlesey, Norwalk, Ohio 44857
(419) 668-2571

11-12-74

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October 14, 1974

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SECTION

REMOVE PAGES

ADD PAGES

Parts & Service

apc
U. T. Supplement #1

Transmission

Old Apex Reversing Transmission Repair Parts Price List dated prior to 10-74

apc
New Apex Industries Repair Parts Price List dated 10-74

gpc
Precico Transmission dated 10-74

Alsport, Inc.
Service Publications Department

ALSPORT

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84 Whittlesey, Norwalk, Ohio 44857
(419) 668-2571

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August 26, 1974

TO: ALL ALSPORT UTILITY TRUCK SALES & SERVICE MANUAL HOLDERS:

NOTE: ALSPORT UTILITY TRUCK SALES AND SERVICE MANUALS ARE CONSTRUCTED AT DIFFERENT TIMES, THEREFORE, YOUR MANUAL MAY CURRENTLY INCLUDE SOME OF THE ABOVE LISTED ADDITIONS. FOR THIS REASON ALL OF THE MATERIAL LISTED MAY NOT BE INCLUDED IN YOUR MAILERS.

Enclosed are new and revised pages for your Utility Truck Sales & Service Manual. Please add the necessary pages immediately as follows:

<u>SECTION</u>	<u>REMOVE PAGES</u>		<u>ADD PAGES</u>
Alsport, Inc.	Old Alsport Department Heads	<i>other</i>	New Alsport Dept. Heads
Accessory		<i>yes</i>	Fall Lined Jacket
Adv. & Sales		<i>yes</i>	Brochure Tecumseh Dealership Application
Parts & Service	Price List dated March 15, '74	<i>yes</i>	Price List dated August 15, 1974
Transmission	Old Apex Rev. Transmission Repair Parts Price List	<i>yes</i>	New Apex Industries Repair Parts Price List
		<i>yes</i>	Price List for Parts & Assemblies
		<i>yes</i>	Peerless Differential dated 7-74
		<i>yes</i>	Holton Differential
Brakes			Disc Ass'y.

Alsport, Inc.
SERVICE PUBLICATIONS DEPARTMENT

ALSPORT

ALSPORT, INCORPORATED
84 Whittlesey, Norwalk, Ohio 44857
(419) 668-2571

9-9-74

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September 5, 1974

TO: ALL ALSPORT UTILITY TRUCK SALES & SERVICE MANUAL HOLDERS:

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Enclosed are new and revised pages for your Utility Truck Sales & Service Manual. Please add the necessary pages immediately as follows:

<u>SECTION</u>	<u>REMOVE PAGES</u>		<u>ADD PAGES</u>
Alsport, Inc.	Old Alsport Department Heads	yes	New Alsport Dept. Heads 8-27-74
Accessory	Price List	No	Fall Lined Jacket
Adv. & Sales	Didn't receive	No	Brochure Tecumseh Dealership Application
Parts & Service	Price List dated March 15, '74	Didn't receive No	Price List dated August 15, 1974
Transmission	Old Apex Rev. Transmission Repair Parts Price List	No	New Apex Industries Repair Parts Price List
	Peerless Differential	No	Price List for Parts & Assemblies
		No	Peerless Differential dated 7-74
		No	Holton Differential
		yes	Salsbury Torque Converter 700 Series
Brakes	Borg Warner Price List	yes	Borg Warner Price List Disc Ass'y.

Alsport, Inc.
SERVICE PUBLICATIONS DEPARTMENT

All About ALSPORT



Alsport, Incorporated is nestled in a quiet farm community in northern Ohio. This location was chosen partially because Norwalk is near the center of industrial activities in the U.S., and it is a convenient shipping point to most of the major population centers in both Canada and the U.S.

Alsport was started by its president, Mr. Bob Warner. His idea was to develop a year round group of recreational products in order to offer a dealer 12 months of product and profit. Starting in mid 1969, our first attempts at this were not overwhelmingly successful. About the only really successful thing we did was to learn. We learned a great many lessons in the recreational industry including something we call dealer understanding. Unlike other industries which are many years older and far more sophisticated, the recreational dealer needs help. He needs to learn to think in terms of profit. We detected that the dealer needed marketing assistance as well as quality products. The dealer also needed a well built vehicle because recreational equipment is subject to abusive treatment in comparison to many other products.

After its first two formative years, our first big successful product was developed. Tri-Sport was first produced in April of 1971. Applying the many lessons learned, Tri-Sport rose to the leader's spot in the three-wheel industry in a matter of a few months. Our humble start came in the 60,000 square foot building pictured below.



Since that time, almost 40,000 Tri-Sports have found their way into the hands of consumers. The product was an overwhelming success. Many firsts were engineered. The first suspended front wheel. The first adjustable handle bar and foot pegs for various size riders. The first to use two cycle snowmobile style engines. The first fully suspended three-wheeler for a comfort ride - unsurpassed, to mention just a few.

We knew immediately that Tri-Sport was a 12 month product. We also knew that it would take a year or two to convince many dealers of this fact. Tri-Sport success gave us the opportunity to purchase the Steen motorcycle Company in June of 1972, which allowed us to expand into the two-wheel market.

Steen production was immediately moved to Norwalk where we discovered that more production space was required. We then acquired a large building just north of our main building which increased manufacturing space to about 90,000 square feet. In August of '72 we acquired Boa-Ski snowmobiles which rounded out our year round product line. With the Boa-Ski came a manufacturing plant in Canada with over 100,000 square feet. With expansions at both locations we now have over 200,000 square feet.

With this rapid expansion came the realization that service was of the utmost importance to our customers. We then made a major decision to transport our own products in order to maintain shipping control. Alsport now has a fleet of 11 sleeper rigs with specially designed 45' vans as pictured below. During 1974 Alsport trucks will drive over 1 million miles just delivering our products.



During this period we were tending more and more toward integrated manufacturing. We obtained many hundreds of thousands of dollars worth of machinery to produce a myriad of parts used on all units. We installed the first totally recirculating powder paint line in the U.S. We once again ran out of space and built executive offices in Norwalk, pictured on the front page. We have found it necessary to establish distribution centers in Erie, Pennsylvania; Sellersville, Pennsylvania; Atlanta, Georgia; Dallas, Texas; Los Angeles, California; and Eugene, Oregon in order to service a growing dealer organization of over 1500. Our sales have increased more than 300% in the past two years.

All of these accomplishments would not be possible without a great deal of planning, manufacturing know-how, and marketing savvy. Many new and varied products are in the development stage. Steen will be greatly expanded in engine size in order to compete directly with imported cycles. We think it's time for a good American-made cycle. Our Tri-Sports are going street legal. They have all the ear-marks of becoming a basic commuter vehicle. The Canadian plant in La Guadeloupe will be producing a full line of pedal bikes for the Canadian market only. Alsport is also introducing a farm and suburban utility vehicle in 1974. Our after-market products, oil, etc. are expanding to include automotive tuning devices. Our California distribution center has exclusive rights for Ceriani suspensions, Arnaco shocks, Magura controls, Steen oil, and Colortune products.

All of these things are made possible because of you, the dealer. Our future growth is tied to one important fact. The dealer must be profitable. With that, all else is possible. We're not perfect. We do indeed make mistakes. We know that learning what not to do is more important than knowing what we do best. In a sense, our success has been the result of not knowing what can't be done. We consider ourselves a company of the future. We would like the opportunity of counting you as one of our growing and profitable dealers. Write or call today. We would like to talk to you about the opportunities to grow with Alsport.



ALSPORT, INCORPORATED
84 Whittlesey, Norwalk, Ohio 44857

ALSPORT, INC. DEPARTMENTS

DEPARTMENTS	DISCUSS	CONTACT	
		<u>Alsport, Inc.</u>	<u>BEST Dist.</u>
Accessory	Orders-Shipments	Norwalk: Bruce Radcliff	Norwalk: Bruce Radcliff Erie: Bruce Bleiler
Advertising	Dealer Support	Tom Catri	Tom Catri
Counter Sales	Parts, Accessories	Bruce Radcliff	Norwalk: Bruce Radcliff Erie: Bruce Bleiler
Credit	Billing COD's Flooring Account Review, Invoices	Jim Ashbrook	Jim Ashbrook
Alsport, Inc.	Company Policies & Procedure	Jerry Keathely Co. Dist. Robert Pugh Ind. Dist.	Paul Guerra
Parts	Orders-Shipments	Bruce Radcliff	Norwalk: Bruce Radcliff Erie: Bruce Bleiler
Racing	Racing Dates Information-Technical	Same as for BEST Dist.	Peter Jacobs 215/687-1194
Sales	Sales Territory Salesmen	Jerry Keathley	Paul Guerra
Machines	Orders-Shipments	Betty Rose Company Dist. Dale Van Nort Independent Dist.	Norwalk: Betty Rose Erie: Joe Fiske
Service & Warranty	Problems in the field Technical Help	Skip Wilson	Skip Wilson
Traffic	Truck Routing Shortages Shipment Via Alsport	Clint Sheffield Vice-President	Clint Sheffield

8/27/74



UT-10 **Utility Truck**

The Alsport Quarter-Ton Dump Truck is now working in Industry and Agriculture across the country. You will also see it pulling gang mowers, lawn rollers, seeders . . . and other lawn care equipment on estates as well as in suburbia.



Then you will see it working in the fields, running fences, setting salt blocks, carrying a calf . . . and how many more jobs can it do on a major ranch? And how about climbing the high hill to check your avocado trees at the top? The **UT-10** can do it.

And you will see it pulling a golf ball picker for collection on the driving range, and also used as a runabout for the greenskeeper.

Take your welder or generator to the job site. Use it to pull a car, truck, out of the mud or snow. Take it to the back 40 to chop trees . . . and then drag them where you want to cut 'em up. There's an infinite number of work applications the **Alsport Utility Truck** can do beyond what we can think of.



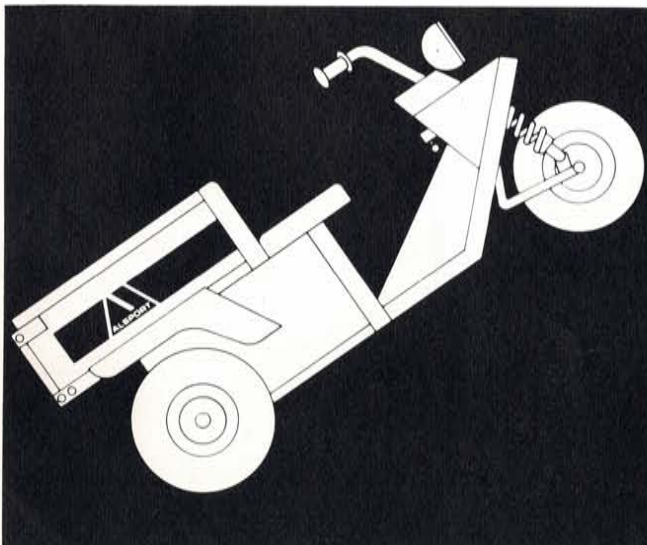


The **UT-10 Dump Truck** is quiet . . . and it is smooth. It is fully suspended at each wheel with hydraulically dampened shocks assisted by coil springs. All shocks are fully adjustable for ride control.

The engine is a cast iron block 10 HP work horse. And driving the **Alsport Utility Truck** is pure simplicity as provided by the twin transmissions. You have forward and reverse maneuverability and no clutching because of the automatic torque convertor. Braking is dual hydraulic discs on the rear axles. The **UT-10** comes with electric starting, headlight, taillight . . . and the alternator is 20 amps @ 12 volts. The gas tank has a three gallon capacity for many, many miles of work and travel on regular gas (no premixing).

The dump bed has over 8 cubic feet of load capacity. The tail gate swings open . . . and the bed is counterbalanced for easy lifting to empty a load of stones, or whatever. And for ruggedness . . . it's all built on a 1½" dia. tubular steel frame.

Take a ride on it — it seats two. Give it your own work test. Then sit down and list the many jobs you have to justify such a purchase. It won't be difficult.



The **Alsport UT-10 Utility Truck** is one of the many **Economy Transportation Vehicles** manufactured by Alsport Incorporated, 84 Whittlesey Avenue, Norwalk, Ohio 44857. Write to: **Dept. UT**, at the above address for local dealer information.

ALSPORT **UT-10**
Utility Truck



Tri-Sport Accessories

ALSPORT, INCORPORATED

84 Whittlesey, Norwalk, Ohio 44857 • 419/668-2571

P.O. Box 7, LaGuadeloupe, Quebec



ALSPORT fall lined jacket

A new "ALSPORT" jacket is introduced to our expanding clothing line for all seasons. This garment is for Fall and Spring and is made of a neoprene coated nylon fabric to insure 100% waterproofing. The lining is of light-weight quilting for just enough warmth on chilly days and nights. The color is our Alsport orange with a black insert on the chevron sleeve. The word "ALSPORT" is embroidered on the sleeve for permanence. Zipper is nylon.

The "ALSPORT" jacket comes in Men's Small, Medium, Large and Extra Large; Woman's Small, Medium, Large, and Extra Large; Youth's Small, Medium, Large.

Part No. 755-137	Men's Jacket
755-138	Woman's Jacket
755-139	Youth's Jacket

Suggested Retail	\$29.95
Suggested Retail	\$29.95
Suggested Retail	\$24.95



APPLICATION
FOR
UNLISTED REGISTERED SERVICE DEALER
AGREEMENT
WITH TECUMSEH PRODUCTS COMPANY



SEE REVERSE SIDE FOR
BENEFITS AND REQUIREMENTS

Company Name _____

Street Address _____

City, State, Zip _____

Name of Man to Contact _____

Phone Number _____

EQUIPMENT MANUFACTURERS REPRESENTED

TYPE OF EQUIPMENT

Lawn Mowers
 Snow Blowers
 Recreational Vehicles

Comments _____

REQUEST
FOR SERVICE INFORMATION
OR SERVICE CONTACT
ONLY

I do not wish to be a Tecumseh dealer, but want a Service Directory showing where service is available.

I do not wish to be a Tecumseh dealer, but want a representative from Tecumseh to contact me regarding the product or service.

Comments _____

This form should be sent to: Tecumseh Products Company
Lauson-Power Products Parts Depot
900 North Street
Grafton, Wisconsin 53024

Attention: Service Coordinator



WHAT IS AN UNLISTED TECUMSEH SERVICE DEALER



The Unlisted Registered Service Dealer Agreement is for the equipment outlet who desires to be in a position to service the Tecumseh Engines and Transmission Components on the units he sells.

Here are some questions and answers:

Can I perform warranty?

Yes, and file direct with Tecumseh Products Company, the same way as any Tecumseh Dealer.

What is Tecumseh's Warranty Reimbursement?

For a dealer, parts used at suggested list price, labor at shop rate up to \$6.50 per hour.

What discount do I enjoy?

40 percent on parts, regular dealer discount on engines and short blocks.

Who is my source for parts?

The local Tecumseh Authorized Service Distributor.

What about initial inventory?

It will be tailored to the equipment line only and for that portion of the line you sell. Therefore, there is no set figure for inventory. However, it is important to have an adequate inventory which your Authorized Service Distributor will help you to determine.

Do I have any inventory protection?

Yes, an unlimited stock adjustment at no penalty once each year.

Do I have to, or can I, service any Tecumseh products?

No, only the equipment you sell.

What else do I have to do?

1. Attend field schools as they come to your area.
2. Have a generally qualified mechanic.
3. Have a shop to do service.
4. Buy and maintain the Tecumseh Master Parts & Service Manual.

What's the first step to get this Tecumseh Agreement?

Fill out the Application for Unlisted Registered Service Dealer Agreement and send it to the Tecumseh factory, who will follow it through and insure contact is made.

ALSPORT FARM/UTILITY TRUCK
LITERATURE POLICY 1974

Alsport will supply, at no charge, a quantity of brochures on a per unit basis, to promote Utility Trucks. Allowances will be:

50 brochures per unit order

Alsport will also supply, at no charge, 500 brochures to any dealer participating in a show or a fair. Notification of shows or fairs must come 30 days in advance and in writing. If dealers desire additional brochures, they may be purchased at the rate of \$10.00 per thousand.

ALSPORT UTILITY TRUCK
Co-op Advertising Program

Alsport will participate in a Dealer Cooperative Advertising Program on a 50-50 basis at the rate of \$20.00 per unit purchased.

Advertising must be exclusively Farm/Utility Truck oriented.

Tear sheets and billings will be needed for verification.

Breakdown of \$20.00 /unit allowance is as follows;

\$10.00	Dealer
\$ 5.00	Distributor
\$ 5.00	Alsport

Billings must be submitted within 30 days of add usage.

INDIVIDUAL PRICES OF ITEMS IN STARTER KIT A (600 series)

Part Number 658-100

PART NC.	ITEM	PRICE
658-105	Brochure 1974	10.00/M
658-101	Window Poster 1974	2.00/ea.
658-102	Wall Feature Chart	3.00/ea.
658-103	Ad Mats	1.50/ea.
658-104	Press Release	

These items can be purchased individually as per the above prices. We will require 2 months lead time in the event that you need abnormally large quantities.

TECUMSEH DEALERSHIP, UNLISTED

Attached is an application to become an unlisted Tecumseh dealer. You may wish to avail yourself of this opportunity. The requirements are not as costly as most dealers believe. The advantages of being a dealer are listed on the reverse side of the application.

UTILITY TRUCK
DEALER'S PARTS PACK

Part No. 645-100

<u>Part No.</u>	<u>Description</u>	<u>Quantity</u>
613-101	Drive Chain 39 Pitches	1
613-102	Drive Chain 65 Pitches	1
646-100	Choke Cable	1
648-100	Gear 18 T 3/4" Bore, Jackshaft	1
648-101	Gear 24 T 3/4" Bore, Jackshaft	1
648-102	Gear 14 T 1" Bore, Transmission	1
654-100	Belt	1
711-115	Heim Joint	1
617-111	Differential	1
725-230	Ign. Switch (Tecumseh #1A183-6)	2
725-238	Solenoid	1
741-101	Bearing	4
746-145	Throttle Cable	3

Total Price \$155.00

DISREGARD ALL PREVIOUS PUBLICATIONS OF THIS PARTS PACK



Utility Truck

1974 technical specifications

MODEL: UT-10

HORSEPOWER: 10 BHP max. @ 3600 RPM

COOLING: Multi-Bladed fan on flywheel pulls cool air through rotating screen forcing it over cooling fins on cylinder and head.

CRANKSHAFT: Ductile iron, with integral counterweights. Crankpin hardened.

Main Bearings: Tapered roller bearings at both ends of crankshaft.

Rotation: Counterclockwise when viewed from power take-off side.

CYLINDER AND CRANKCASE: Precision cast iron alloy.

Piston: Cam ground, permanent mold, heat treated, aluminum alloy with one oil control and two compression rings (top compression ring chrome plated.)

Piston Pin: High finish hardened steel.

Cylinder Head: Aluminum alloy with extra deep, grass proof, cooling fins.

Connecting Rods: I-Beam design. Forged aluminum alloy, heat treated, with large bearing area.

Valves: Austenitic steel intake. austenitic steel exhaust with stellite seating surface.

Valve Seats: Intake-iron alloy insert, exhaust-stellite insert.

Valve Lifters: Precision machined and heat treated.

Valve Guides: Integral with cylinder.

FUEL SYSTEM:

Air Cleaner: Large capacity replaceable, extra fine filtration, nonbypassable pleated paper element.

Carburetor: Float bowl, manual choke, manual stop with remote provisions and remote throttle control.

Fuel Pump: 6 PSI-vacuum operated. Integral with carburetor.

GOVERNOR: Most efficient mechanical type, in crankcase, for positive engine speed control.

COMPRESSION RELEASE: Relieves compression during starting cycle for quick, reliable starting.

IGNITION: Solid state magneto capacitor discharge design with electronic retard. Sealed in epoxy resin impervious to dust and moisture.

LUBRICATION: Splash system - 50 ounce capacity sump.

MUFFLER: Large capacity.

PAINT: Attractive, long lasting baked enamel. Metal chemically cleaned and treated for permanent bonding.

STARTER: Electric - 12V 20 AMPS.

CYLINDER DISPLACEMENT: 23.7 cu.in.

GAS TANK CAPACITY: 3 gallons - U.S. measure.

APPROX. WEIGHT: 600 pounds

FRAME: Fabricated 1-1/2" tubular steel.

TIRE (Front): 18 x 8.50 x 8 2 ply - 4 ply rated tubeless.

TIRES (Rear): 21 x 11 x 8 knobbed 2 ply - 4 ply rated tubeless.

CLUTCH: Torque convertor - automatic.

TRANSMISSION: Reversing = 2:36 to 1 gear reduction, No. 40 chain driven to limited-slip differential.

BRAKES: Dual hydraulic brakes on rear axles; 8" disc.; integral hydraulic parking lock.

LENGTH: 93" overall.

SEAT WIDTH: 36" passenger area.

SUSPENSION: Hydraulically dampened with coil spring assist. Fully adjustable for ride control.

DUMP BED: Over 8 cubic feet capacity.

Length: 34-7/8"

Width: 39-7/8"

Depth: 10-1/4"

GROUND CLEARANCE: 5-3/4" - lowest point.

ELECTRICAL SPECIFICATIONS:

Headlight: SAE approved sealed beam. 35 watt, 12V DC. Dual intensity - single control.

Taillight: SAE approved, dual intensity. Reflector lens and license plate illumination.

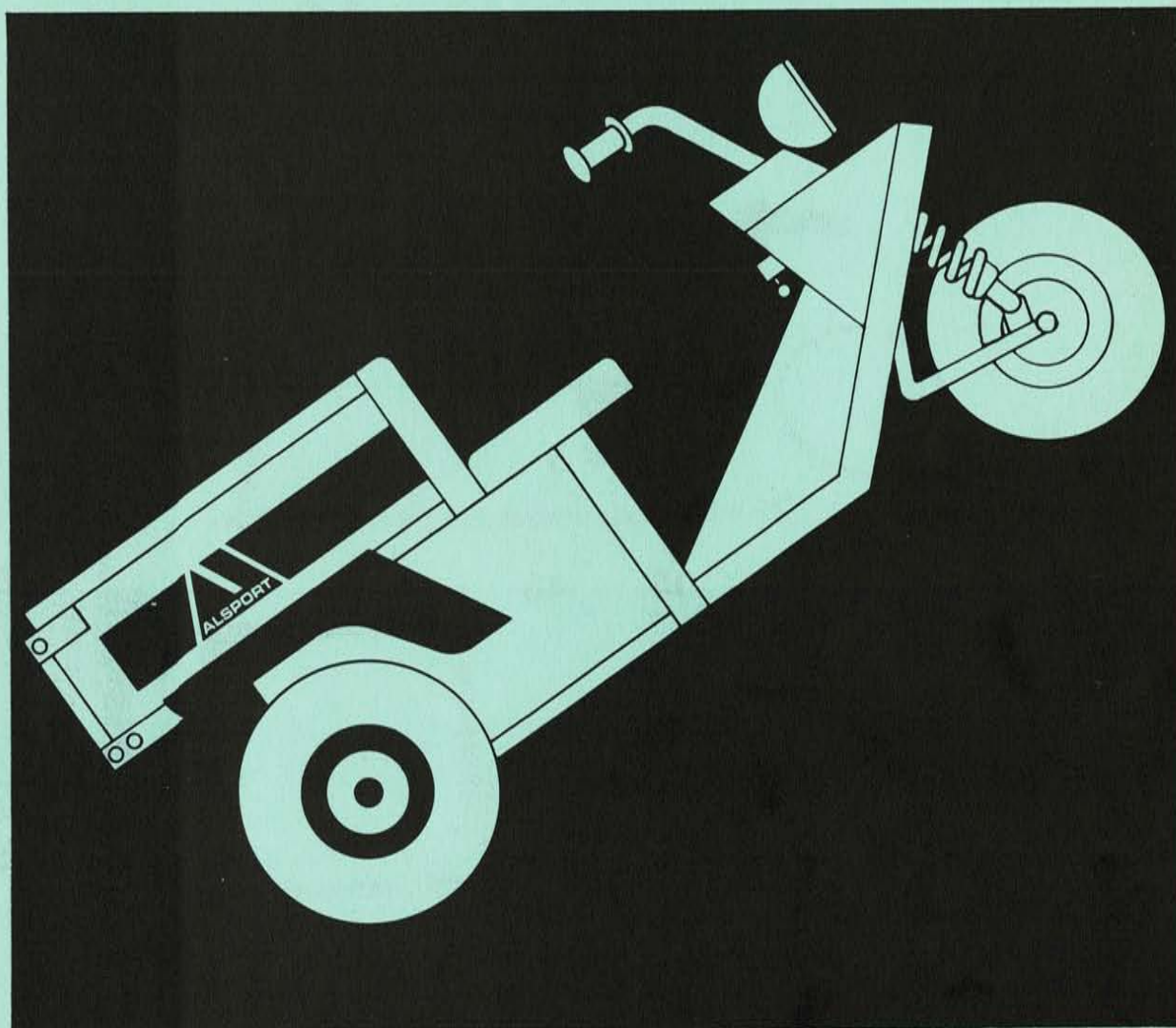
Battery: 12V 32 AMP/hour wet cell.

Alternator: 20 AMP @ 12 volts. Integral with engine.

Rectifier: Solid-state, regulated.



TRANSAXLE Utility Truck



illustrated parts

ALSPORT, INCORPORATED
84 Whittlesey, Norwalk, Ohio 44857

Part Number 659-136

U. T. 10 Transaxle		figure ONE
Item no.	part no.	description
1.	633-107	Handle Bar
2.	720-104	Throttle Grip Assembly
3.	720-105	Dummy Grip
	720-101	Items 2 & 3
4.	746-145	Throttle Cable
5.	746-103	Throttle Cable Lock
6.	749-102	Cable Ties
7.	710-100	King Pin 3/4-10 x 5 5/8
8.	741-102	Bearing 3/4 I. D.
9.	712-105	King Pin Nut 3/4-10
10.	633-105	Front Fork
11.	711-107	Handle Bar Mount
12.	710-105	Hex Hd. Bolt 5/16-24 x 2 1/4
13.	712-102	Hex Lock Nut 5/16-24
14.	710-116	Hex Hd. Bolt 3/8-24 x 1 3/4
15.	736-102	Flat Washer 3/8 I. D.
16.	749-114	Front Shock #100-8002-000
17.	633-106	Leading Link
18.	710-118	Hex Whiz Lock Bolt 3/8-24 x 3/4
19.	646-100	Choke
20.	734-101	Front Tire & Wheel Assembly
21.	711-100	Axle 3/4 Dia. x 12"
22.	750-100	Wheel Spacers 3/4 I. D. x 3 7/16"
23.	712-100	Hex Lock Nut 3/8-24



ALSPORT, INCORPORATED

U. T. 10 Transaxle

figure

TWO

item no.

part no.

description

1.	633-112	Tailgate
	627-117	Tailgate Latch Pin
	632-100	Spring
	736-102	Flatwasher 3/8 I. D.
	715-101	Cotter Pin
2.	633-111	Dump Box
3.	626-129	Tailgate Pivot Plate
4.	710-128	Hex Bolt 5/16-24 x 1
5.	712-102	Hex Lock Nut 5/16-24
6.	633-115	L. H. Rear Fender
7.	633-116	R. H. Rear Fender
8.	623-100	Back Rest Pad
9.	623-101	Seat Pad
10.	633-102	Seat Frame
11.	626-131	Dump Box Pivot Plate
12.	710-106	Hex Hd. Bolt 5/16-24 x 1 1/2
13.	712-102	Hex Lock Nut 5/16-24
14.	710-131	Hex Hd. Bolt 1/4-20 x 1
15.	712-129	Hex Lock Nut 1/4-20
16.	633-103	Dump Box Latch Pin
17.	715-101	Cotter Pin
18.	736-111	Flat Washer 1/2 I. D.
19.	632-101	Spring
20.	710-129	Wood Screw #10 x 3/4
21.	633-109	Front Fender Cap
22.	633-108	Front Fender
23.	633-110	Console
24.	610-102	Hex Hd. Bolt 5/16-24 x 3
25.	712-102	Hex Lock Nut 5/16
26.	610-117	Self Drilling Screw
	613-103	Tailgate Sash Chain
	651-103	Plastic Loom
	627-143	"S" Hook
	710-147	Machine Screw 10-32 x 5/8
	712-118	Lock Nut 10-32



ALSPORT, INCORPORATED

U. T. 10 Transaxle	figure	THREE
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Item no.	part no.	description
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1.	633-135	Frame
2.	626-109	L. H. Side Panel
3.	626-108	R. H. Side Panel
4.	626-113	Rear Side Panel
5.	626-155	Carpet Retainers
6.	626-165	Carpet Retainers
7.	628-100	Pop Rivets
8.	635-107	Rubber Grommet
9.	635-108	Limiter Rubber
10.	710-168	Hex Hd. Bolt 1/4-20 x 3/4
11.	712-129	Hex Lock Nut 1/4-20
12.		Not Used
	726-326	Battery Hold down Strap
	633-137	Battery Box (bolt on)



ALSPORT, INCORPORATED

U. T. 10 Transaxle	figure	FOUR
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Item no.	part no.	description
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1.	638-102	Axle & Hub Assembly
2.	710-226	Lug Stud 7/16-20 x 1
3.	741-105	Bearing & Collar 1" I. D.
4.	633-118	R. H. Axle Support
5.	633-117	L. H. Axle Support
6.	714-111	Woodruff Key #808
7.	617-110	Universal Joint (1" Bore & Spline)
8.	710-197	Sq. Hd. Cross Drilled Bolt 3/8-16 x 3/4
9.	710-163	Allen Hd. Bolt 3/8-16 x 7/8
10.	712-121	Locknut 3/8-16
11.	633-114	Torque Arm
12.	712-147	Hex Nut 1/2-20
13.	711-115	Rod End Bearing
14.	710-157	Hex Hd. Bolt 1/2-20 x 1 1/2
15.	749-115	Rear Shocks #500-8002-000
16.	650-101	Spacers 7/16 I. D. x 1 1/16"
17.	610-100	Hex Hd. Bolt 7/16-20 x 5
18.	712-123	Hex Lock Nut 7/16-20
19.	736-149	Flat Washer 7/16 I. D.
20.	712-152	Lug Nut 7/16-20
21.	734-100	Rear Knobby Tire
	615-100	Roll Pin 3/16 x 1 1/2 (not shown)



ALSPORT, INCORPORATED

U. T. 10 Transaxle	figure	FIVE
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item no.	part no.	description
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1.	635-101	Fuel Tank
2.	651-100	Fuel Tank Cap
3.	624-100	Fuel Guage
4.	735-110	Rubber Strip
5.	710-168	Hex Hd. Bolt 1/4-20 x 3/4
6.	635-106	Rubber Grommet
7.	712-129	Lock Nut 1/4-20
8.	626-190	Engine Mount
9.	735-118	Rubber Motor Mount
10.	710-155	Hex Hd. Bolt 10-32 x 5/8
11.	712-118	Lock Nut 10-32
12.	736-102	Flat Washer 3/8 I. D.
13.	736-101	Lock Washer 3/8 I. D.
14.	710-220	Hex Bolt 3/8-16 x 1
15.	712-100	Lock Nut 3/8-24
16.	710-116	Hex Hd. Bolt 3/8-24 x 1 3/4



ALSPORT, INCORPORATED

U. T. 10 Transaxle		figure	SIX
item no.	part no.	description	
1.	652-100	10HP Tecumseh Engine Electric Start	
2.	633-125	Exhaust Manifold Assembly	
3.	633-122	Muffler Assembly	
4.	732-102	Springs	
	618-103	Retaining Clip (not shown)	
5.	710-131	Hex Hd. Bolt 1/4-20 x 1	
6.	712-129	Hex Lock Nut 1/4-20	
7.	626-152	Muffler Straps	
8.	633-124	Rear Air Cleaner Plate	
9.	NPN	Air Filter (see Tecumseh Supplement)	
10.	NPN	Cover (see Tecumseh Supplement)	
11.	633-123	Air Filter Flange	
12.	712-129	Hex Lock Nut 1/4-20	
13.	710-133	Hex Hd. Bolt 1/4-20 x 2	
14.	627-155	Filter Tube	
15.	623-102	Flex Tube 1" I. D. x 6"	
16.	NPN	Wing Nut (see Tecumseh Supplement)	
17.	750-117	Lock Collar 3/4 I. D.	
18.	617-107	Torque Convertor Driven 1" Bore	
19.	654-100	Drive Belt	
20.	717-130	Torque Convertor Driver	
21.	614-100	Key 1/4 Sq. x 1"	
22.	736-148	Flat Washer 3/8 I. D.	
23.	710-126	Hex Hd. Bolt 3/8-24 x 2 1/2	
	623-103	Air Filter Hose Clamp (not shown)	



ALSPORT, INCORPORATED

U. T. 10 Transaxle		figure SEVEN
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Item no.	part no.	description
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1.	617-105	Trans Axle (not shown)
2.	635-102	Shift Knob
3.	627-159	Shift Arm
4.	641-100	Rod End Bearing
5.	612-103	Hex Nut 3/8-24
6.	710-166	Hex Bolt 3/8-24 x 1
7.	712-100	Lock Nut 3/8-24
8.	633-133	Shift Pivot Assembly
9.	627-149	Shift Pivot Bushing
10.	610-108	Hex Hd. Bolts 5/16-18 x 3/4
11.	736-105	Lock Washer 5/16 I. D.
12.	710-115	Hex Bolt 3/8-24 x 1 1/2



ALSPORT, INCORPORATED

U. T. 10 Transaxle		figure EIGHT
Item no.	part no.	description
1.	725-239	Battery 12 Volt
2.	710-121	Hex Hd. Bolt 5/16-24 x 3/4
3.	736-105	Lock Washer 5/16 I. D.
4.	712-102	Hex Lock Nut 5/16-24
5.	726-184	Mounting Bracket
6.	657-100	Hydraulic Brake Lever Lock
7.	637-100	Elbow
8.	637-101	Filling
9.	710-168	Hex Hd. Bolt 1/4-20 x 3/4
10.	712-129	Hex Lock Nut 1/4-20
11.	625-104	Rectifier (Tecumseh No. 1A183-6)
12.	625-102	Tailight
	725-249	Replacement Bulb
	625-105	Replacement Lens
	625-106	Replacement Housing Assembly
13.	725-230	Ignition Switch
14.	725-166	Headlight
	725-200	Replacement Bulb
	725-209	Replacement Housing Assembly
15.	626-154	Battery Hold Down Strap
16.	712-148	Wing Nut 5/16-18
17.	725-238	Solenoid
	625-100	Main Wire Harness
	625-101	Battery Cable 30"
	725-235	Battery Cable 14"
	725-251	Fuse Harness
	625-108	Ground Wire Brown



ALSPORT, INCORPORATED

U. T. 10 Transaxle	figure	NINE
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Item no.	part no.	description
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- | | | |
|----|---------|--|
| 1. | 657-104 | Disc Brake Ass'y. |
| 2. | 757-128 | Hyd. Brake System (see Kelsey-Hayes Brake section for service parts) |



ALSPORT, INCORPORATED

U. T. 10 Transaxle		figure	TEN
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item no.	part no.	description	
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1.	635-100	Floor Mat	
2.	659-102	L. H. Decal for Dump Box	
3.	659-103	R. H. Decal for Dump Box	
4.	659-101	Front Fender Decal	
5.	759-100	Alsport Logo	



ALSPORT, INCORPORATED

U. T. 10 Transaxle		figure	ELEVEN
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Item no.	part no.	description	
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1.	749-105	Jiffy Trim	
2.	659-134	Decal Operation Instructions	
3.	725-265	Reflector	Red
4.	725-264	Reflector	Amber
5.	659-126	Decal "On-Off Switch"	
6.	659-106	Decal Dump Instructions	
7.	659-135	Decal Shift Pattern	



ALSPORT, INCORPORATED

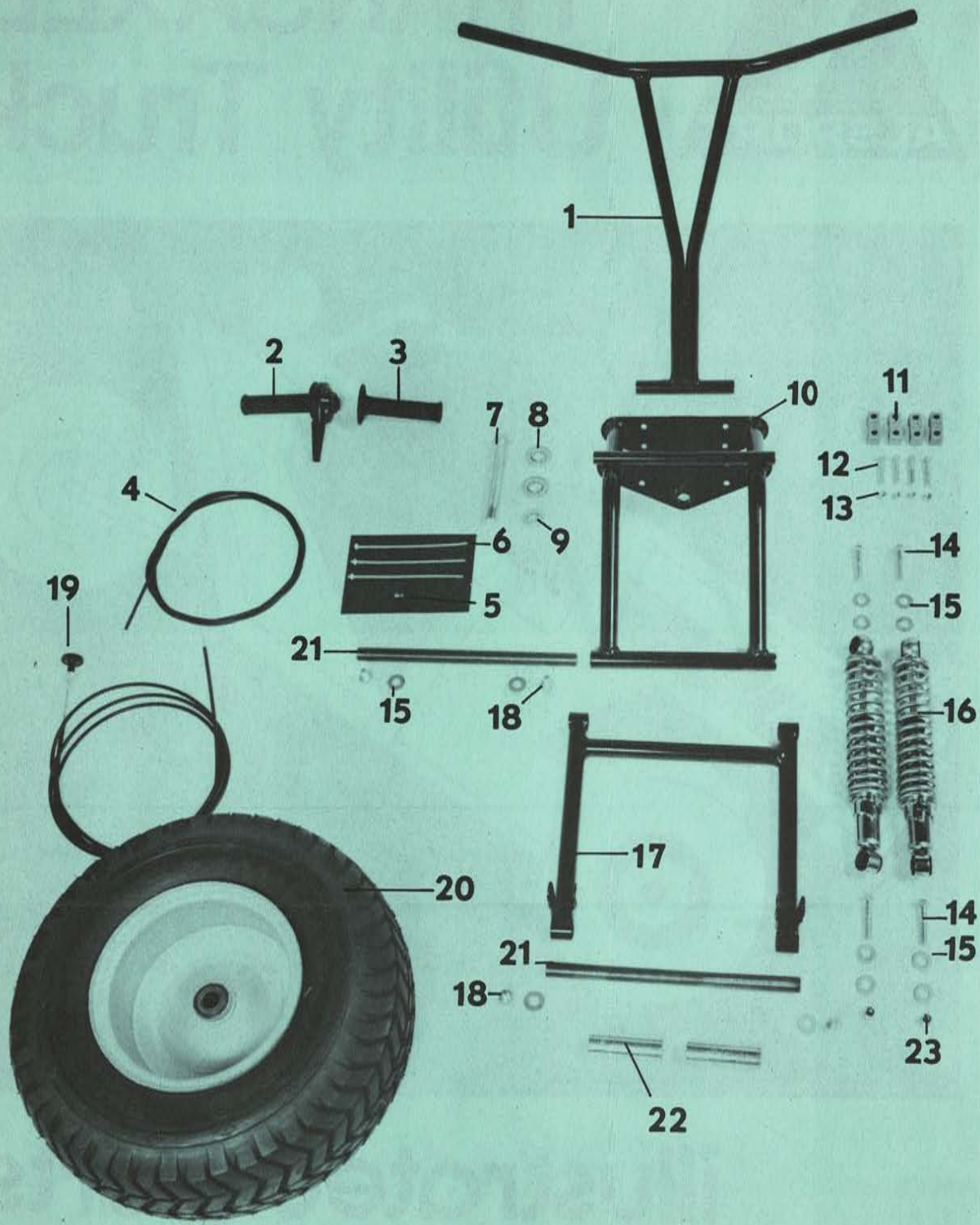


FIGURE 1 / U.T.10 Transaxle

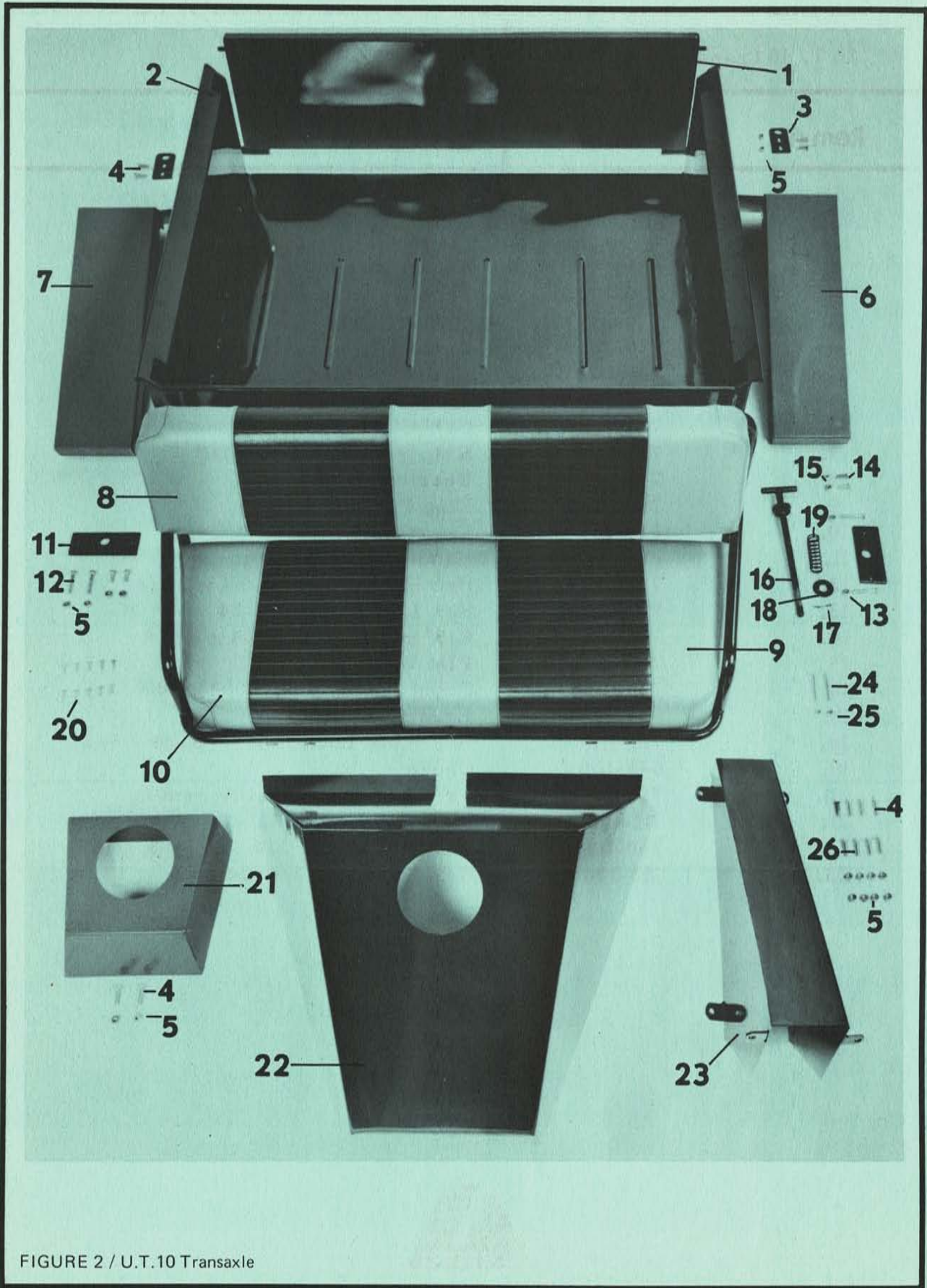


FIGURE 2 / U.T.10 Transaxle

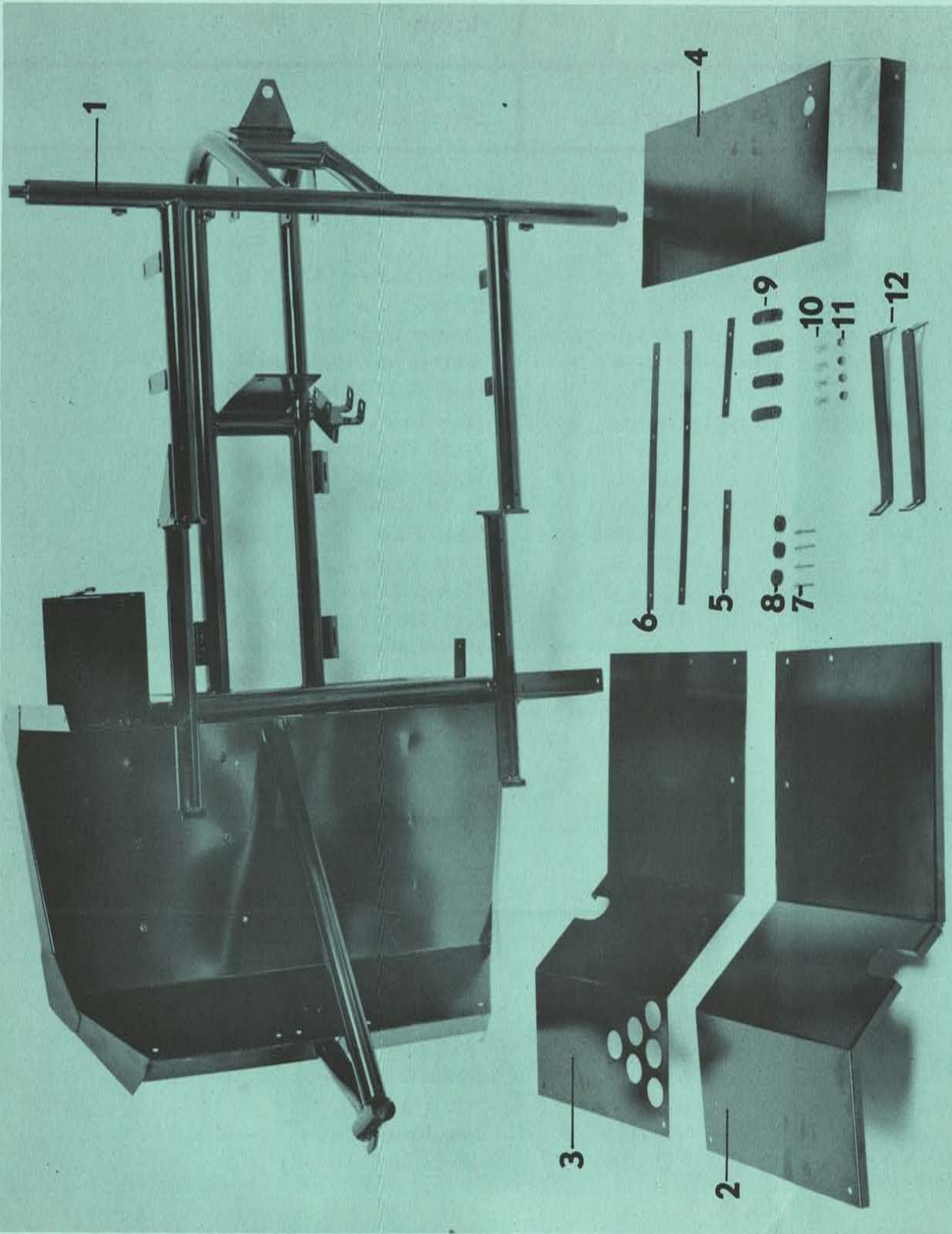


FIGURE 3 / U.T. 10 Transaxle

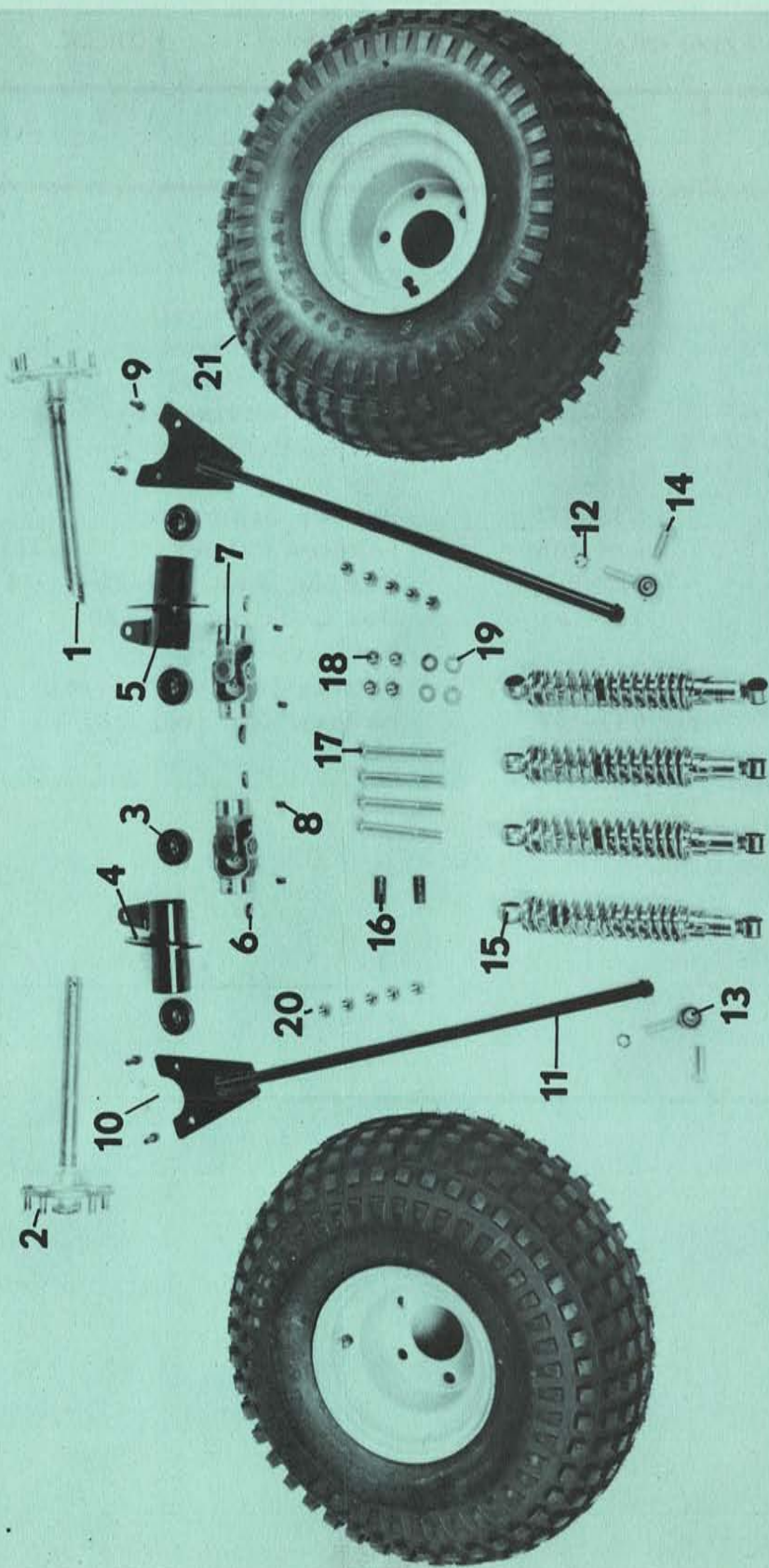


FIGURE 4 / U.T. 10 Transaxle

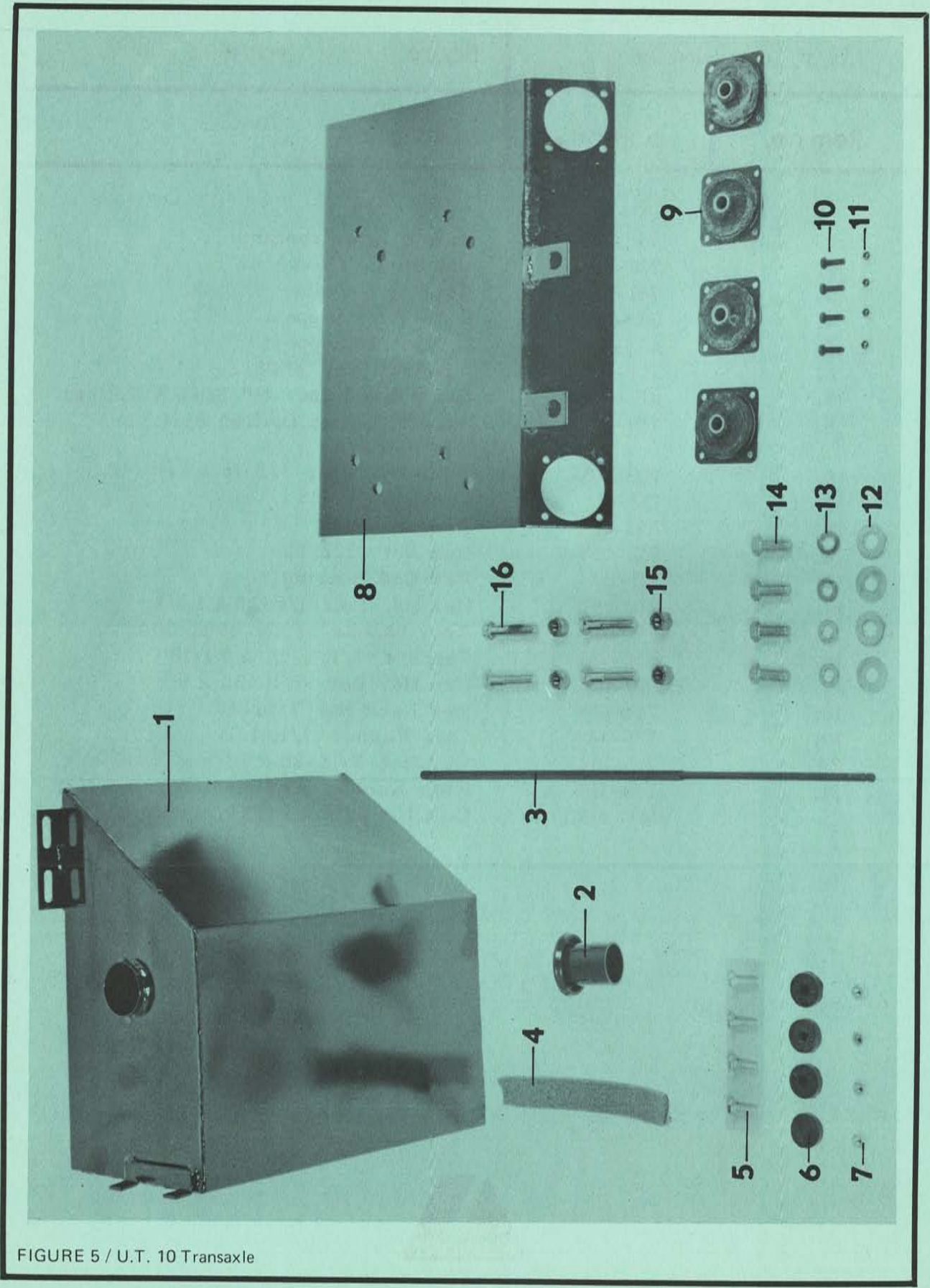


FIGURE 5 / U.T. 10 Transaxle

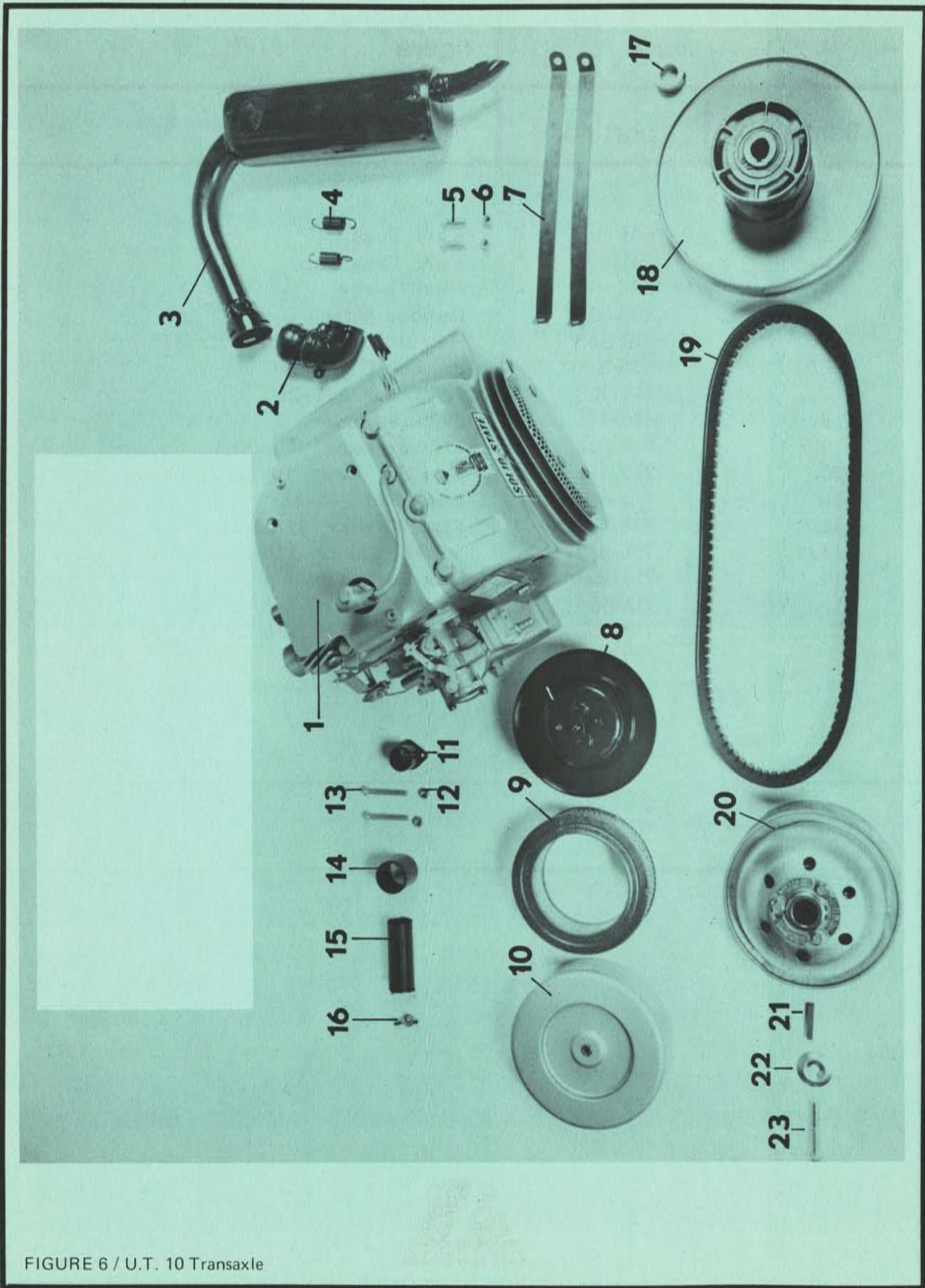


FIGURE 6 / U.T. 10 Transaxle

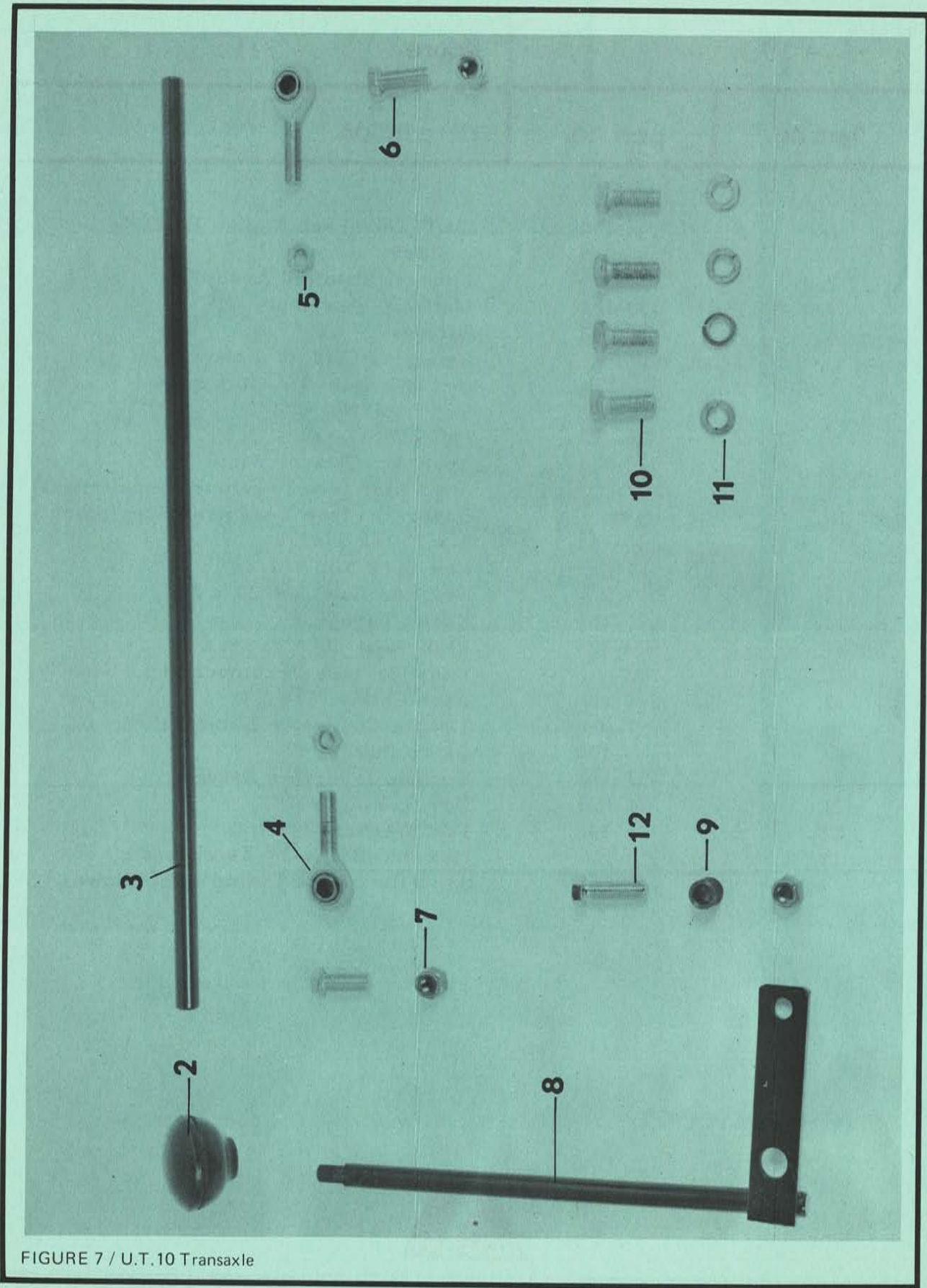


FIGURE 7 / U.T.10 Transaxle

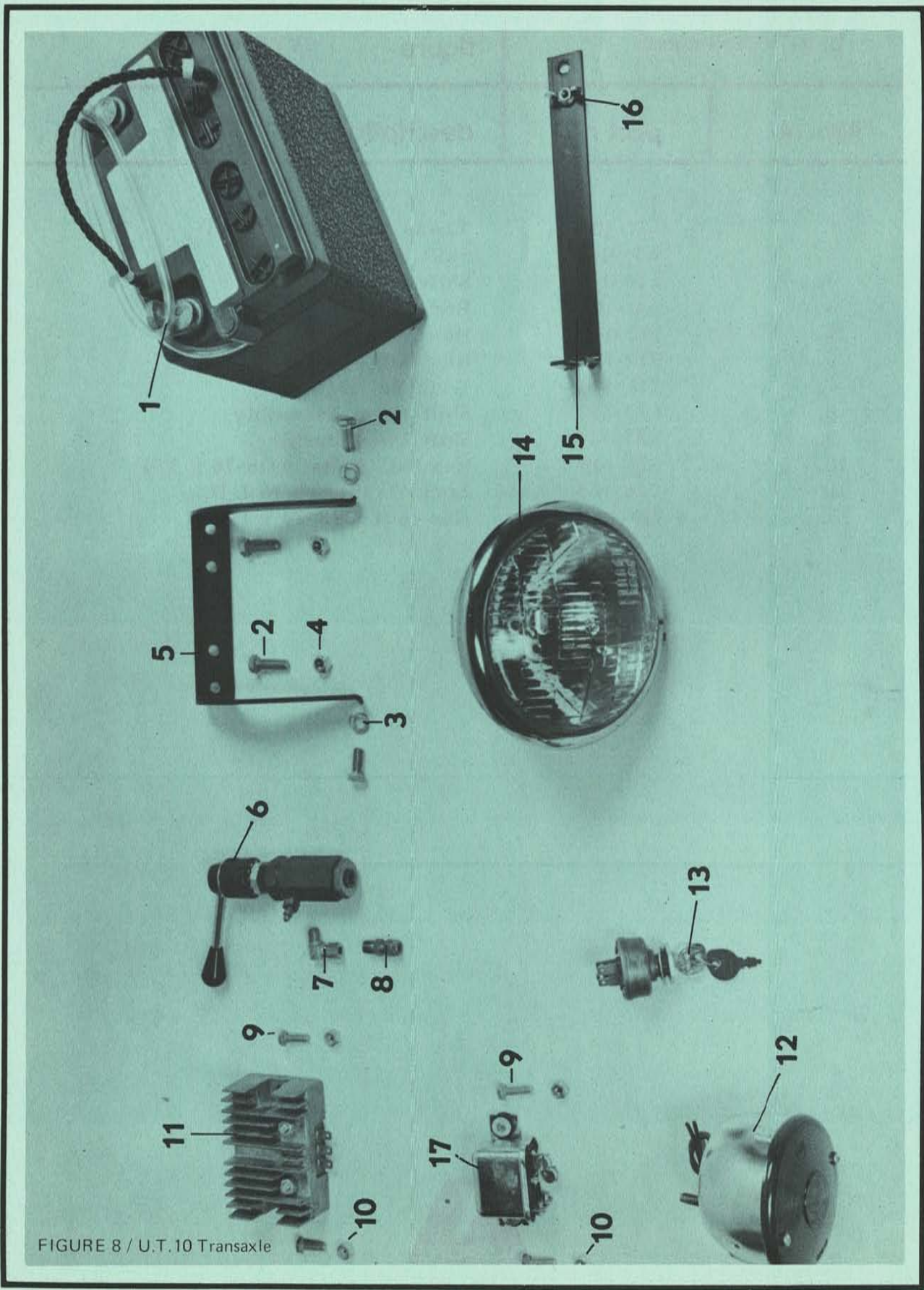


FIGURE 8 / U.T. 10 Transaxle

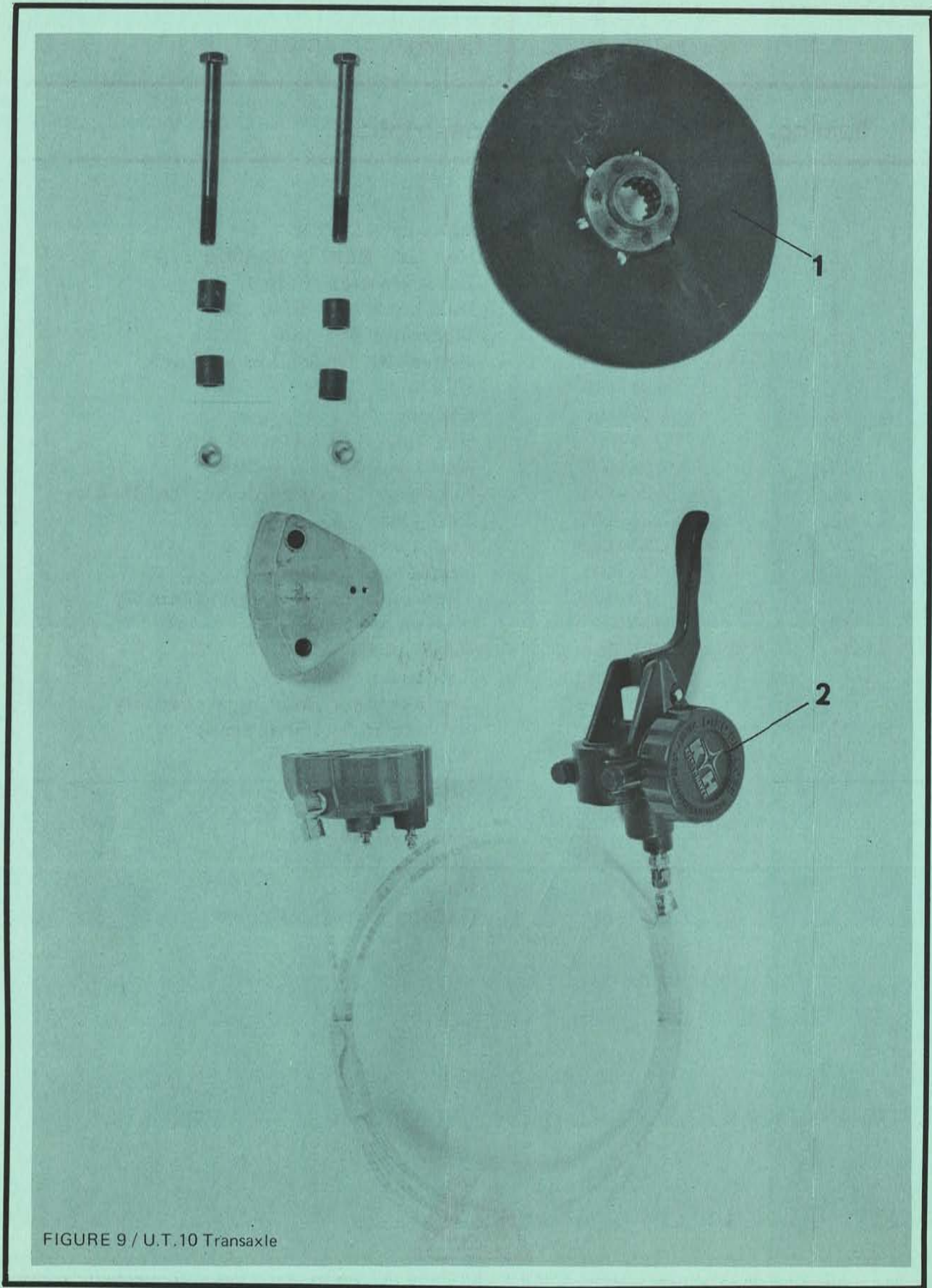


FIGURE 9 / U.T.10 Transaxle

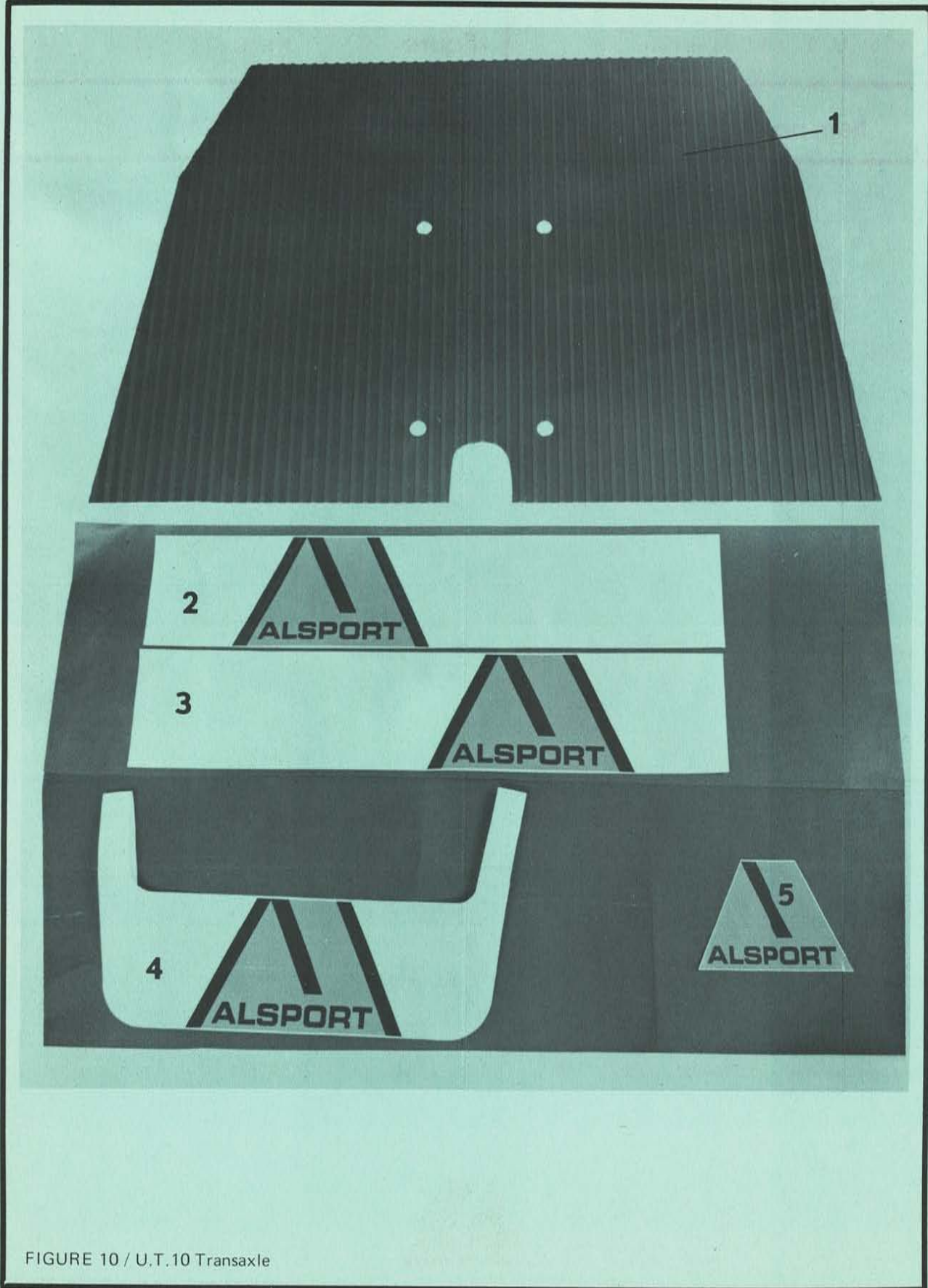
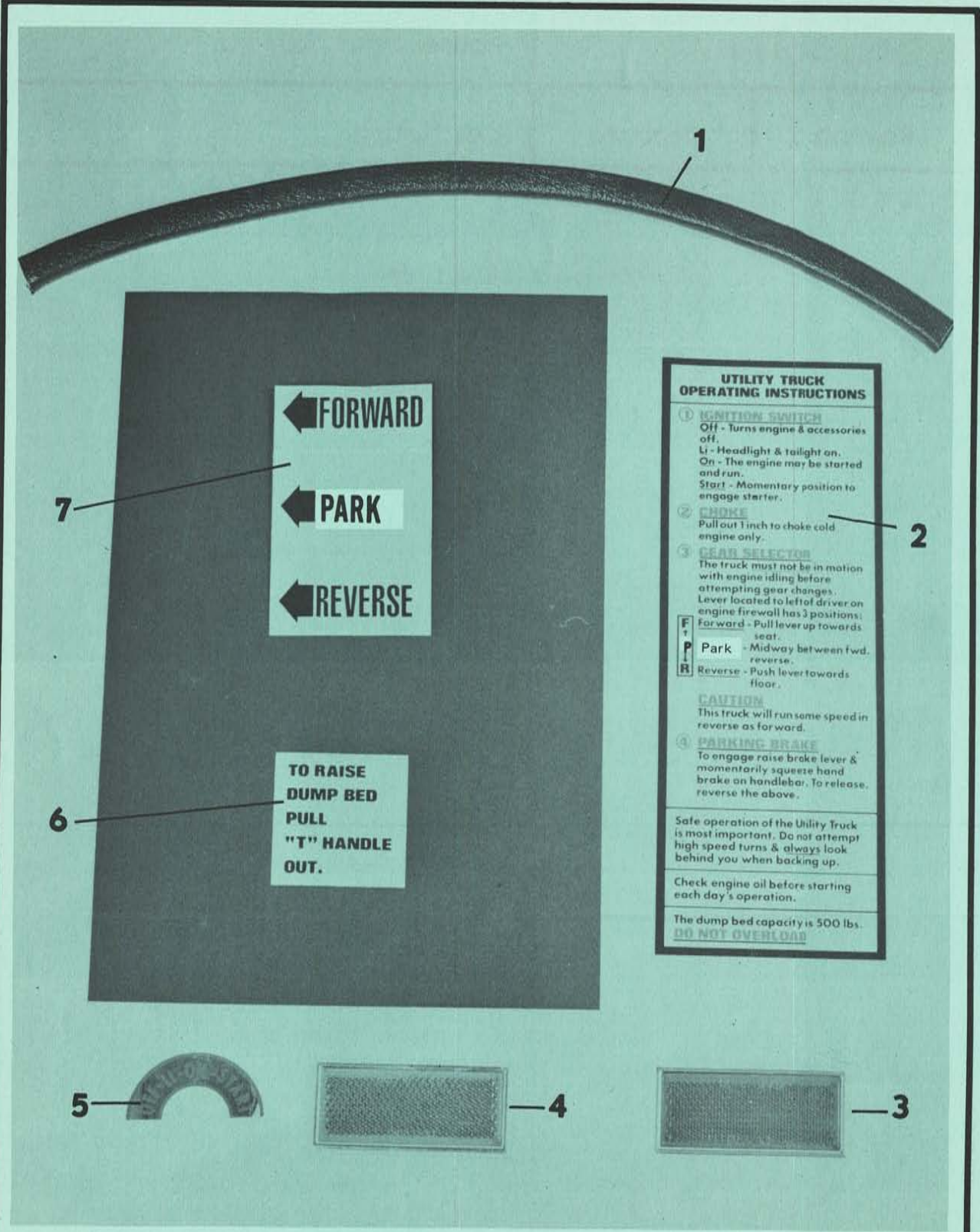


FIGURE 10 / U.T.10 Transaxle



**UTILITY TRUCK
OPERATING INSTRUCTIONS**

① **IGNITION SWITCH**
 Off - Turns engine & accessories off.
 Li - Headlight & taillight on.
 On - The engine may be started and run.
 Start - Momentary position to engage starter.

② **CHOKER**
 Pull out 1 inch to choke cold engine only.

③ **GEAR SELECTOR**
 The truck must not be in motion with engine idling before attempting gear changes. Lever located to left of driver on engine firewall has 3 positions:
F Forward - Pull lever up towards seat.
P Park - Midway between fwd. reverse.
R Reverse - Push lever towards floor.

CAUTION
 This truck will run some speed in reverse as forward.

④ **PARKING BRAKE**
 To engage raise brake lever & momentarily squeeze hand brake on handlebar. To release, reverse the above.

Safe operation of the Utility Truck is most important. Do not attempt high speed turns & always look behind you when backing up.

Check engine oil before starting each day's operation.

The dump bed capacity is 500 lbs.
DO NOT OVERLOAD

FIGURE 11 / U.T.10 Transaxle



alsport Utility Truck

PARTS PRICE LIST

Effective November 1, 1974

PRICES SHOWN ARE
MANUFACTURER'S SUGGESTED LIST PRICES.

THIS PARTS PRICE LIST SUPERSEDES
PREVIOUSLY PUBLISHED PRICE LISTS OR SUPPLEMENTS.

PRICES SUBJECT TO CHANGE WITHOUT NOTICE.

U.S. PRICES ONLY



PN 659-109

ALSPORT UTILITY TRUCK PARTS
PRICE LIST
600 Series

<u>Part No.</u>	<u>Description</u>	<u>List Price Each</u>
610-100 A	7/16-20 x 5 Bolt	.15
610-101	7/16-20 x 4 1/2 Bolt	.30
610-102 A	5/16-24 x 3 Bolt	.15
610-103	3/8-16 x 2 1/4 Bolt	.20
610-104 A	5/16-18 x 1/2 Set Screw	.15
610-105	5/16-24 x 3 1/2 Bolt	.20
610-106 A	5/16-24 x 1/2 Bolt	.15
610-107 A	1/4-20 x 1 1/4 Machine Screw	.15
610-108 A	5/16-18 x 3/4 Bolt	.15
610-109	See 710-139	
610-110 A	1/4-20 x 2 Machine Screw	.15
610-111 A	3/8-24 x 3 Bolt	.15
610-112 A	1/4-20 x 1 1/4 Bolt	.15
610-113	See 710-168	
610-114 A	3/8-24 x 1 1/4 Bolt	.15
610-115 A	1/4-20 x 3/4 Machine Screw	.15
610-116 A	1/4-28 x 3/4 Machine Screw	.15
*610-117	Self Drilling Screw	.20
612-100	9/16-18 Hex Nut	.20
612-101	1/4-20 Moly Jam Nut	.20
612-102 A	1/4-20 Wing Nut	.15
612-103 A	3/8-24 Jam Nut	.15
613-101	#40 Chain Pitch 39	7.20
613-102	#40 Chain Pitch 65	11.55
613-103	11" Sash Chain	1.00
613-104	4 1/2" Sash Chain	.50
614-100 A	1/4" sq. x 1" Key	.25
615-100	3/16 Dia. x 1 1/2" Roll Pin	.20
617-100	See 717-130	
617-101	Torque Convertor Driven	60.80

<u>Part No.</u>	<u>Description</u>	<u>List Price Each</u>
626-152	Muffler Strap	.40
626-153	Transmission & Jackshaft Support	.50
626-154	Battery Hold Down Strap	1.50
626-155	Footstep Carpet Retainer (short)	2.00
626-160	Side Panel Support	2.00
626-165	Footstep Carpet Retainer (long)	3.00
*626-190	Engine Mount	10.00
*626-196	Battery Protector Plate	.75
627-117	Tailgate Latch	2.50
627-134	Shift Arm Apex	1.80
*627-138	Shift Arm	1.00
627-143	"S" Hook	.35
627-149	Shift Pivot Bushing	.50
*627-155	Air Filter Flange	.80
*627-159	Shift Arm	1.00
628-100 A	Pop Rivet Ad 64 BS	.15
628-101 A	Pop Rivet Ad 66 BS	.15
632-100	1/2 x 2 1/2 Spring	.50
632-101	5/8 x 2 1/2 Spring	.50
633-100	Shift Bracket Ass'y.	1.75
633-101	Shift Pivot Ass'y.	2.10
633-102	Seat Frame	23.25
633-103	Dump Box Latch Pin	2.00
633-104	Tailgate Latch Pin	2.00
633-105	Front Fork	17.55
633-106	Leading Link	14.00
633-107	Handle Bar	9.20
633-108	Front Fender	15.65
633-109	Front Fender Cap	4.35
633-110	Console	11.10
633-111	Dump Box	77.00
633-112	Tailgate	18.15
*633-113	Frame (Revised)	215.00
633-114	Torque Arm	10.55
633-115	L. H. Rear Fender	7.75
633-116	R. H. Rear Fender	7.75
633-117	L. H. Axle Support	5.40
633-118	R. H. Axle Support	5.40
633-119	Engine Mount 10 H. P.	10.60
633-120	Shift Linkage	.65
633-121	See 626-121	

<u>Part No.</u>	<u>Description</u>	<u>List Price Each</u>
648-100	Sprocket 18 tooth 3/4 Bore	6.90
648-101	Sprocket 24 tooth 3/4 Bore	8.40
648-102	Sprocket 14 tooth 1" Bore	8.80
649-100 A	Ty Rap 12"	.15
649-101 A	Ty Rap 6"	.15
649-102	Edge Protector 13"	1.50
650-100	7/16" I. D. x 1 Spacer	.80
650-101	3/4 O. D. x 1/2 I. D. x 1 1/16 Spacer	.45
650-102	9/16 O. D. x 5/16 I. D. x .58 Spacer	.20
651-100	Fuel Tank Cap (plastic)	.60
651-101	Muffler Asbestos	2.00
651-103	4 1/2" Plastic Loom	.50
652-100	10 HP Tecumseh Engine	352.50
654-100	Drive Belt	13.00
657-100	Hydraulic Brake Lever Lock	36.75
*657-104	Brake Disc Ass'y (Precico)	9.00
659-100	Alsport Logo	1.20
659-101	Front Fender Decal	1.20
659-102	L. H. Decal for Dump Box	1.20
659-103	R. H. Decal for Dump Box	1.20
659-104	Operation Instruction Decal	.40
659-105	Shift Pattern Decal	.40
659-106	Dump Box Instructions	.40
**659-107	U. T. Owners Manual	3.00
**659-108	U. T. Illustrated Parts	1.00
**659-109	U. T. Parts Price List	1.00
**659-110	U. T. Sales & Service Manual	6.00
659-126	On & Off Decal	.40
**659-128	U. T. Transmission Service Section	1.00
**659-129	U. T. Electrical System	1.00
**659-130	U. T. Assembly Instructions	1.00
**659-133	U. T. Supplement "Granite State"	1.00
*659-134	Decal Operation Instructions	.40
*659-135	Decal Shift Pattern	.40
**659-136	U. T. Transaxle Illustrated Parts List	1.00

<u>Part No.</u>	<u>Description</u>	<u>List Price Each</u>
712-100 A	3/8-24 Hex Nut -Nylon	.15
712-102 A	5/16-24 Lock Nut Nylon	.15
712-104 A	1/2-20 Lug Nut	.15
712-105	3/4-10 King Pin Nut	.55
* 712-108 A	Hex Nut 5/16-24	.15
712-117 A	5/16-18 Lock Nut Center	.15
712-118 A	10-32 Lock Nut	.15
* 712-121 A	3/8-16 Lock Nut	.15
712-123	7/16-20 Lock Nut Center	.30
712-129 A	1/4-20 Lock Nut Nylon	.15
712-132 A	1/2-20 Lock Nut Center	.15
712-135 A	3/8-24 Lock Nut Center	.15
712-147	1/2-20 Hex Nut	.20
712-148	5/16-18 Wing Nut	.20
* 712-152 A	7/16-20 Lug Nut	.15
713-100 A	#40 Master Link Clip	.25
713-106 A	#40 Half Link	.50
713-110 A	#40 Master Link Cotted	.50
714-102 A	3/16 Sq. x 2 Key	.25
714-103	3/16 Sq. x 4 Key	.45
714-111 A	#808 Woodruff Key	.20
715-101 A	3/32 x 3/4 Cotter Pin	.15
717-114	Universal Joint 1" Bore	22.40
717-123	Differential (for service parts see Holtan HA 252 Transmission)	66.55
717-126	Differential (for service parts see Peerless Transmission)	40.80
717-130	Drive Torque Convertor Salsbury 780 Series	49.30
720-101	Magura Twist Grip & Dummy Grip	6.25
720-104	Magura Twist Grip Ass'y.	5.55
720-105	Magura Dummy Grip	.70
723-112	3/32 I. D. Fuel Line	.60/ft.
723-141	1 1/2 Dia. U-Clamp	.25
723-142	1 1/2 Saddle	.50
723-152	Fuel Tank Cap	1.40
723-184	Fuel Filter Fram G-6	2.50

<u>Part No.</u>	<u>Description</u>	<u>List Price Each</u>
741-101	3/4" I. D. Bearing w/collar	5.65
741-102	3/4" I. D. Bearing	1.85
741-103	1" I. D. Bearing w/Lock Collar	5.10
741-105	1" I. D. Bearing and Lock Collar	4.80
*746-102	See 646-102	
746-103 A	Throttle Cable Lock	.30
*746-145	Throttle Cable	2.70
748-120	#40 A 54 Sprocket (for Holtan HA 252 Differential)	9.95
748-127	#40 A 54 Sprocket (for Peerless Differential)	9.95
749-102 A	6 3/4" Long Cable Ties	.15
749-105	Jiffy Trim	.35 /ft
749-110	Flangett for 3/4" I. D. Bearing	.85
749-114	#100-8002-000 Front Shock	18.80
749-115	#500-8002-000 Rear Shock	20.20
749-116	Flangett for 1" I. D. Bearing	1.00
750-100	3/4 I. D. x 3 7/16 Wheel Spacer	1.30
750-117	3/4 I. D. Lock Collar	1.00
*757-128	Hyd. Brake Ass'y (for service parts see Kelsey-Hayes Brake Section)	75.20
757-140	Hyd. Brake Ass'y. (for service parts see Borg-Warner Supplement)	74.80
757-141	8" Disc Assembly (Borg-Warner)	9.00
757-143	8" Disc Brake (Borg-Warner #C20057P)	6.00
757-144	1" Bore Brake Hub (Borg-Warner #B200058P)	3.00

1. THIS PARTS LIST IS IN NUMERICAL ORDER, FOR EASE IN LOCATING PRICES.
2. THE LETTER "A" FOLLOWING THE PART NUMBER INDICATES BULK PACKAGING OF 10 PIECES.
3. WHEN A PART IS REPLACED, THE SUGGESTED LIST PRICE IS THAT OF THE REPLACEMENT PART.
4. "NLA" INDICATES THE PART IS NO LONGER AVAILABLE FROM THE FACTORY, BUT MAY BE AVAILABLE FROM THE DISTRIBUTOR.
5. "NA" INDICATES THE PART NUMBER HAS REVERTED TO ORIGINAL MANUFACTURERS PART NUMBER. TO LOCATE THESE PARTS, REFER TO MANUFACTURERS ILLUSTRATED PARTS BOOK, IN THE RESPECTIVE SECTION OF THE 1974 SALES & SERVICE MANUAL.
6. PRICES ARE MANUFACTURERS SUGGESTED LIST PRICE AT THE TIME OF PUBLICATION, AND ARE SUBJECT TO CHANGE ANYTIME WITHOUT NOTICE.
7. SINGLE ASTERIKS (*) INDICATE THAT THE ITEM WAS ADDED TO THE PRICE LIST OR THAT THIS PRICE HAS CHANGED SINCE THE LAST PUBLISHED PRICE LIST.
8. DOUBLE ASTERIKS (**) INDICATE THAT ALL LITERATURE MATERIAL IS NET PRICE ONLY, NO DISCOUNT.

<u>Part No.</u>	<u>Description</u>	<u>List Price Each</u>
617-102	Transmission (for service parts see Apex Supplement)	205.00
617-103	"Hot Shift" Transmission (for service parts see Snow-Nabxtedt Supplement)	330.00
*617-105	Transaxle-Precico (for service parts see Transmission Section)	367.20
*617-107	Torque Convertor Driven 1" Bore	61.80
*617-110	U-Joint (1" Bore & Spline)	28.20
618-101	Exhaust Clamp	1.50
*618-102	Saddle 1 5/8 Clamp	.50
*618-103	Retaining Clip	.50
623-100	Back Rest Pad	21.20
623-101	Seat Pad	39.80
623-102	1" I. D. x 6" Lgth. Flex Tube	1.50
*623-103	Hose Clamp	.75
624-100	Fuel Guage	1.50
625-100	Main Wire Harness	14.00
625-101	Battery Cable 30"	4.65
625-102	Tailight	3.20
625-103	Ignition Switch	4.35
625-104	Rectifier Tecumseh #1A183-6	4.95
625-105	Lens f/625-102	1.00
625-106	Housing Assembly f/625-102	1.75
625-107	NLA	
625-108	15" Black Battery Cable	3.00
625-109	20" Red Battery Cable	3.65
625-110	See 725-239	
625-111	22" Battery Cable	3.80
625-112 A	Butt Connector	.15
625-113	Red Lead Wire	1.00
625-114	Brown Lead Wire	1.00
625-249	Replacement Bulb f/625-102	.50
626-100	Shift Guide Plate	.45
626-108	R. H. Side Panel	3.80
626-109	L. H. Side Panel	3.80
626-113	Rear Panel	3.80
626-121	Transmission & Gear Box Plate	8.60
626-129	Tailgate Pivot Plate	.45
626-131	Dump Box Pivot Plate	.60

<u>Part No.</u>	<u>Description</u>	<u>List Price Each</u>
633-122	Muffler Ass'y.	18.75
633-123	Air Filter Flange-Mounting to Carburetor	1.60
633-124	Rear Air Filter Ass'y.	1.35
633-125	Exhaust Manifold Ass'y. 10 H. P.	10.00
633-128	Transmission Lever (G. S. M.)	2.55
633-130	Engine Base Support (U-Clamp)	2.70
*633-133	Shift Pivot Ass'y.	2.10
*633-135	Frame (Transaxle)	200.00
*633-137	Battery Box (Bolt on)	9.95
635-100	Floor Mat	14.30
635-101	Fuel Tank (Metal)	13.40
635-102	Shift Knob	3.50
635-103	Bushing Nylon	.75
635-104	Fender Cap Rubber	1.80
635-105	Rubber Mt.	.20
635-106 A	5/16 I. D. Rubber Mt.	.15
635-107 A	Rubber Mt.	.15
635-108	Limiter Rubber	.30
635-109 A	Rubber Forming Washer	.20
636-100 A	3/4" I. D. Lock Washer	.15
636-101 A	Forming Washer	.15
637-100	Elbow 3/16 Tube x 1/8 Pt. w/compression cap and ring	1.00
637-101	Straight 3/16 Tube 1/8 Pt.	1.00
*638-102	Axle & Hub Ass'y.	14.20
639-100	See 725-264	
639-101	See 725-265	
641-100	Rod End Bearing	1.10
*641-101 A	Nylon Bushing	.25
645-101	Field Modification Kit	9.95
646-100	Choke	7.05
646-101	Throttle Cable	3.70

ALSPORT UTILITY TRUCK PARTS
PRICE LIST
700 Series

<u>Part No.</u>	<u>Description</u>	<u>List Price Each</u>
710-100	3/4-10 x 5/8 King Pin	.95
710-105 A	5/16-24 x 2 1/4 Bolt	.15
710-106 A	5/16-24 x 1 1/2 Bolt	.15
710-110 A	5/16-24 x 1 3/4 Bolt	.15
*710-115 A	3/8-24 x 1 1/2 Hex Bolt	.15
710-116 A	3/8-24 x 1 3/4 Bolt	.15
710-117 A	1/2-20 x 1 1/4 Lug Stud	.15
*710-118 A	3/8-24 x 3/4 Whiz Lock Bolt	.15
710-121 A	5/16-24 x 3/4 Bolt	.15
710-126 A	3/8-24 x 2 1/2 Bolt	.15
710-127 A	#8-32 x 1/2 Selt Tap Screw	.15
710-128 A	5/16-24 x 1 Bolt	.15
710-129 A	#10 x 3/4 Woodscrew	.15
710-131 A	1/4-20 x 1 Bolt	.15
710-133 A	1/4-20 x 2 Bolt	.15
710-139 A	5/16-18 x 1 Bolt	.15
*710-145 A	5/16-18 x 5/16 Set Screw	.15
710-147 A	10-32 x 5/8 Machine Screw	.15
710-148 A	1/4-20 x 5/16 Set Screw	.15
710-155 A	10-32 x 5/8 Bolt	.15
710-157 A	1/2-20 x 1 1/2 Bolt	.15
710-158	3/8-16 x 7/8 Set Screw	.30
*710-163 A	3/8-16 x 7/8 Allen Hd. Bolt	.15
710-166 A	3/8-24 x 1 Bolt	.15
710-168 A	1/4-20 x 3/4 Bolt	.15
710-169 A	3/8-16 x 1 1/4 Bolt	.15
*710-197	3/8-16 x 3/4 Sq. Hd. Cross Drilled Bolt	.50
710-211 A	3/8-16 x 1/2 Bolt	.15
*710-220	3/8-16 x 1 Hex Bolt	.20
*710-226 A	7/16-20 Lug Stud	.15
711-100	3/4 Dia. x 12 Axle	2.60
711-107	Handle Bar Mount	.80
711-115	Rod End Bearing	5.20
711-117	3/4 Dia. x 12 11/16 Jackshaft	2.45

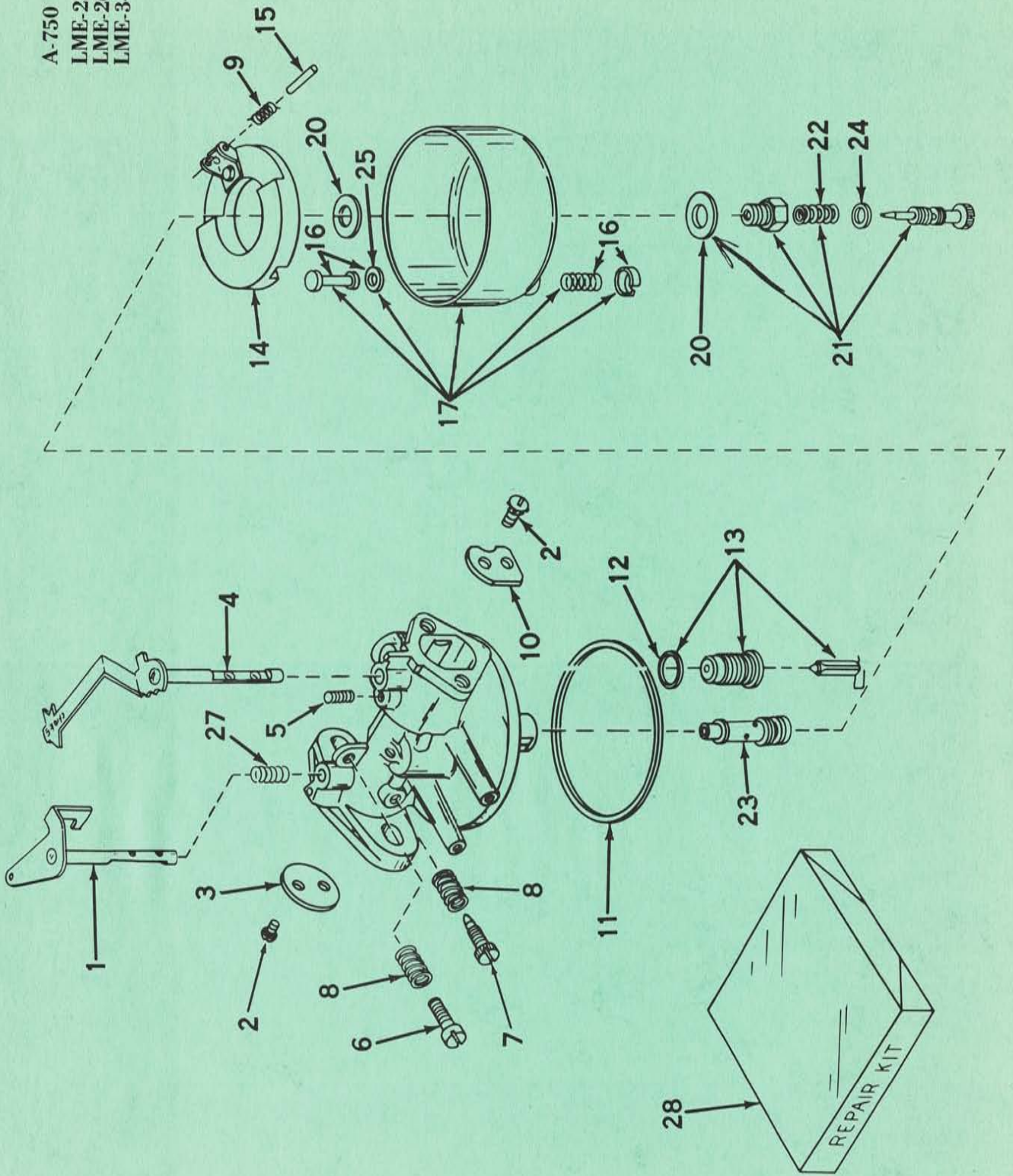
<u>Part No.</u>	<u>Description</u>	<u>List Price Each</u>
725-109 A	Butt Connector	.15
725-162	Fuse Harness	1.30
725-166	12 Volt Headlight (sealed beam)	15.00
725-200	Replacement Bulb f/725-166	5.00
725-209	Housing Assembly f/725-166	10.00
725-230	Ignition Switch	6.45
725-235	14" Red Starter Cable	2.95
725-238	Solenoid	5.85
725-239	12 Volt Battery	44.00
* 725-249	Replacement Bulb	.50
725-251 A	10 Amp. Fuse	.35
* 725-264	Reflector - Amber	.75
* 725-265	Reflector - Red	.75
726-184	Headlight Mounting Bracket	6.00
* 726-326	Battery Box Holddown	1.50
732-102	Spring Ball Joint	.60
734-100	21 x 11.00 x 8 Rear Knobby Tires	60.50
734-101	18 x 8.50 x 8 w/bearing Front Tire & Wheel Ass'y.	53.75
735-102 A	Rubber Grommet	.30
* 735-107	Rubber Strip	.80/ft
* 735-118	Rubber Motormount	2.65
736-101 A	3/8 I. D. Lock Washer	.15
736-102 A	3/8 I. D. Flat Washer	.15
736-104 A	5/16 I. D. Flat Washer	.15
736-105 A	5/16 I. D. Spring Lock Washer	.15
736-111 A	1/2 I. D. Flat Washer	.15
736-116 A	1/4" I. D. Flat Washer	.15
736-119 A	1/2" I. D. External Tooth Lockwasher	.15
736-148	3/8 I. D. Flat Washer	.40
736-149	7/16 I. D. Flat Washer	.20
738-112	Outboard Axle & Hub Ass'y.	14.20

TECUMSEH PRODUCTS COMPANY
 Lauson-Power Products Parts Depot Division
 Grafton, Wisconsin

CARBURETOR No. 631304A

<u>REF.</u> <u>No.</u>	<u>PART</u> <u>NUMBER</u>	<u>PART NAME</u>	<u>No.</u> <u>REQ.</u>
1	31994	Shaft & Lever Assy., Throttle	1
2	630606	Screw, Pan hd. sems, 4-40 x 1/4	4
3	31995	Shutter, Throttle	1
4	631499	Shaft & Lever Assy., Choke	1
5	27113	Spring, Choke stop	1
6	630605	Screw, Throttle adjusting	1
7	*27112	Needle, Idle adjusting	1
8	27114	Spring, Adjusting needle	2
9	31503	Spring, Flat shaft	1
10	30927	Shutter, Choke	1
11	*27109	Gasket, Bowl-to-body	1
12	32628	Gasket, Valve seat	1
13	*32411A	Valve, Seat, Gasket & Spring Assy. (Incl. Nos. 9 & 12)	1
14	27105	Float	1
15	*27106	Shaft, Float	1
16	27136A	Stem Assy., Bowl drain (Incl. No. 25)	1
17	29170	Bowl & Drain Assy. (Incl. No. 16)	1
20	*27110	Gasket, Bowl-to-body	2
21	*28945	Needle Assy., Power adjusting (Incl. Nos. 22 & 24)	1
22	630786	Spring, Adjusting needle	1
23	30355	Nozzle, Main	1
24	27544	"O" Ring	1
25	*27554	Gasket, Drain stem	1
27	32096	Spring, Throttle return	1
28	32412A	Repair Kit (Incl. items marked *)	1

A-750
LME-25
LME-26
LME-34



NOTICE

ILLUSTRATED PARTS LIST FOR TECUMSEH
ENGINES ARE FOR YOUR CONVENIENCE ONLY!
ORDER THESE PARTS THROUGH THE LOCAL
SERVICE DEALERS.

TECUMSEH PRODUCTS COMPANY
 Lauson-Power Products Parts Depot Division
 Grafton, Wisconsin

MODELS HH100-115202D
 HH100-115204D

REF. NO.	PART NUMBER	PART NAME	NO. REQ.
1	33039	Cylinder Assy. (Incl. Nos. 2, 4, 30, 47 & 110)	1
2	27652	Pin, Dowel	2
4	31950	Seal, Oil	2
5	31940	Valve, Intake (Standard)	1
5	31941	Valve, Intake (1/32" oversize) (Incl. No. 9)	1
6	31942	Valve, Exhaust (Standard)	1
6	31943	Valve, Exhaust (1/32" oversize) (Incl. No. 9)	1
7	650592	Key, Flywheel	1
8	31944	Spring, Valve	2
9	31945	Cap, Lower valve spring (Standard)	2
9	31946	Cap, Lower valve spring (1/32" oversize)	2
10	20810	Pin, Valve spring retaining	2
11	33397	Crankshaft Assy. (Incl. Nos. 12, 13, 78 & 79)	1
12	29783	Pin, Crankshaft gear	1
13	31931	Gear, Crankshaft	1
14	32001A	Piston & Pin Assy. (Incl. 2 of No. 16) (Std.)	1
14	32002	Piston & Pin Assy. (Incl. 2 of No. 16) (.010 oversize)	1
14	32003	Piston & Pin Assy. (Incl. 2 of No. 16) (.020 oversize)	1
14	32619	Piston & Pin Assy. (Incl. 2 of No. 16) (.030 oversize)	1
14	32620	Piston & Pin Assy. (Incl. 2 of No. 16) (.040 oversize)	1
15	32004	Ring Set, Piston (Standard)	1
15	32005	Ring Set, Piston (.010 oversize)	1
15	32006	Ring Set, Piston (.020 oversize)	1
15	32623	Ring Set, Piston (.030 oversize)	1
15	32624	Ring Set, Piston (.040 oversize)	1
16	31919	Ring, Piston pin retaining	2
17	33093A	Rod Assy., Connecting (Incl. Nos. 18, 19 & 20)	1
18	32077	Bolt, Connecting rod	2
19	26073	Washer, Connecting rod	2
20	28264	Nut, Lock	2
21	32150	Camshaft (Mech. compression release)	1
22	31939	Lifter, Valve	2
23	32685	Cover, Cylinder (Incl. Nos. 4, 28, 30, 34 & 43)	1
25	*29673	Gasket, Dipstick	1
26	33069	Dipstick, Oil (Incl. No. 25)	1
27	*31956	Gasket, Cylinder cover	1
28	32426	Spacer, Governor rod	1
29	650588	Screw, Hex hd. Sems, 1/4-20 x 2	1
30	31927	Plug, Oil drain	2
32	30564	Screw, Hex hd. Sems, 1/4-20 x 1	8

REF. NO.	PART NUMBER	PART NAME	NO. REQ.
33	31964	Clamp, Governor lever	1
34	29193	Ring, Retaining	1
35	31963	Lever, Governor adjusting	1
36	650518	Lockwasher, No. 10 E.T.	1
37	650428	Screw, Fil. flex hd., Self-locking 10-24 x 7/8	1
38	7975	Nut, Square, 10-24	1
39	31965	Plate, Governor spring	1
40	30312	Screw, Hex slotted washer hd., 10-32 x 1/2	1
41	31967	Spring, Governor	1
42	31968	Link, Governor	1
43	32425	Rod Assy., Governor	1
44	31948	Spool, Governor	1
45	29193	Ring, Retaining	1
46	31947	Gear Assy., Governor	1
47	31930	Shaft, Governor	1
48	*32000A	Gasket, Cylinder head	1
49	33034	Head, Cylinder	1
50	650711	Screw, Hex hd. cap, 5/16-18 x 1-5/8	7
51	650714	Screw, Special Hex hd. cap, 5/16-18 x 1-5/8	2
53	33636	Plug, Spark (Champion J-8 or equivalent)	1
54	33035	Cover, Cylinder head	1
55	650691	Washer, Flat	9
57	27793	Clip, Conduit	2
58	28942	Screw, Hex hd. slotted Sems, 10-32 x 3/8	2
59	650128	Screw, Fil. slotted hd. Sems, 10-24 x 1/2	3
60	31976	Extension, Blower housing	1
61	31990	Bracket, Choke control	1
63	33835	Motor, Starter (Model HH100-115202D)	1
64	650512	Screw, Hex hd. Sems 5/16-18 x 7/8 (Model HH100-115202D)	2
65	610747	Coil Assy., Alternator (Incl. Nos. 69 & 70)	1
66	650416	Screw, Rd. hd. Sems, 10-32 x 1	2
67	30688	Screw, Hex hd. cap Sems, 1/4-20 x 3/4	2
68	29774	Line, Fuel	1
69	610820	Terminal	1
70	610819	Connector, Pyramid	1
71	33099	Spring	1
73	31975	Baffle, Blower housing (Model HH100-115204D)	1
73	32579	Baffle, Blower housing (Model HH100-115202D)	1
75	650561	Screw, Phil. Hex hd. cap, 1/4-20 x 5/8	3
76	28537	Washer	1
77	32676	Decal, Solid state	1
78	31932	Bearing, Tapered roller	2
79	31928	Cup, Bearing	2
79A	32599	"O" Ring	1
81	*31971	Gasket, Shim (.0035 thick, see note 1)	1
82	*31972	Gasket, Shim (.005/.007 thick, see note 1)	1
82A	32031	Spacer, Steel (.010 thick, see note 1)	1
83	32577	Cover, Cylinder (See Note 1)	1
84	650512	Screw, Hex hd. Sems, 5/16-18 x 7/8	3
85	650666	Washer, Lock	1
86	650594	Nut, Flywheel, 3/4-16	1

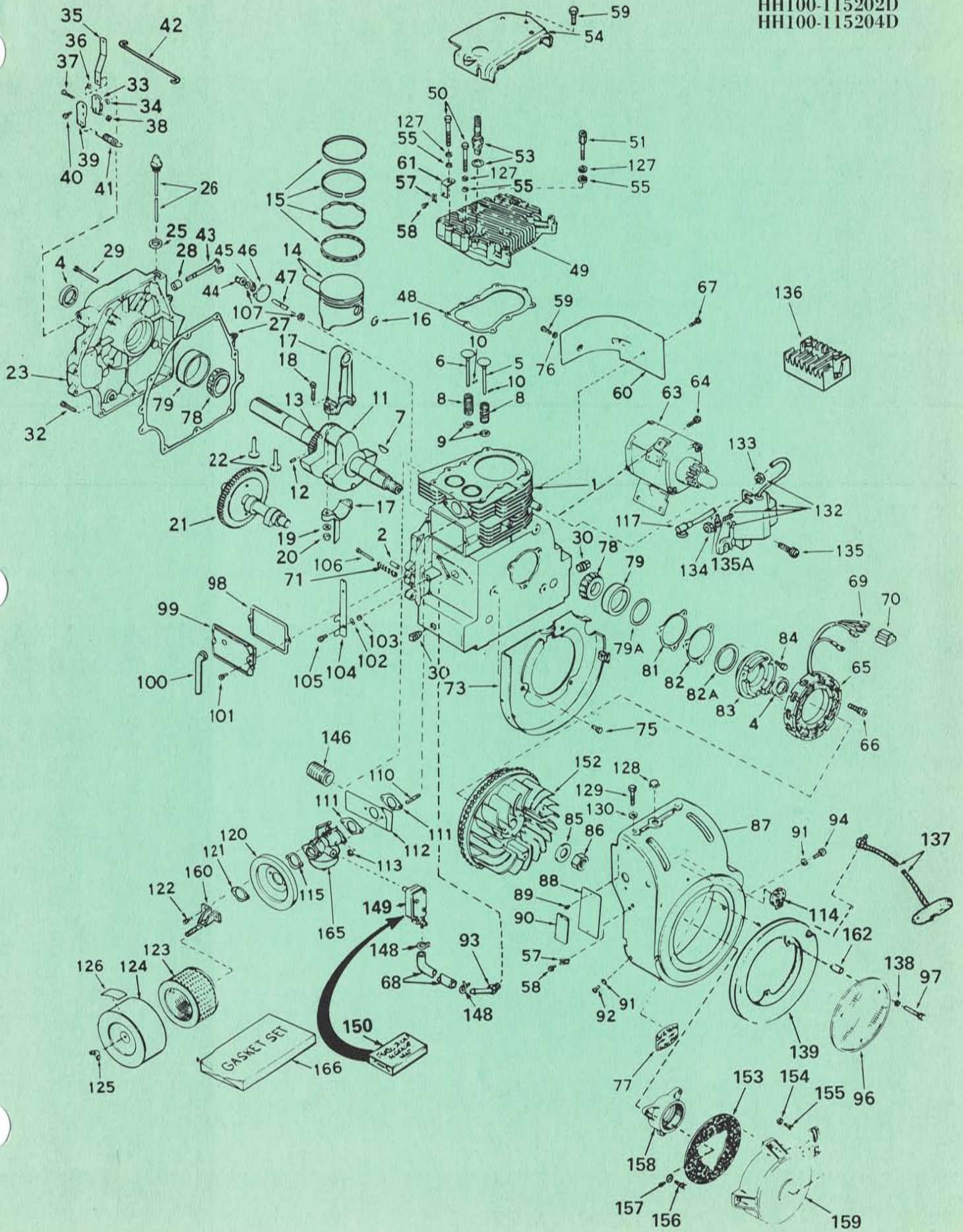
REF. NO.	PART NUMBER	PART NAME	NO. REQ.
87	33037	Housing, Blower (Model HH100-115204D)	1
87	33044A	Housing, Blower (Model HH100-115202D)	1
88	31345	Plate, Identification	1
89	29309	Stud, Drive	2
90	30586	Decal, Name & Instruction	1
91	8274	Lockwasher, Split, 5/16"	2
92	650624	Screw, Hex hd. cap, 5/16-24 x 9/16	1
93	32958	Fitting, Fuel line	1
94	650595	Screw, Hex hd. cap, 5/16-24 x 3/8	1
96	33776	Screen, Starter pulley (Model HH100-115202D)	1
97	650680	Screw, Truss hd. mach., 1/4-20 x 3/4 (Model HH100-115202D)	3
98	*31958	Gasket, Breather	1
99	31957	Breather, Assembly	1
100	27627	Tube, Breather	1
101	650128	Screw, Fil. slotted hd. Sems, 10-24 x 1/2	2
102	28558	Washer, Wave	1
103	31966	Bushing, Governor lever	1
104	31984A	Lever, Control	1
105	650597	Screw, Hex washer hd., 10-24 x 5/8	1
106	650591	Screw, Fil. slotted hd. mach., 10-24 x 2	1
107	30590A	Washer, Flat	2
110	650587	Stud, Carburetor	2
111	*31960	Gasket, Carburetor	2
112	31959	Baffle, Air	1
113	29752	Nut, Hex, 1/4-28	2
114	32045	Decal, Name & H.P.	1
115	*27272	Gasket, Air cleaner	1
117	610118	Cover, Spark plug	1
120	32812	Bracket, Air cleaner	1
121	30767	Spacer, Cleaner	1
122	650399	Screw, Phil. fil. hd. Sems, 10-32 x 5/8	2
123	32008	Element, Air cleaner	1
124	32810	Cover, Air cleaner	1
125	650513	Nut, Wing, 1/4-20	1
126	31752	Decal, Air cleaner	1
127	650690	Washer, Belleville	9
128	33038	Plug, Button	1
129	650713	Screw Hex hd. cap, 5/16-18 x 5/8	2
130	26073	Washer	2
132	610748	Magneto (Incl. Nos. 117, 133, 134 & 135A)	1
133	610750	Grommet, Lead wire	1
134	650124	Nut, Hex, 10-32	1
135	650661	Screw, Phil. hd. w/conical spring lockwasher, 1/4-20 x 3/4	2
135A	30843	Terminal	1
136	610749	Regulator Assy., Rectifier	1
137	32046	Rope Assy., Starter (Model HH100-115202D)	1
138	27070	Lockwasher (Model HH100-115202D)	3
139	31980	Pulley, Starter (Model HH100-115202D)	1
146	32042	Nipple, Pipe	1
148	26460	Clamp, Fuel line	2

REF. NO.	PART NUMBER	PART NAME	NO. REQ.
149	32959	Pump, Fuel	1
150	33010	Fuel Pump Repair Kit	1
152	610746	Flywheel	1
153	32049	Screen, Starter Hub (Model HH100-115204D)	1
154	8345	Washer (Model HH100-115204D)	4
155	650598	Screw, Hex hd. cap Sems, 1/4-28 x 3/4 (Model HH100-115204D)	4
156	650516	Screw, Hex hd. Sems w/flatwasher, 1/4-20 x 1-1/8 (Model HH100-115204D)	3
157	650675	Washer, Flat (Model HH100-115204D)	3
158	32048	Hub, Rewind Starter (Model HH100-115204D)	1
159	590405	Starter Assembly (Model HH100-115204D)	1
160	32907	Bracket, Air cleaner	1
162	31992	Spacer, Screen	3
165	631304A	Carburetor (Incl. No. 111)	1
166	33237	Gasket Set (Incl. items marked *)	1

NOTE 1: Determine the gap between the cover and the machined surface on the cylinder, which can be from .001" up to .007", in which case no shim gaskets will be required. Use of gaskets must be limited to a combined total of .010" thick. Steel spacers must be used as required to eliminate crankshaft end play.

A-1619

HH100-115202D
HH100-115204D



TECUMSEH PRODUCTS COMPANY
Lauson-Power Products Parts Depot Division
Grafton, Wisconsin

REWIND STARTER No. 590405

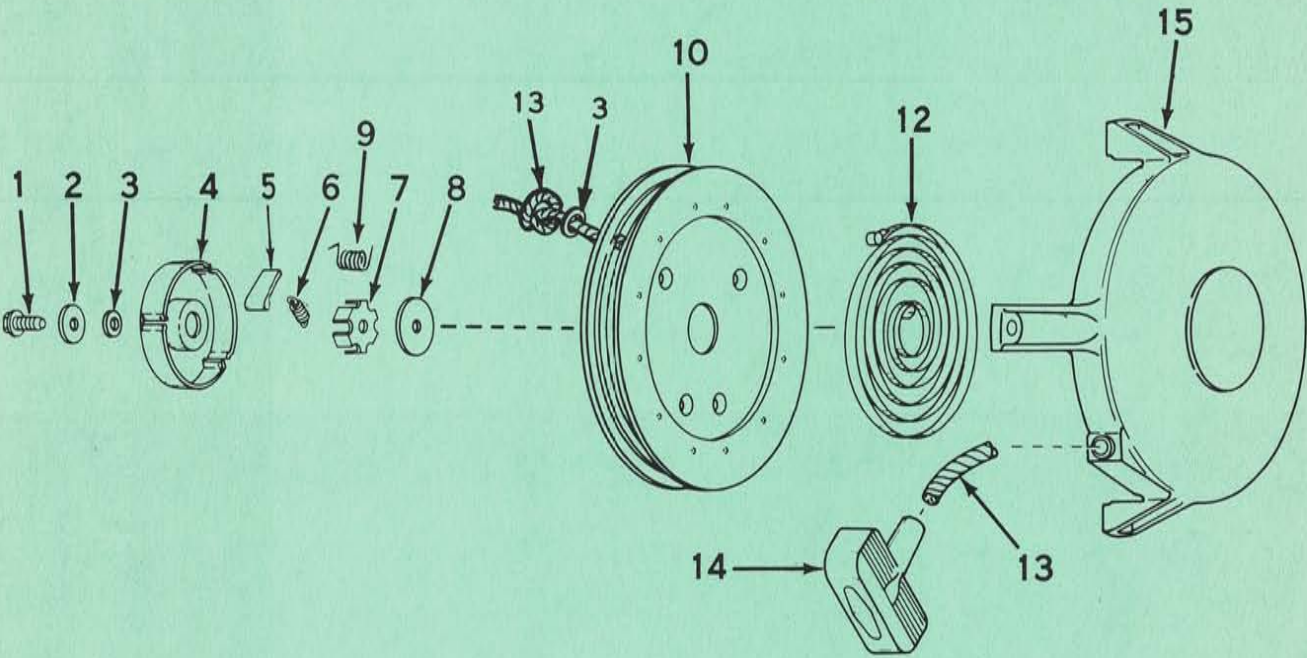
<u>REF. NO.</u>	<u>PART NUMBER</u>	<u>PART NAME</u>	<u>NO. REQ.</u>
1	32025	Screw, Retainer	1
2	32024	Washer, Brake	1
3	32023	Washer, Spacer	2
4	32021	Retainer	1
5	590148	Dog, Starter	3
6	32022	Spring, Retainer	1
7	32027	Brake	1
8	32028	Washer, Thrust	1
9	33179	Spring, Dog	3
10	32029A	Pulley & Sheave Assy.	1
12	28289	Spring, Starter	1
13	30971	Rope, Starter	1
14	590387	Handle, Starter	1
15	32030	Housing, Starter	1

A-447

1A32-188

504-901-0

Revised 2-21-72



SALSBUARY

MODEL 780

AUTOMATIC TORQUE CONVERTER

ENGINE RATING: 2-Cycle to 25 H. P.
4-Cycle to 12 H. P.

For 2-cycle engines through 400 cc, drive pulleys are bored for 25 mm and 30 mm shafts (1/10 taper), as well as standard 3/4" and 1" straight bores. Engagement speed of the drive pulley is 2,300 rpm (standard 2-cycle). Variations are available for 2,800 rpm and above. Four 4-cycle engines, engagement speed is established at 1,600 rpm.

SPEED RATIOS: 3.76:1 reduction low speed with an overdrive ratio of .87:1 (engine rpm x 1.16) or greater under optimum conditions. The Model 795 torque converter is a high speed performance drive designed for applications such as snow vehicles which utilize 2-cycle engines in the 5,500 rpm class.

LIGHT WEIGHT: Aluminum die castings have been selected to provide one of the lightest high capacity drives on the market. Driven sheaves are of steel to accomodate the operating speeds encountered in racing requirements. The drive pulley dimensions are 7.22" outside diameter, weight 5.25 pounds. The driven pulley has a 9.26 diameter and weighs 8 pounds.

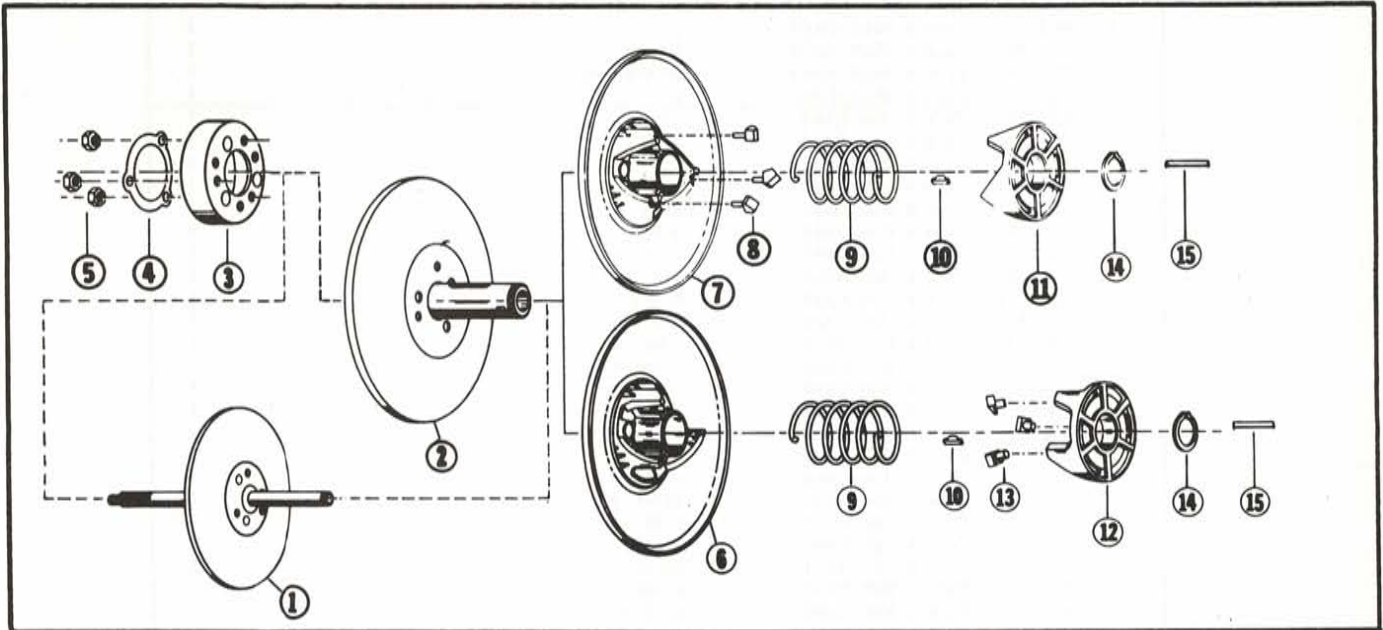
ECONOMICAL: In addition to the variety of drive pulley bore sizes mentioned above, driven pulley designs are available in standard sizes of 3/4" and 1". OEM requirements are available with internal splines, as well as integral shafts with external splines (see specification on the reverse side).

TORQUE SENSITIVE: The Salsbury Model 780 is a torque sensitive torque converter. Torque sensitive drives are particularly suited to those applications where immediate response to torque demand is required for down shifting and where engine speed is ideally maintained at its peak rpm.

This unit is particularly preferred for high speed racing requirements on vehicles such as snowmobiles.

FOR INSTALLATION DIMENSION, SEE REVERSE

MODELS 500, 700, 770, 780, 790 DRIVEN PULLEY (TORQUE SENSITIVE) ILLUSTRATED PARTS LIST



MODELS 500, 700, 770, 780, 790 DRIVEN PULLEYS BY ASSEMBLY NUMBER

Assembly Usage Code	Assembly Number	Model/Bore Size
a	138900	770, 3/4 in.
b	138901	770, 1 in.
c	138902	770, 7/8 in.
d	139700	770, 3/4 in. bdr
e	139701	770, 1 in. bdr
f	139702	770, 7/8 in. bdr
g	139900	790, 3/4 in.
h	139901	790, 1 in.
j	140200	790, 3/4 in. int.
k	140300	780, 3/4 in.
l	140301	780, 7/8 in.
m	140302	780, 1 in.
n	140400	780, 3/4 in. int.
p	140401	780, 3/4 in. int.
q	140600	770, 3/4 in. bfl
r	140601	770, 7/8 in. bfl
s	140602	770, 1 in. bfl
t	140700	780, 3/4 in. bdr
u	140701	780, 7/8 in. bdr
v	140702	780, 1 in. bdr
w	141100	780, step int.
x	141101	780, step int.
y	141200	700, 3/4 in.
z	141201	700, 7/8 in.
aa	141202	700, 1 in.
ab	141203	700, 3/4 in. short
ac	141204	700, 1 in.
ad	143000	780, 3/4 in. wbf
ae	143001	780, 7/8 in. wbf
af	143002	780, 1 in. wbf
ag	143500	500, 3/4 in.
ah	143501	500, 7/8 in.
aj	143502	500, 1 in.
ak	143600	700, 3/4 in.
al	143601	700, 7/8 in.
am	143602	700, 1 in.
an	143603	700, 3/4 in short

Assembly Usage Code	Assembly Number	Model/Bore Size
ap	143700	770, 3/4 in.
aq	143701	770, 7/8 in.
ar	143702	770, 1 in.
as	143800	780, 3/4 in.
at	143801	780, 7/8 in.
au	143802	780, 1 in.
av	143803	780, 25mm
aw	143804	780, 7/8 in.
ax	143805	780, 3/4 in.
ay	143900	790, 3/4 in.
az	143901	790, 7/8 in.
ba	143902	790, 1 in.
bb	144200	780, 3/4 in. wbf
bc	144201	780, 7/8 in. wbf
bd	144202	780, 1 in. wbf
be	144203	780, 3/4 in. wbf
bf	144204	780, 7/8 in. wbf
bg	144205	780, 1 in. wbf
bh	144500	780, step int.
bj	144501	780, step int.
bk	144800	770, 3/4 in. bfl
bl	144801	770, 7/8 in. bfl
bm	144802	770, 1 in. bfl
bn	144803	770, 3/4 in. bfl
bp	145100	780, 3/4 in. bdr
bq	145101	780, 7/8 in. bdr
br	145102	780, 1 in. bdr
bs	145103	780, 3/4 in. bdr
bt	145104	780, 7/8 in. bdr
bu	145105	780, 1 in. bdr
bv	145300	500, 3/4 in. bdr
bw	145301	500, 7/8 in. bdr
bx	145302	500, 1 in. bdr
by	146100	780, 3/4 in.
bz	146101	780, 7/8 in.
ca	146102	780, 1 in.

int. = integral shaft bfl = brake flange wbf = wide brake flange bdr = brake drum



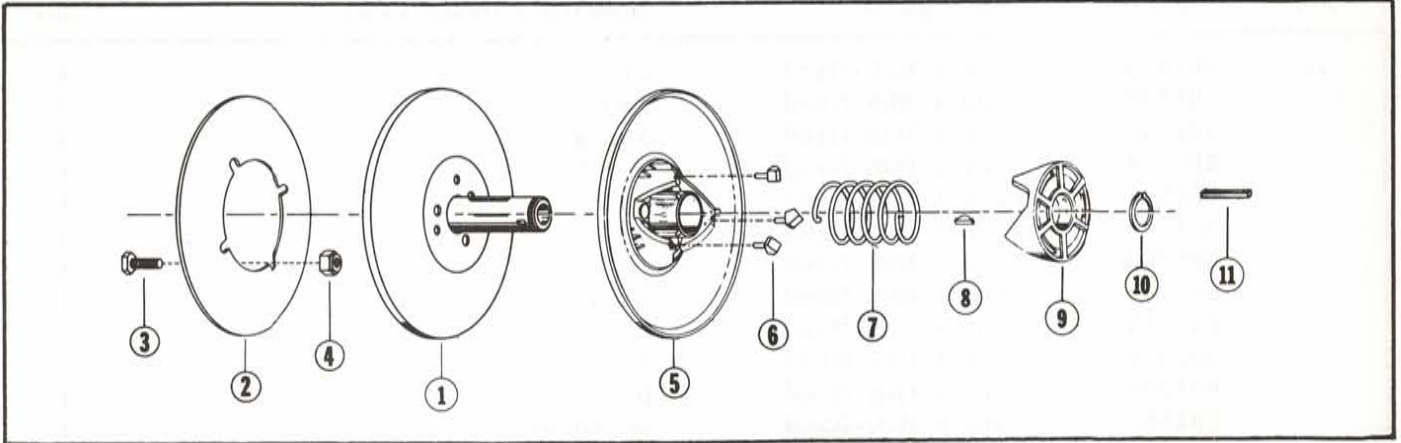
A DIVISION OF **ISC** INSTRUMENT SYSTEMS CORPORATION

1010 EAST 62nd STREET, LOS ANGELES, CALIFORNIA 90001 • PHONE (213) 232-6181

MODEL 850 and 860 DRIVEN PULLEY

(TORQUE SENSITIVE)

ILLUSTRATED PARTS LIST



MODEL 850 and 860 DRIVEN PULLEYS BY ASSEMBLY NUMBER

Assembly Usage Code	Assembly Number	Model/Bore Size
a	147600	850, 3/4 in.
b	147601	850, 7/8 in.
c	147602	850, 1 in.
d	147603	850, 3/4 in.
e	147604	850, 7/8 in.
f	147605	850, 1 in.
g	147606	850, 3/4 in.
h	147607	850, 7/8 in.
j	147608	850, 1 in.
k	147609	850, .9855 in.
l	147610	850, .9855 in.
m	147611	850, 1 in.
n	147612	850, 1 in.
p	147613	850, 7/8 in.
q	147614	850, 1 in.
r	147615	850, 3/4 in.
s	147700	850, 1 in. bd
t	147800	860, 1 in.
u	147801	860, 1 in.
v	147802	860, 1 in.
w	147803	860, 1 in.
x	147804	860, 1 in.
y	147805	860, 7/8 in.

Assembly Usage Code	Assembly Number	Model/Bore Size
z	147806	860, 1 in.
aa	147807	860, 1 in.
ab	147808	860, 1 in.
ac	147809	860, 3/4 in.
ad	147810	860, 7/8 in.
ae	147900	860, .9855 in. bd
af	147901	860, .9855 in. bd
ag	147902	860, 1 in. bd
ah	147903	860, 3/4 in. bd
aj	147904	860, 7/8 in. bd
ak	148900	850, 3/4 in. bfl
al	148901	850, 7/8 in. bfl
am	148902	850, 1 in. bfl
an	148903	850, 3/4 in. bfl
ap	148904	850, 7/8 in. bfl
aq	148905	850, 1 in. bfl
ar	148906	850, 3/4 in. bfl
as	148907	850, 7/8 in. bfl
at	148908	850, 1 in. bfl
au	148909	850, 1 in. bfl
av	149200	860, 3/4 in. bfl
aw	149201	860, 1 in. bfl
ax	149202	860, 1 in. bfl

bd = brake disc bfl = brake flange



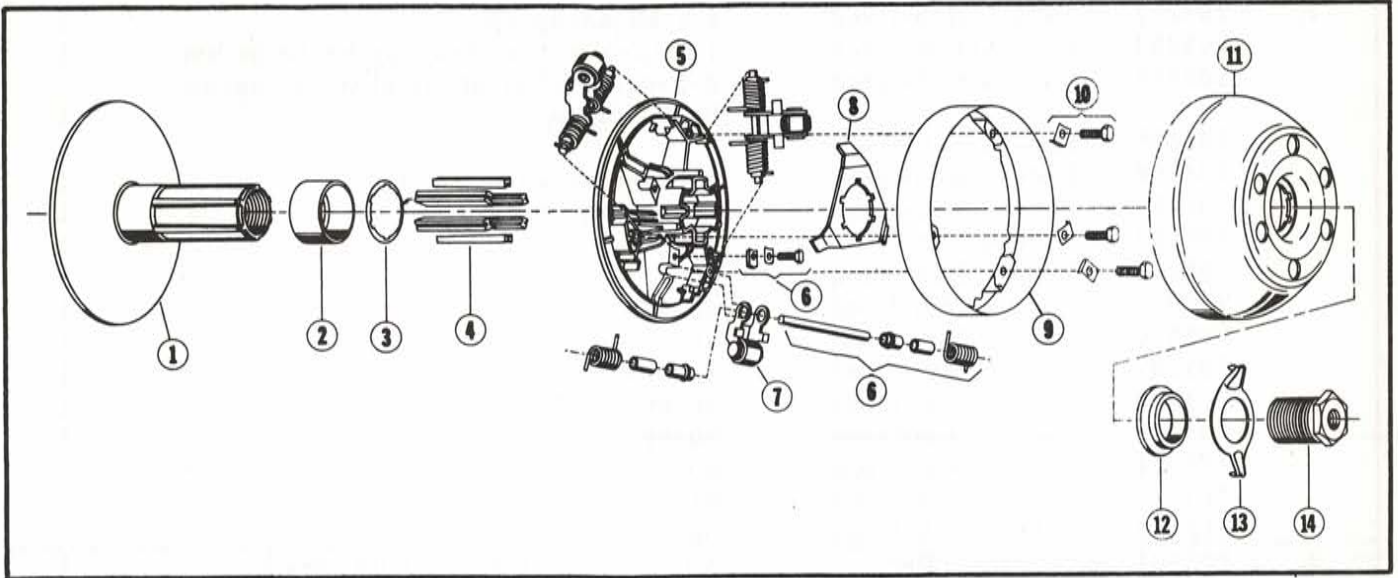
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Replaces
Form No. S72-2-20

MODEL 780 DRIVE PULLEY (SPLINE DRIVE) ILLUSTRATED PARTS LIST

7-72



MODEL 780 DRIVE PULLEYS BY ASSEMBLY NUMBER

Assembly Usage Code	Assembly Number	Tapered Bore	Engine Adaptability
a	143200	25 mm	. 110 inset
b	143201	24 mm	. 160 offset
c	143202	25 mm	. 110 inset
d	143203	30 mm	. 200 offset
e	143204	25 mm	. 160 offset
f	143205	30 mm	. 190 inset
g	143206	25 mm	. 110 inset
h	143207	30 mm	. 200 offset
j	143208	25 mm	. 160 offset
k	143209	30 mm	. 190 inset
l	143210	30 mm	Flush
m	143211	30 mm	Flush
n	143212	30 mm	Flush
p	143213	24 mm	. 160 offset
q	143214	30 mm	Flush
r	143215	30 mm	Flush
s	143216	24 mm	. 160 offset
t	143217	25 mm	. 110 inset
u	143218	30 mm	. 200 offset
v	143219	30 mm	. 190 inset
w	143220	25 mm	. 160 offset
x	143221	30 mm	Flush
y	143223	25 mm	. 210 inset
z	143224	30 mm	Flush

Assembly Usage Code	Assembly Number	Tapered Bore	Engine Adaptability
aa	143225	30 mm	. 200 offset
ab	143226	30 mm	. 190 inset
ac	143227	30 mm	. 190 inset
ad	143228	30 mm	. 200 offset
ae	143229	25 mm	. 110 inset
af	143230	30 mm	. 200 offset
ag	143231	30 mm	. 380 inset
ah	143232	30 mm	. 200 offset
aj	143233	30 mm	. 200 offset
ak	143234	24 mm	Flush
al	143235	30 mm	. 200 offset
am	143236	25 mm	. 160 offset
an	143237	23.5 mm	. 625 inset
ap	143238	30 mm	. 190 inset
aq	143239	25 mm	. 110 inset
ar	143240	30 mm	. 200 offset
as	143241	24 mm	Flush
at	143242	30 mm	Flush
au	143243	30 mm	. 200 offset
av	143244	30 mm	Flush
aw	143245	25 mm	. 110 inset
ax	143248	30 mm	. 200 offset
ay	143249	30 mm	Flush
az	143250	30 mm	. 200 offset

Assembly Usage Code	Assembly Number	Tapered Bore	Engine Adaptability
ba	143251	30 mm	. 200 offset
bb	143252	25 mm	. 160 offset
bc	143253	30 mm	Flush
bd	143254	30 mm	Flush
be	143255	30 mm	. 200 offset
bf	143256	25 mm	. 110 inset
bg	146400	30 mm	. 200 offset r/fl
bh	146401	30 mm	. 190 inset r/fl
bj	146402	25 mm	. 110 inset
bk	146403	30 mm	. 200 offset r/fl
bl	146404	30 mm	Flush r/fl
bm	146405	30 mm	Flush r/fl
bn	149000	30 mm	. 200 offset
bp	149001	30 mm	Flush
bq	149100	25 mm	. 110 inset
br	149101	24 mm	. 160 offset
bs	149102	23.5 mm	. 625 inset
bt	149103	30 mm	. 200 offset
bu	149104	25 mm	. 160 offset
bv	149105	30 mm	Flush
bw	149106	30 mm	Flush
bx	149107	30 mm	. 200 offset
by	149108	25 mm	. 110 inset
bz	149109	30 mm	Flush

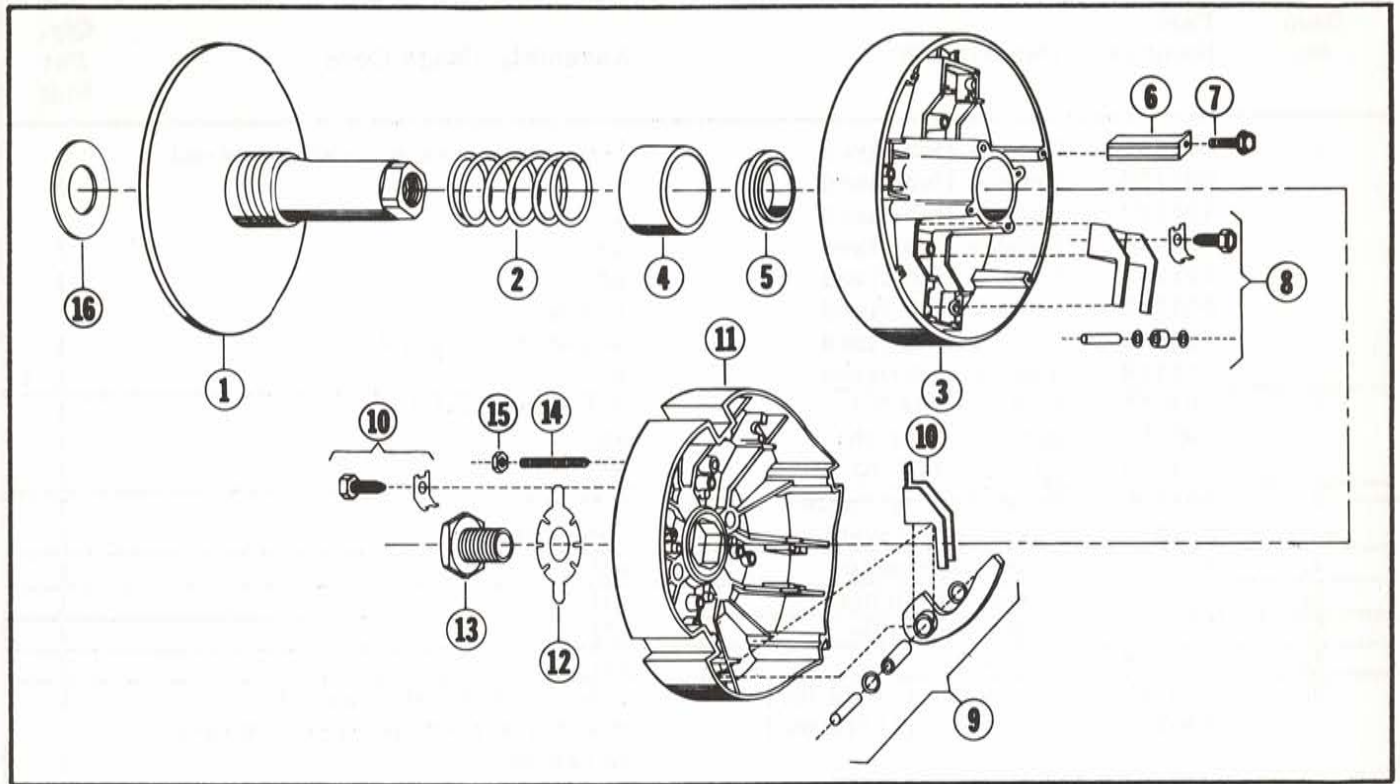
r/fl = return flange



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800 SERIES DRIVE PULLEY

ILLUSTRATED PARTS LIST



800 SERIES DRIVE PULLEYS BY ASSEMBLY NUMBER

Assembly Usage Code	Assembly Number	Bore	Engine Adaptability
a	148400	30 mm	Flush
b	148401	30 mm	Flush
c	148402	30 mm	Flush
d	148403	30 mm	Flush
e	148404	30 mm	Flush
f	148405	30 mm	Flush
g	148406	30 mm	Flush
h	148407	30 mm	.200 Inset
j	148408	30 mm	Flush
k	148409	30 mm	Flush
l	148600	30 mm	Flush
m	148601	30 mm	Flush
n	148602	30 mm	Flush
p	148603	30 mm	Flush
q	148604	30 mm	Flush

Assembly Usage Code	Assembly Number	Bore	Engine Adaptability
r	148605	30 mm	.630 Inset
s	148606	30 mm	.630 Inset
t	148607	30 mm	Flush
u	148608	30 mm	Flush
v	148700	25 mm	Flush
w	148701	30 mm	Flush
x	148702	35 mm	Flush
y	148703	30 mm	.630 Inset
z	148704	30 mm	Flush
aa	148705	30 mm	Flush
ab	148706	30 mm	Flush
ac	148707	30 mm	Flush
ad	148708	30 mm	Flush
ae	690233	3/4 in.	Rotax
af	690234	7/8 in.	Rotax

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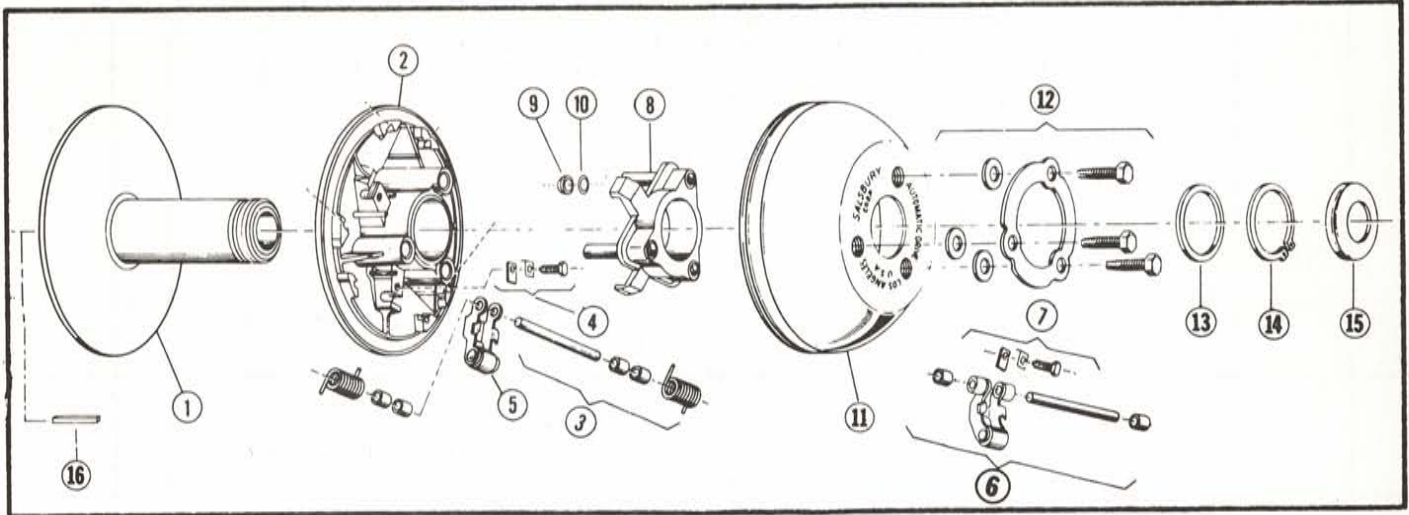
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Printed in U. S. A.

Form No. S72-002-PL

MODELS 700, 705, 770, 775, 780, 790, 795 DRIVE PULLEY and 7000 VARI-CON CONTROL PULLEY (SPIDER DRIVE)

ILLUSTRATED PARTS LIST



700 AND 7000 SERIES PULLEYS BY ASSEMBLY NUMBER

Assembly Usage Code	Assembly Number	Bore	Engine Adaptability
a	141300	24mm	.160 offset
b	141301	25mm	.110 inset
c	141302	30mm	.200 offset
d	141303	25mm	.160 offset
e	141304	30mm	.190 inset
f	141306	25mm	.110 inset
g	141307	30mm	.200 offset
h	141308	25mm	.160 offset
j	141309	30mm	.190 inset
k	141310	25mm	.110 inset
l	141311	30mm	flush
m	141312	30mm	flush
n	141313	30mm	flush
p	141314	24mm	.160 offset
q	141315	30mm	flush
r	141316	30mm	flush
s	141317	24mm	.160 offset
t	141318	25mm	.110 inset
u	141319	30mm	.200 offset
v	141320	30mm	.190 inset
w	141321	25mm	.160 offset
x	141322	30mm	flush
y	141323	30mm	flush
z	141324	30mm	flush
aa	141325	30mm	flush
ab	141500	25mm	.210 inset
ac	141501	30mm	.200 offset
ad	141502	25mm	.210 inset
ae	141600	3/4 in.	straight
af	141601	1 in.	straight
ag	141602	3/4 in.	straight
ah	141603	1 in.	straight
aj	141604	3/4 in.	straight
ak	141605	1 in.	straight
al	141606	1 in.	straight
am	141607	1 in.	straight
an	141700	3/4 in.	straight
ap	141701	1 in.	straight

Assembly Usage Code	Assembly Number	Bore	Engine Adaptability
aq	141702	3/4 in.	straight
ar	141703	1 in.	straight
as	141704	1 in.	straight
at	141705	3/4 in.	straight
au	141706	1 in.	straight
av	141707	1 in.	straight
aw	141708	1 in.	straight
ax	141709	1 in.	straight
ay	141800	24mm	.160 offset
az	141801	25mm	.210 inset
ba	141802	30mm	flush
bb	141803	25mm	.110 inset
bc	141804	30mm	.190 inset
bd	141805	25mm	.210 inset
be	141806	30mm	flush
bf	141807	30mm	.190 inset
bg	141900	24mm	.160 offset
bh	141901	25mm	.210 inset
bj	141902	30mm	flush
bk	141903	30mm	.200 offset
bl	141904	30mm	flush
bm	141905	25mm	.210 inset
bn	141906	25mm	.110 inset
bp	141907	25mm	.210 inset
bq	141908	25mm	.160 offset
br	141909	30mm	.200 offset
bs	141910	30mm	flush
bt	141911	30mm	.190 inset
bu	141912	25mm	.210 inset
bv	141913	24mm	.160 offset
bw	141914	30mm	flush
bx	141915	30mm	.200 offset
by	142000	1 in.	straight
bz	142001	.670 in.	straight
ca	142002	3/4 in.	straight
cb	142400	30mm	flush
cc	142401	30mm	.190 inset
cd	143400	1 in.	straight
ce	146800	25mm	.110 inset



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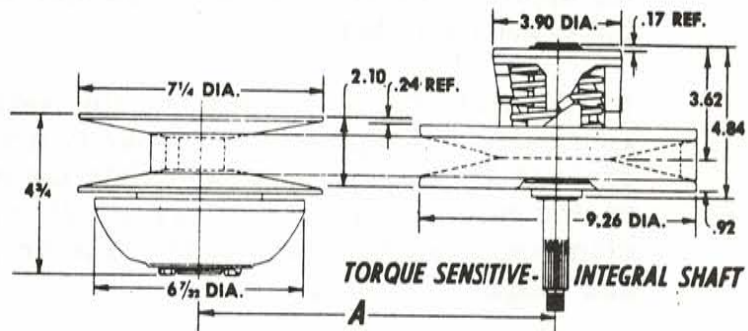
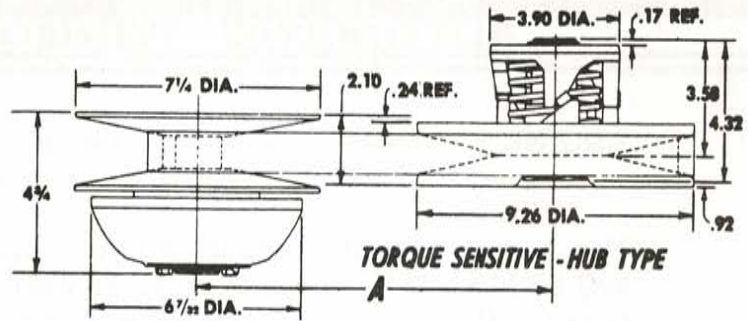
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OPTIONAL SPECIFICATIONS:

Optional specifications include a tapered drive pulley bore for 2-cycle engines, as well as a standard 1" straight bore. Driven pulley adaptations include 3/4", 7/8", and 1" bores, and integral shaft as illustrated (see Form 69D8 for standard specifications).

Engagement speed and shift patterns are altered by selecting heavier or lighter centrifugal weights.

For pulley mounting centers on Dimension "A", see Form 67D35 for a complete selection of belt lengths.



WARRANTY

Our products are warranted to be free from defects of material or workmanship for a period of 90 days from date of shipment from our factory in Los Angeles, California. In case of failure within this period, the article shall be returned prepaid to the factory in Los Angeles, California where it will be examined to determine the cause of failure. If failure is found to have been caused by defective material or workmanship such defects will be corrected at no cost to the purchaser. Our liability, however, is limited in any event to the purchase price of any item proven defective, or, at our option, to the replacement of such item upon its return to us making

due allowance for the service rendered. Any failure which is found to be due to accident, abuse or negligence, shall result in repairs being charged for at established prices for material and labor. This warranty becomes void if belts other than approved by us have been used, if unit is caused to operate at speeds over recommended maximum, or if service has been attempted other than by personnel authorized in writing by factory. This warranty being expressly in lieu of all other warranties and representations expressed or implied and of all other liabilities in connection with the sale or use of any unit.

SALSBUURY
CORPORATION

Form 69D9

MODELS 500, 700, 770, 780, 790 DRIVEN PULLEY

Item No.	Part Number	Description	Assembly Usage Code	Qty. Per Unit
1.	601171	Face & Shaft-fixed	j	1
	601178	Face & Shaft-fixed	n	1
	601239	Face & Shaft-fixed	w-x-bh-bj	1
	601287	Face & Shaft-fixed	p	1
2.	601124	Face & Hub-fixed	a-ap	1
	601135	Face & Hub-fixed	b-ar	1
	601142	Face & Hub-fixed	d	1
	601143	Face & Hub-fixed	e	1
	601144	Face & Hub-fixed	g-ay	1
	601145	Face & Hub-fixed	h-ba	1
	601175	Face & Hub-fixed	k-as-ax	1
	601176	Face & Hub-fixed	l-at-aw	1
	601177	Face & Hub-fixed	m-au	1
	601189	Face & Hub-fixed	q-bk-bn	1
	601194	Face & Hub-fixed	t-bp-bs	1
	601195	Face & Hub-fixed	u-bq-bt	1
	601196	Face & Hub-fixed	v-br-bu	1
	601197	Face & Hub-fixed	c-aq	1
	601203	Face & Hub-fixed	f	1
	601205	Face & Hub-fixed	y-ak	1
	601206	Face & Hub-fixed	z-al	1
	601207	Face & Hub-fixed	aa-ac-am	1
	601277	Face & Hub-fixed	r-bl	1
	601278	Face & Hub-fixed	s-bm	1
	601292	Face & Hub-fixed	ab-an	1
	601300	Face & Hub-fixed	ad-bb-be	1
	601301	Face & Hub-fixed	ae-bc-bf	1
	601302	Face & Hub-fixed	af-bd-bg	1
	601370	Face & Hub-fixed	az	1
	601396	Face & Hub-fixed	ag	1
	601397	Face & Hub-fixed	ah	1
	601398	Face & Hub-fixed	aj	1
	601408	Face & Hub-fixed	bv	1
	601409	Face & Hub-fixed	bw	1
	601410	Face & Hub-fixed	bx	1
	601483	Face & Hub-fixed	av	1
601663	Face & Hub-fixed	by	1	
601665	Face & Hub-fixed	bz	1	
601666	Face & Hub-fixed	ca	1	
3.	702966	. Drum-brake, 4 in. dia.	d-e-f-t-u-v-bp-bq-br-bs-bt-bu-bv-bw-bx	1
4.	702915	. Lockplate	d-e-f-t-u-v-bp-bq-br-bs-bt-bu-bv-bw-bx	1
5.	900176	. Nut-hex	d-e-f-t-u-v-bp-bq-br-bs-bt-bu-bv-bw-bx	3
6.	601125	Face Asy-movable, 35°	a-b-c-d-e-f-q-r-s	1
	601146	Face Asy-movable, 35°	g-h	1
	601172	Face Asy-movable, 41°	j	1
	601173	Face Asy-movable, 41°	k-l-m-t-u-v-ad-ae-af	1
	601179	Face Asy-movable, 41°	n-p	1
	601208	Face Asy-movable, 41°	y-z-aa-ab-ac	1
	601241	Face Asy-movable, 41°	w-x	1
	7.	601336	Face Asy-movable	ag-ah-aj-bv-bw-bx
601337		Face Asy-movable	ak-al-am-an	1
601338		Face Asy-movable	ap-aq-ar-bk-bl-bm-bn	1
601339		Face Asy-movable	as-at-au-av-aw-ax-bb-bc-bd-be-bf-bg-bp-bq-br-bs-bt-bu	1
601340		Face Asy-movable	ay-az-ba	1
601353		Face Asy-movable	bh-bj	1
601664		Face Asy-movable	by-bz-ca	1
8.	703113	. Slipper-cam	ag thru ca	3
9.	702970	Spring-5 coil plain	All, except av-aw-ax-be-bf-bg-bj-bn-bs-bt-bu	1
	703246	Spring-7 coil yellow	av-aw-ax-be-bf-bg-bj-bn-bs-bt-bu	1
10.	901687	Key	All	1
11.	703219	Bracket-torque, 41°	ag thru au, ax thru bg, bk thru ca	1
	703274	Bracket-torque, 35°	av-aw	1
	703278	Bracket-torque, 41°	bh-bj	1
12.	601127	Bracket Asy-torque	a-b-c-d-e-f-g-h-k-l-m-q-r-s-t-u-v-y-z-aa-ab-ad-ae-af	1
	601154	Bracket Asy-torque	j-n-p	1
	601243	Bracket Asy-torque	w-x	1
	601334	Bracket Asy-torque	ac	1
	702984	. Slipper-cam	a thru af	3
14.	900009	Ring-retaining	All, except j-n-p-w-x-bh-bj	1
	901228	Ring-retaining	j-n-p	1
	901703	Ring-retaining	w-x-bh-bj	1
15.	700306	Key-drive	b-e-h-m-s-v-aa-ac-af-aj-am-ar-au-ba-bd-bg-bm-br-bu-bx-ca	1

MODEL 850 and 860 DRIVEN PULLEY

Item No.	Part Number	Description	Assembly Usage Code	Qty Per Unit
1.	601375	Face & Hub-fixed	av	1
	601377	Face & Hub-fixed	aw-ax	1
	601745	Face & Hub-fixed	a-d-g-r	1
	601746	Face & Hub-fixed	b-e-h	1
	601747	Face & Hub-fixed	c-f-j-m-n-q	1
	601748	Face & Hub-fixed	k-l	1
	601753	Face & Hub-fixed	ac	1
	601754	Face & Hub-fixed	y-ad	1
	601755	Face & Hub-fixed	t-u-v-w-x-z-aa	1
	601804	Face & Hub-fixed	ab	1
	601806	Face & Hub-fixed	p	1
	601821	Face & Hub-fixed	ak-an-ar	1
	601822	Face & Hub-fixed	al-ap-as	1
	601823	Face & Hub-fixed	am-aq-at	1
	601824	Face & Hub-fixed	au	1
	601837	Face & Hub-fixed	ah	1
	601838	Face & Hub-fixed	aj	1
601839	Face & Hub-fixed	s-ag	1	
601840	Face & Hub-fixed	ae-af	1	
2.	703690	Disc-brake	s-ae-af-ag-ah-aj	1
3.	901769	Screw-hex 5/16-24	s-ae-af-ag-ah-aj	4
4.	901770	Nut-hex 5/16-24	s-ae-af-ag-ah-aj	4
5.	601769	Face Asy-movable	a thru n-q-r-s-ak-al-am-an-ap-aq-ar-as-at	1
	601770	Face Asy-movable	t-u-v-w-x-y-z-aa-ac-ad-ae-af-ag-ah-aj-av-aw-ax	1
	601805	Face Asy-movable	ab	1
	601807	Face Asy-movable	p-au	1
	6.	703113	. Slipper-cam	all
7.	702970	Spring - 5 coil plain	a-b-c-p-q-r-s-u-x-z-ab-ac-ad-ag-ah-aj-an-ap-aq-ar-as-at-an-aw-ax	1
	703102	Spring - 7 coil black	m-n-w	1
	703246	Spring - 7 coil yellow	d-e-f-g-h-j-k-l-t-v-y-aa-ae-af-ak-al-am-au	1
8.	901687	Key	all	1
9.	703219	Cam-torque, 41°	a-b-c-d-e-f-l-n-u-v-y-ak-al-am	
	703274	Cam-torque, 35°	g-h-j-k-m-q-r-s-w-x-aa-ac-ad-ae-ag-ah-aj-an-ap-aq-au-av-aw	1
	703703	Cam-torque, 32°	p-t-z-ab-af-ar-as-at-ax	1
10.	900009	Ring-retainer	all	1
11.	700306	Key-drive	c-f-j-m-n-q-s-t-u-v-w-x-z-aa-ab-ac-ag-am-aq-at-au-aw-ax	1

MODEL 780 DRIVE PULLEY

Item No.	Part Number	Description	Assembly Usage Code	Qty. Per Unit
1.	703252	Face & Hub-fixed	f-k-ab-ac-ap-bh	1
	703253	Face & Hub-fixed	l-m-n-q-r-x-z-at-av-ay-bc-bd-bl-bm	1
	703254	Face & Hub-fixed	d-h-u-aa-ad-af-ah-aj-al-ar-au-ax-az- ba-be-bg-bk	1
	703255	Face & Hub-fixed	y	1
	703256	Face & Hub-fixed	a-c-g-t-ae-aq-aw-bf-bj	1
	703257	Face & Hub-fixed	e-j-w-am-bb	1
	703258	Face & Hub-fixed	b-p-s	1
	703388	Face & Hub-fixed	ag	1
	703551	Face & Hub-fixed	ak-as	1
	703560	Face & Hub-fixed	an	1
	703767	Face & Hub-fixed	bp-bv-bw-bz	1
	703768	Face & Hub-fixed	bn-bt-bx	1
	703770	Face & Hub-fixed	bq-by	1
	703771	Face & Hub-fixed	bu	1
	703772	Face & Hub-fixed	by	1
	703776	Face & Hub-fixed	bs	1
2.	703191	Bearing-idler	all except bd thru bz (optional)	1
3.	703192	Washer-idler bearing	all	1
4.	703193	Liner-spline	all	6
5.	703185	Face-movable	all	1
6.	690161	Kit-spring/pin/bushing	a-b-c-d-e-f-l	1
	690162	Kit-spring/pin/bushing	g-h-j-k-m-n-p-y-z-aa-ac-ae-ag-am-bf- bh-bl-by	1
	690163	Kit-spring/pin/bushing	q-r-s-t-u-v-w-x-ab-ad-ak-al-an-ap-aq- as-at-au-aw-az-bc-bk-bm-bp-br-bs-bu	1
	690170	Kit-spring/pin/bushing	af-ah-aj-ar-ax-ay-ba-bb-bd-be-bg-bj- bn-bq-bt-bu-bw-bx-bz	1
	690223	Kit-spring/pin/bushing	av	1
7.	690164	Kit-roller arm	a-b-c-d-e-f-l-r-s-t-u-v-w-x-aa-ac-ae- af-ag-am-an-aq-ar-as-at-au-aw-bm-be- bp-br-bs-bx	1
	690165	Kit-roller arm	g-h-j-k-m-n-p-q-y-z-ab-ad-ak-al-ap-av- ax-ay-ba-bb-bc-bf-bg-bh-bj-bl-bn-bt-bu- bv-by-bz	1
	690175	Kit-roller arm	ah	1
	690205	Kit-roller arm	aj	1
	690218	Kit-roller arm	bd-bq-bw	1
	690227	Kit-roller arm	bk	1
8.	703194	Retractor	all	1
9.	601647	Flange-return	bg-bh-bk-bl-bm-bn-bp	1
10.	690216	Kit-screw/lockplate	bg-bh-bk-bl-bm-bn-bp	1
11.	601330	Plate Asy-ramp	a-b-c-d-e-f-g-h-j-k-l-m-n-p-q-r-s-t-u- v-w-x-y-z-aa-ab-ac-ad-ae-ag-br	1
	601446	Plate Asy-ramp	af-ap-aw-ax-ay-az-bh-bj-bk-bl-bq-bz	1
	601486	Plate Asy-ramp	ah-aj-ak-al-am-an-aq-ar-as-at-au-av-ba- bb-bc-bd-be-bf-bg-bm-bn-bp-bs-bt-bu-bv- bw-bx-by	1
12.	703200	. Washer-ramp plate	all	1
13.	703245	. Lockplate-ramp plate	all	1
14.	703208	Nut-ramp plate	all	1

800 SERIES DRIVE PULLEY

Item No.	Part Number	Description	Assembly Usage Code	Qty. Per Unit
1.	601737	Face & Hub-fixed	l-m-n-p-q-t-u-w-z-aa-ab-ac-ad	1
	601738	Face & Hub-fixed	v	1
	601739	Face & Hub-fixed	x	1
	601740	Face & Hub-fixed	ae	1
	601741	Face & Hub-fixed	af	1
	601773	Face & Hub-fixed	r-s-y	1
	703620	Face & Hub-fixed	a-b-c-d-e-f-g-j-k	1
	703778	Face & Hub-fixed	h	1
2.	703626	Spring - (84 lb)	All except g-l-ab	1
	703701	Spring - (100 lb)	ab	1
	703729	Spring - (72 lb)	g-l	1
3.	601800	Face Asy-movable	a thru k	1
	601815	Facy Asy-movable	l thru af	1
4.	*	. Bearing-center	all	1
5.	*	. Bearing-flange	all	1
6.	703741	. Bearing-slide	all	4
7.	901796	. Screw	all	4
8.	690255	Kit-roller (19/32 in.)	a-b-c-g-h-l-p-t-y-aa-ad	1
	690256	Kit-roller (11/16 in.)	d-e-f-j-k-m-n-q-r-s-u-v-w-x-z	1
	690257	Kit-roller (3/4 in.)	ac-ae-af	1
			ab	1
9.	690252	Kit-arm (Blue)	b-e-v-u-x-ab-ad	1
	690253	Kit-arm (Yellow)	a-d-y-aa	1
	690254	Kit-arm (White)	z-ac	1
	690258	Kit-arm (Purple)	c-f-g-h-j-l-m-n-q-r-t-ae-af	1
	690272	Kit-arm (Plain)	p	1
	690273	Kit-arm (Orange)	k-s	1
	690274	Kit-arm (D. Green)	u	1
	10.	690267	Kit-clamp, arm (flat)	a-b-c-d-e-h-j-l-m-p-r-t
690269		Kit-clamp, arm (43°)	f-k-q-s	1
690270		Kit-clamp, arm (w/o)	n-u-v-w-x-y-z-aa-ab-ac-ad-ae-af	1
690271		Kit-clamp, arm (40°)	g	1
703739		Housing	all	1
12.	703749	Lockplate	all	1
13.	703631	Screw-special	all	1
14.	901779	Screw-set	v thru af	4
15.	901780	Nut-hex hd.	v thru af	4
16.	901790	Spacer (3/4 x .060)	ae	2
	901791	Spacer (3/4 x .030)	ae	2
	901792	Spacer (7/8 x .030)	af	2
	901793	Spacer (7/8 x .060)	af	2
Accessories				
	601515	Tool-Dismount	all except ae-af	

* Included with movable face assy, however, not individually available at this time.

MODELS 700, 705, 770, 775, 780, 790, 795, 7000 PULLEY

Item No.	Part Number	Description	Assembly Usage Code	Qty. Per Unit
1.	600771	Face & Hub-fixed	a-p-s-ay-bg-bv	1
	600828	Face & Hub-fixed	ae-ag-aj-an-aq-at-ca	1
	600829	Face & Hub-fixed	af-ah-ak-al-am-ap-ar-as-au-av-aw-ax-by	1
	600983	Face & Hub-fixed	ab-ad-az-bd-bh-bm-bp-bu	1
	600984	Face & Hub-fixed	l-m-n-q-r-x-y-z-aa-ba-be-aj-bl-bs-bw-cb	1
	601037	Face & Hub-fixed	c-g-u-ac-bk-br-bx	1
	601044	Face & Hub-fixed	bz	1
	601077	Face & Hub-fixed	b-f-k-t-bb-bn-ce	1
	601123	Face & Hub-fixed	d-h-w-bq	1
	601190	Face & Hub-fixed	e-j-v-bc-bf-bt-cc	1
601445	Face & Hub-fixed	cd	1	
2.	601217	Face-movable	All except cd	1
	601344	Face-movable	cd	1
3.	690112	Kit-spring	a-b-c-d-e-k-l-ag-ah-aj-ak-am-an-ap-aq-ar-as-aw-ax-be-bv-cc	1
	690113	Kit-spring	aa-ab-ac-ae-af-al-at-au-av-ay-az-ba-bg-bh-bj-bk-bl-bm-bn-bu-ca	1
	690128	Kit-spring	q-r-s-t-u-v-w-x-y-z	1
	690158	Kit-spring	f-g-h-j-m-n-p-ad-bb-bc-bd-bf-bp-bq-br-bs-bt-bw-bx-by-bz-cb	1
	690223	Kit-spring	ce	1
4.	690216	Kit-mounting	All except cd	1
5.	690004	Kit-roller arm	aa-ab-ac-ae-af-ag-ah-an-ap-af-au-ay-az-ba-bg-bh-bj-bk-bl-bm-bn	1
	690020	Kit-roller arm	y-bf	1
	690021	Kit-roller arm	f-g-h-j-m-n-p-q-z-ad-bb-bc-bd-bp-bq-br-bs-bt-bw-by-bz-cb	1
	690056	Kit-roller arm	aj-ak-aq-ar	1
	690065	Kit-roller arm	al-as-av	1
	690085	Kit-roller arm	bu	1
	690116	Kit-roller arm	a-b-c-d-e-k-l-r-s-t-u-v-w-x-am-aw-be-bv-bx-ca-cc	1
	690165	Kit-roller arm	ce	1
690172	Kit-roller arm	ax	1	
6.	690231	Kit-roller arm	cd	1
7.	690216	Kit-mounting	cd	1
8.	601216	Spider Assembly	All except ab-ac-ad-by-bz-ca-cb-cc-cd	1
	601219	Spider Assembly	ab-ac-ad-by-bz-ca-cb-cc	1
	601472	Spider Assembly	cd	1
9.	700912	Bumper	All	3
10.	701241	Spacer	ab-ac-ad-by-bz-ca-cb-cc	3
11.	702357	Plate-ramp	ab-ac-ae-af-at-au-ay-az-ba-bg-bh-bj-bk-bn-bu	1
	702512	Plate-ramp	ag-ah-aj-ak-al-am-an-ap-aq-ar-as-aw-ax-bl-bm-bw-by-bz-ca	1
	702967	Plate-ramp	a-b-c-d-e-f-g-h-j-k-l-m-n-p-aa-ad-av-bb-bc-bd-bf-bp-bq-br-bs-bt-bv-bx-cb-cc-ce	1
	703176	Plate-ramp	q-r-s-t-u-v-w-x-y-z	1
	703361	Plate-ramp	cd	1
	703527	Plate-ramp	be	1
	690088	Kit-mounting	All	1
12.	703046	Spacer	a thru aa, also ce	1
14.	900009	Ring-retaining	All	1
15.	702978	Washer-retaining	a-b-c-d-e-f-g-h-j-k-l-m-n-p-q-r-s-t-u-v-w-x-y-z-aa-an-aq-at-bg-bh-bj-bk-bl-bm-bn-bp-bq-br-bs-bt-bu-bv-bw-bx-bz-ca-cb-cc-ce	1
	702979	Washer-retaining	ab-ac-ad-ae-ag-aj-ay-az-ba-bb-bc-bd-be-bf	1
	703077	Washer-retaining	ap-ar-as-au-av-aw-ax-by	1
	703150	Washer-retaining	af-ah-ak-al-am-cd	1
	703024	Key-drive	as	1
16.	700306	Key-drive	af-ah-ak-ac-am-ap-ar-au-av-aw-ax-by	1
	703024	Key-drive	as	1

PRICE \$1.00

SALSBURY TORQUE CONVERTERS



SHOP MANUAL

SECOND EDITION

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INDEX

**DO NOT RUN AN ENGINE
EQUIPPED WITH DRIVE
PULLEY IF THE BELT IS
NOT ENGAGED WITH THE
DRIVEN PULLEY**

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INDEX-1

Remove Drive Pulley before making high speed no load engine test.

1-A-1 If it is necessary to operate an engine without a load for testing and the belt is removed, the drive pulley must also be removed.

1-A-2 Before testing a drive assembly, always replace the shielding installed by the vehicle manufacturer. In the event that a scatter shield is not available, fabricate one from steel or a material of similar tensile strength and ductility. The scatter shield must be designed to enclose both pulleys and contain any parts that may break away.

1-A-3 Inspect the drive and driven pulleys monthly if used frequently. Clean and service before each season.

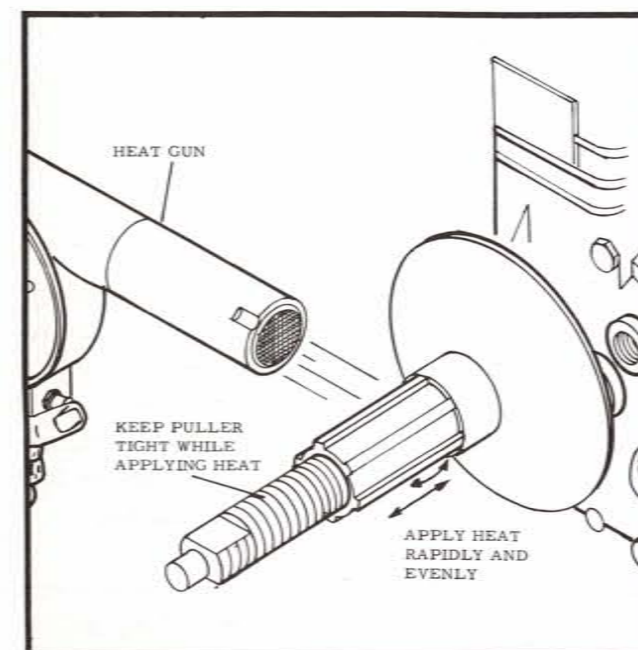


FIGURE 1-A-1

1-A-4 Gear pullers must not be used on either fixed or movable face or ramp plate. Use Salisbury pullers to remove. See price section of the Master Service Manual for the list of pullers, application and price.

1-A-5 Following procedures are recommended for the removal of drive and driven pulley hubs that are seized to the shaft.

1-A-6 Pulleys can be disassembled on the shaft if they do not slide off with reasonable amount of pressure with pullers.

After disassembly, use heat or tap sharply but lightly with a light hammer. Apply pressure with the puller (figure 1-A-1) while heating or tapping. A heat gun is the recommended source of heat. If open flame is used, keep away from fuel lines, fuel tanks, carburetors, and plastic hoods. Before using heat, remove any solvent that may have been used with compressed air and dry thoroughly.

1-A-7 Some early Model 500 and 700 Series drive pulleys did not have threaded hubs. After removing ramp plate, place two 703046 spacers between spider and snap ring. This will equal the thickness of the ramp plate and prevent movement of the spider when a gear puller is used. Care must be taken when positioning the gear puller to prevent moving or damaging the spider.

1-A-8 Driven pulleys that have a snap ring on the hub can be pulled with a gear puller (figure 1-A-2). Place a close fitting tubular collar on the hub, replace the snap ring and position the gear puller. Enlarge the inside diameter of a drive pulley spider with emery cloth and slide on hub as a seat for the gear puller.

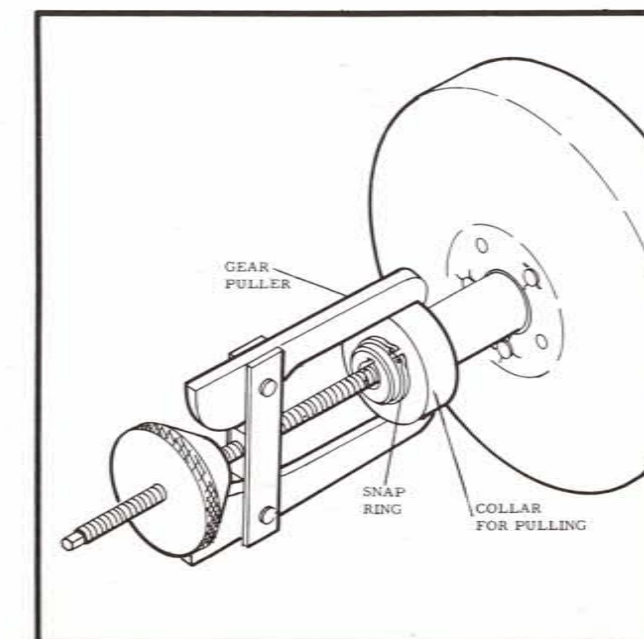


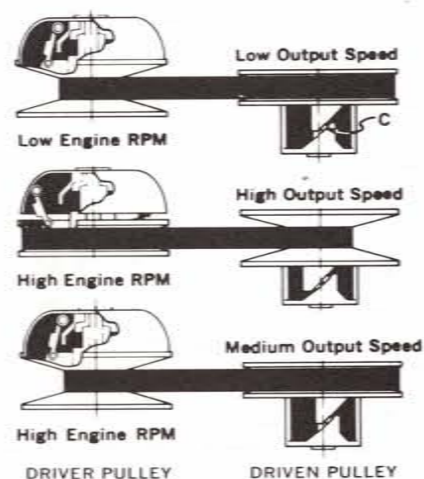
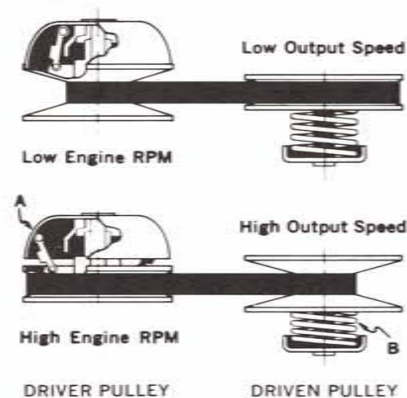
FIGURE 1-A-2

HOW IT WORKS

Two types of driven pulley systems available:

SPEED SENSITIVE

TORQUE SENSITIVE



1-B-1 At low speeds the normal position of the driver pulley maintains the V - belt at a smaller diameter which with the corresponding larger diameter on the driven pulley, creates a "low gear" ratio.

1-B-2 As the speed increases, the centrifugally actuated roller weights (A) follow the contour of the bowl-shaped ramp plate, forcing the driver sheaves together. This action through the belt compresses the driven pulley spring (B), thus achieving a "high gear" ratio.

1-B-3 In the torque sensitive design (as in the speed sensitive design the normal position of the driver pulley at low engine speeds maintains the V-belt in a small diameter. Normal rotational force on cam actuator (C) keeps the driven pulley in "low gear" ratio.

1-B-4 As the driver pulley is essentially the same in both type units, higher engine speeds cause the roller weights to close the driver pulley sheaves creating a "high gear" ratio (note position of cam actuator).

1-B-5 If an increased load occurs (such as climbing a hill) after the vehicle is up to speed the cam actuator on the driven pulley takes over and automatically "downshifts" without loss of engine speed. Then engine remains at peak power range for all but the most severe loads, at which time it will shift into peak torque range.

WARRANTY PROCEDURE

O. E. M. INSTALLATIONS

Warranty claims should be handled in the manner prescribed by the vehicle manufacturer on which the Salsbury drive is installed.

REPLACEMENT SALES

Warranty claims on Salsbury drives are to be processed by the dealer or distributor selling the drive as a replacement or new installation.

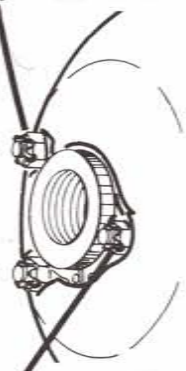
TORQUE REQUIREMENTS

RAMP PLATE RETAINER BOLTS

8-10 ft lbs
Model 500
700 Series

Torque Value for
Torque Pin Nut
Model 1190, 1195

Torque
20 - 25 ft lbs



Secure with
Cotter Key

DRIVE PULLEY RETAINER

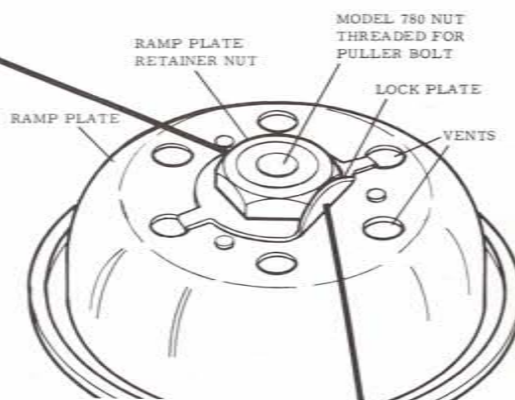
(not Salsbury Part)

Model	Torque
330	25 ft lbs
500	25 ft lbs
700 series	25 ft lbs
780	35 ft lbs
910	70 ft lbs
1190	80 ft lbs

Hold Drive Pulley with
Strap Wrench
Use S. A. E. Grade 5
or better, 3 marks

RAMP PLATE RETAINER NUTS

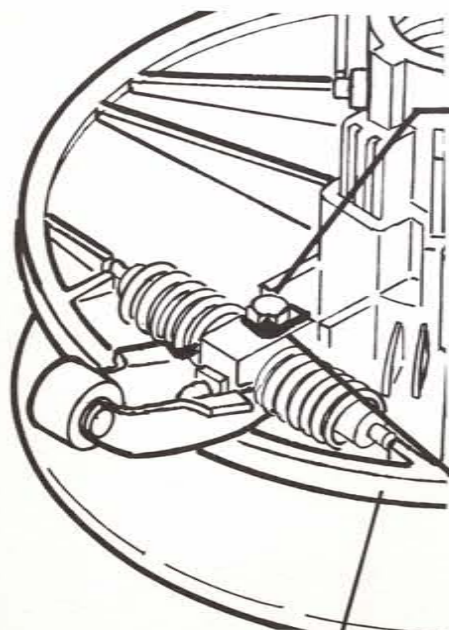
Model	Torque
780	125+15 ft lbs
910	150+15 ft lbs



Nut Must Be
Locked Bend
as Shown

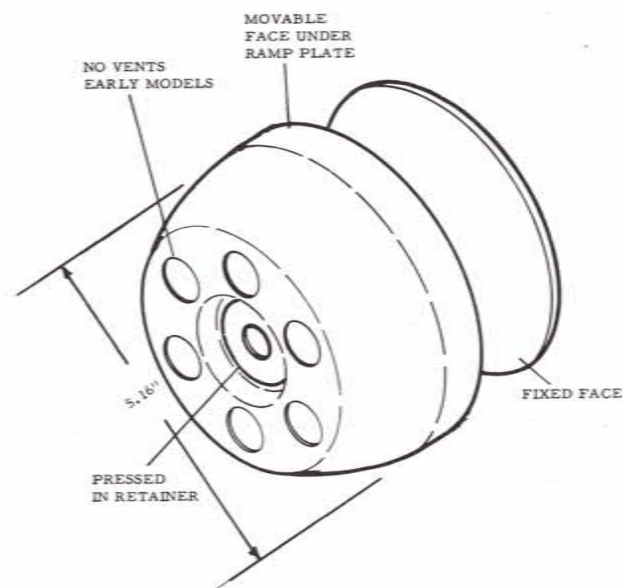
HEX BOLT

Model	Torque
330	5-7 ft lbs
500	5-7 ft lbs
700 series	5-7 ft lbs
780	5-7 ft lbs
910	5-7 ft lbs
1190	5-7 ft lbs

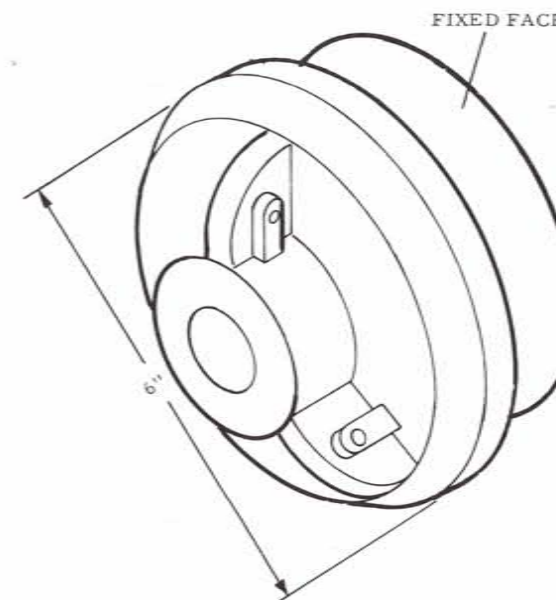


Bolt Must Be
Locked Bend
Plate as Shown

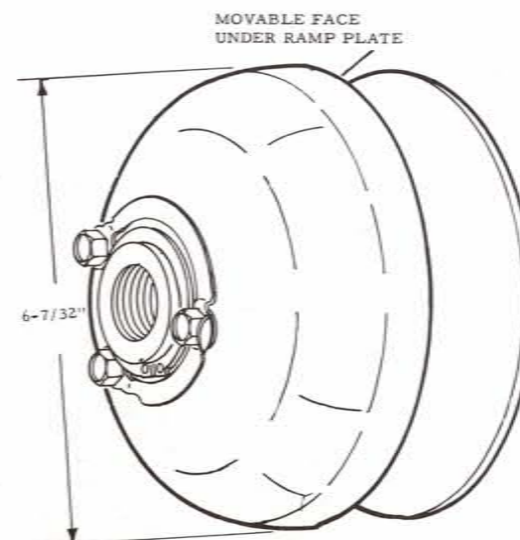
VISUAL IDENTIFICATION GUIDE DRIVE PULLEYS



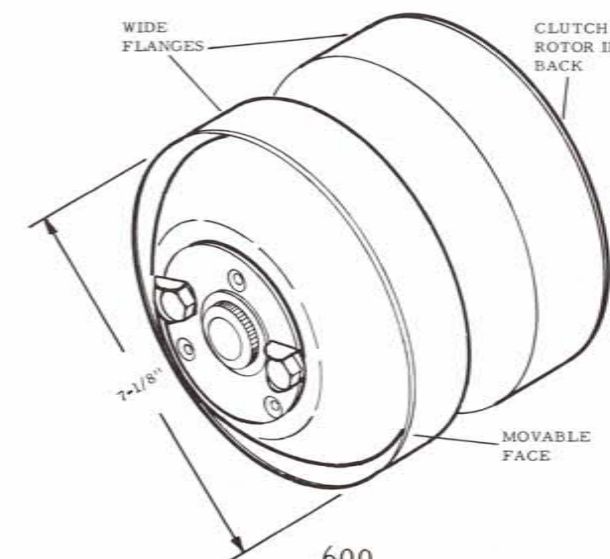
300



400

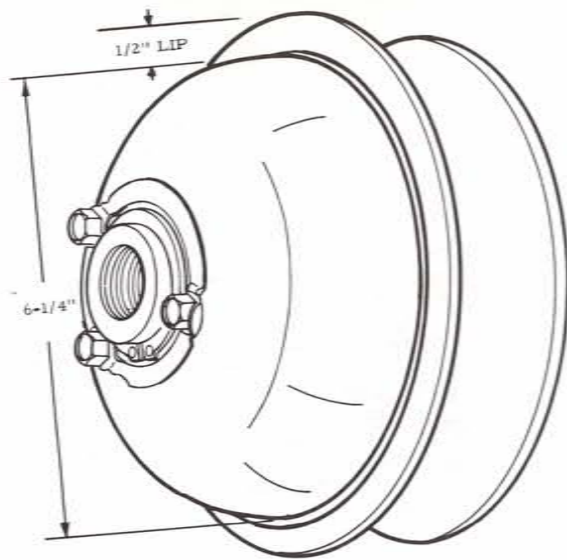


500

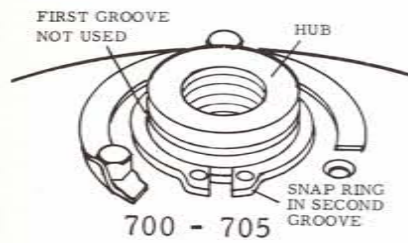


600

VISUAL IDENTIFICATION GUIDE DRIVE PULLEYS

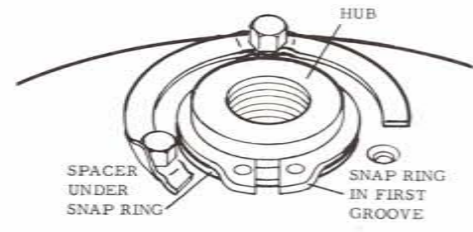


700 Series
See Views A, B, C



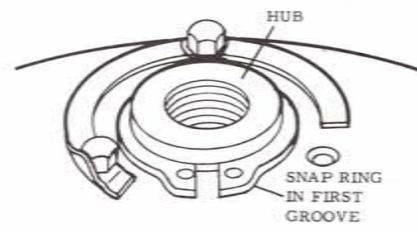
700 - 705

View A



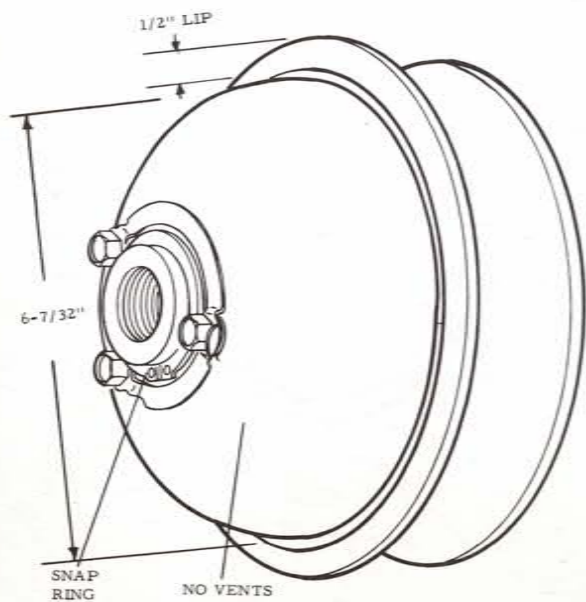
MODEL 780

View B

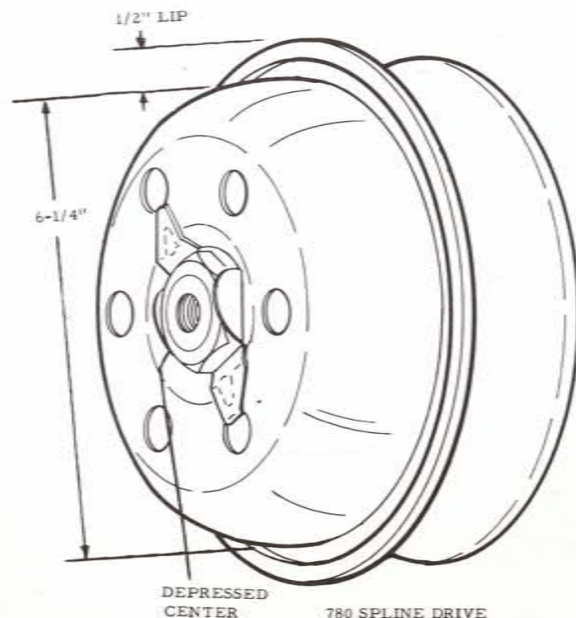


MODEL 770, 775, 790, 795

View C

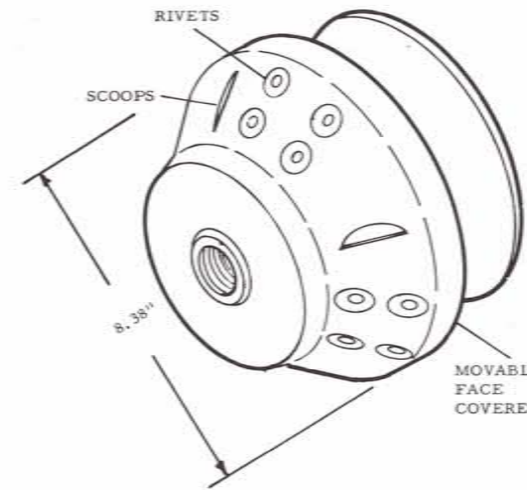


780 Spider Drive

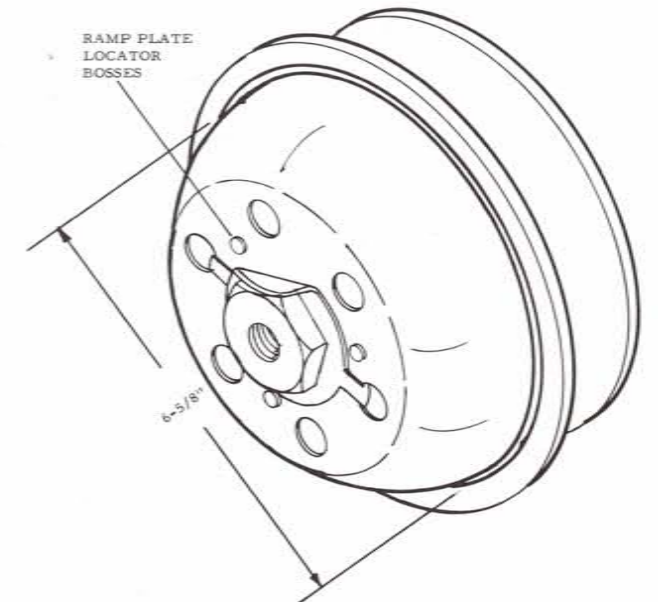


780 Spline Drive

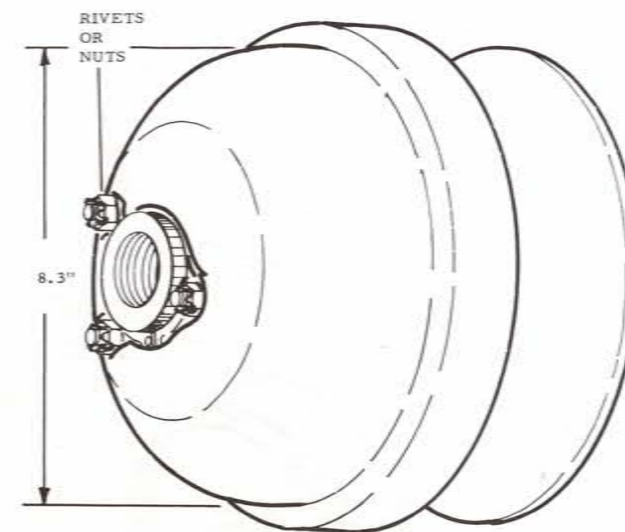
VISUAL IDENTIFICATION GUIDE DRIVE PULLEYS



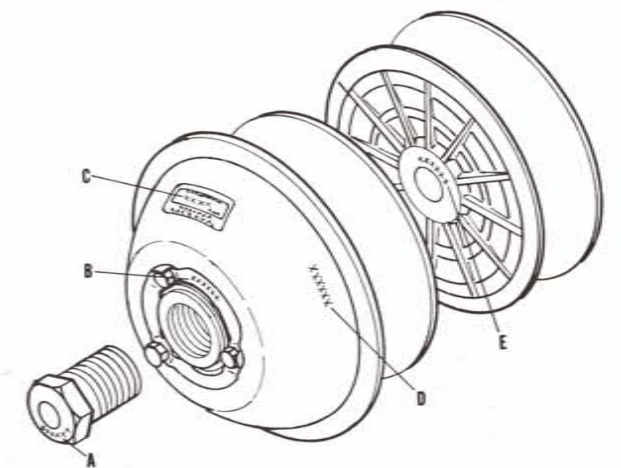
880



910



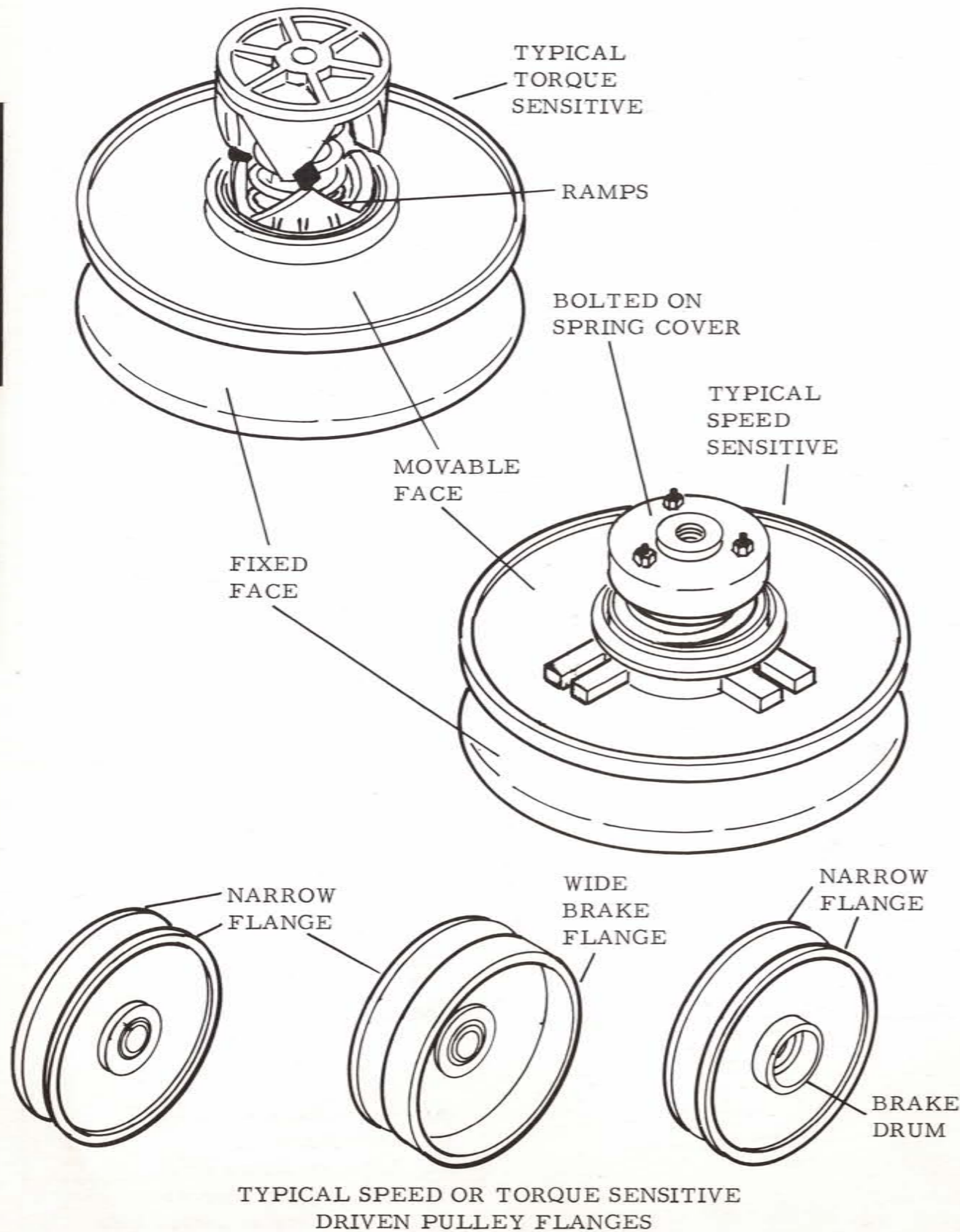
1190/1195



MODEL NUMBERS MARKED
IN AREAS INDICATED

- A. Ramp Plate Retainer
- B. Lock Plate
- C. Label on Ramp Plate
- D. Ink Stamped Number
- E. Fixed Face at Center Hub

VISUAL IDENTIFICATION GUIDE DRIVEN PULLEYS



SERVICING MODEL 330, 780, 910 DRIVE PULLEYS

2-A-1 Use pullers screwed into internal hub threads to remove pulleys from shafts. (figure 2-A-1). See Price List Section, Master Service Manual for list of pullers, application and price. See also, Chapter 1, recommended methods for pulley removal.

Do not use gear pullers on either face or ramp plate, this will cause damage.

Model 780 ramp plate retainer nut is threaded for a puller bolt. Protect crankshaft threads. (figure 2-A-2)

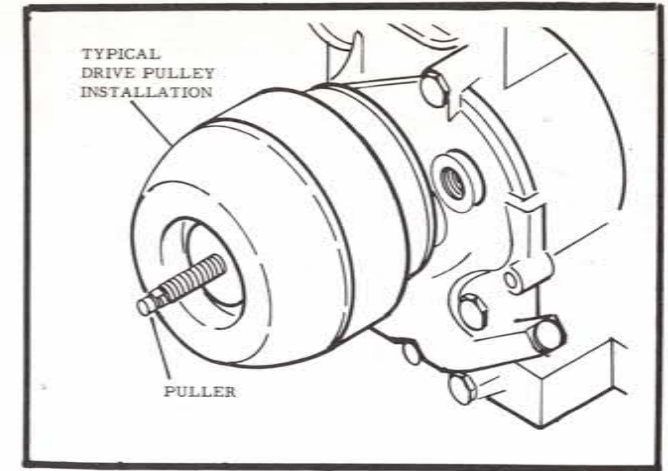


FIGURE 2-A-1

2-A-2 Clean and examine prior to disassembly. Note mounting of ramp plate in relation to hub. If numbers 1 and 2 are stamped on ramp plate, note their position in relation to the hub and roller arm. Replace ramp plate in same position. (figure 2-A-2)

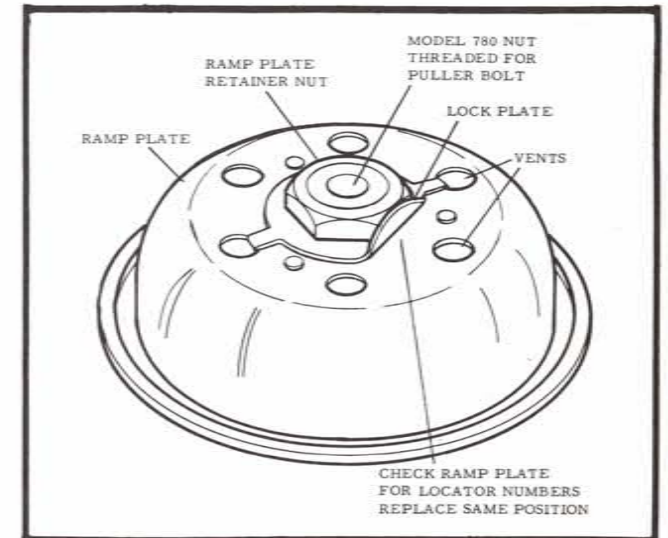


FIGURE 2-A-2

2-A-3 Remove Model 330 ramp plate by knocking out retainer with long drift pin inserted from fixed face end. To replace, position ramp plate on spline and tap retainer with hammer to seat.

Flatten lock plate (figure 2-A-2) and unscrew ramp plate retainer nut of Models 780 and 910. Hold with strap wrench or double pronged tool inserted into vents in ramp plate. Nut has right hand thread and must be extremely tight. See Torque Specifications, Chapter 1. (figure 2-A-2)

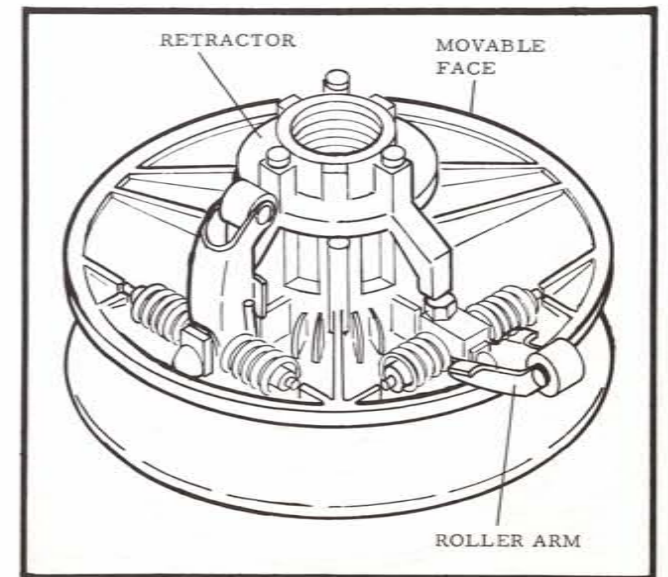


FIGURE 2-A-3

2-A-4 Removal of the ramp plate exposes roller arms, springs, pins, bushings. (figure 2-A-3) Clean thoroughly and service as required. Examine roller arms, springs, pins for wear at bearing points, replace if worn. Replace parts in sets as indicated in parts list. Do not mix new and used parts, use sets completely.

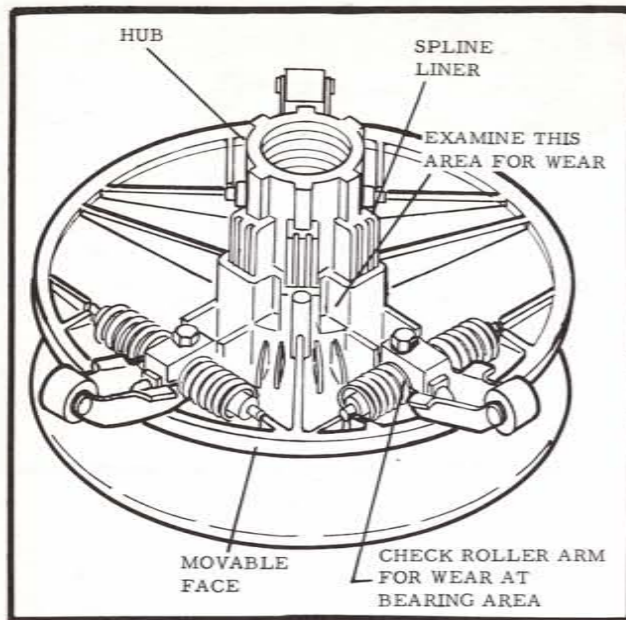


FIGURE 2-A-4

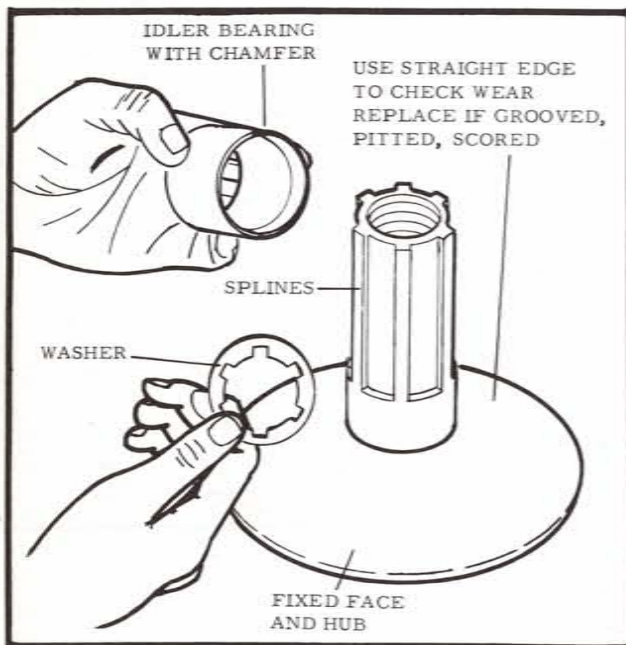


FIGURE 2-A-5

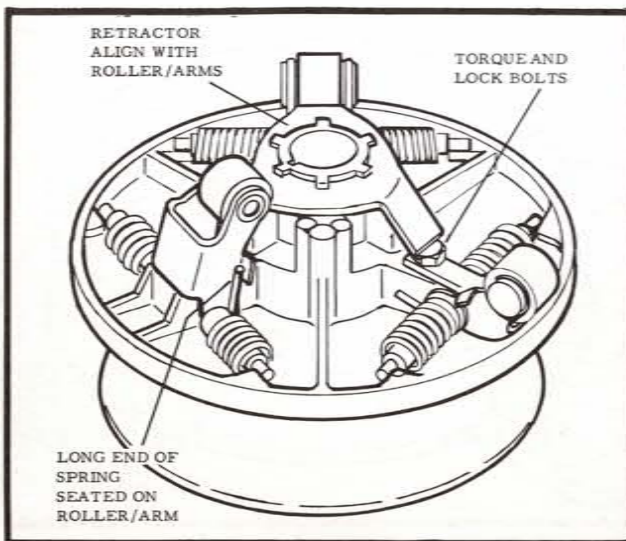


FIGURE 2-A-6

2-A-5 Note position of retractor prior to removing. Ramps of retractor align with roller arms. (figure 2-A-3) When replacing, allow adequate spline length for engagement of ramp plate with hub. (figure 2-A-6)

After releasing springs from roller arms, slide movable face sharply against retractor to remove from hub. (figure 2-A-4)

2-A-6 Examine movable face at spline liners, replace either or both parts to reduce clearance if excessive. (figure 2-A-4)

2-A-7 Clearance is maintained between spline liners and idler bearing by keyed washer. Service as required. (figure 2-A-5)

2-A-8 Examine belt surface of pulley faces, replace if worn, grooved, pitted, scored or other damage. Check for wear by placing straight edge across surface. Replace part if wear is indicated. (figure 2-A-5)

2-A-9 Idler bearing is installed with inside chamfer toward fixed face. Idler bearing is a free turning, close fit on the hub. Replace if excessively worn. Do not use lubrication. Clean idler bearing with dry cloth, do not use solvent.

2-A-10 During assembly torque all bolts and secure with lock plates. See Torque Chart, Chapter 1.

2-A-11 Use tool number 703152 or 703153 for engaging the springs with roller arms.

2-A-12 If drive pulley is installed on a tapered shaft, clean shaft inside taper of pulley before assembly. Tapers must be assembled dry.

2-A-13 See Torque Chart for correct torque for bolt retaining drive pulley to crankshaft. Use a good grade bolt, at least S. A. E. Grade 5 or better. This is indicated by three marks on the head of the bolt.

SERVICING MODEL 500 AND 700 SERIES

2-B-1 Use puller 702807 if hub is threaded. Do not use gear puller on any part of drive pulley to remove from crankshaft. See Chapter 1, General, for instructions for removal of pulleys seized to shaft.

2-B-2 Clean and examine prior to disassembly. Note method of assembly and position of ramp plate prior to disassembly.

NOTE: Hub has two grooves for installation of snap ring. (figures 2-B-1, 2-B-2) Check position prior to disassembly. Use same groove to rebuild. Some models have a spacer between snap ring and ramp plate. See visual identification chart for illustration.

2-B-3 Removal of ramp plate exposes roller arms, springs, pins, bushings. (figure 2-B-3) Clean thoroughly and service as required. Replace all worn parts. Use complete service kits for springs or roller arms. Do not combine new and used parts of the same kind. Any indication of wear requires replacement.

2-B-4 The spider is an interference fit on the hub and it must be tight. Any indication of movement requires replacement.

Spider's position on hub is related to position of snap ring.

If the spider is removed it must be replaced with a new part. Remove only if necessary to replace either movable or fixed face.

Remove spider with gear puller, or heat. The recommended method of heating is with a heat gun.

2-B-5 Examine the movable face. Replace if bushings are worn or other damage is noted. (figure 2-B-3)

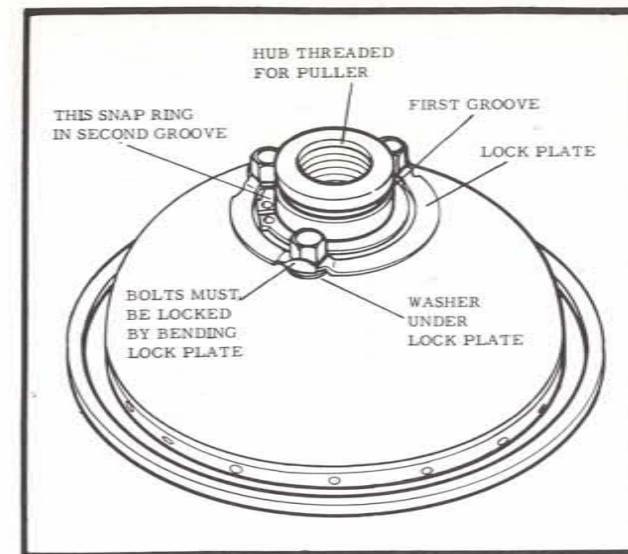


FIGURE 2-B-1

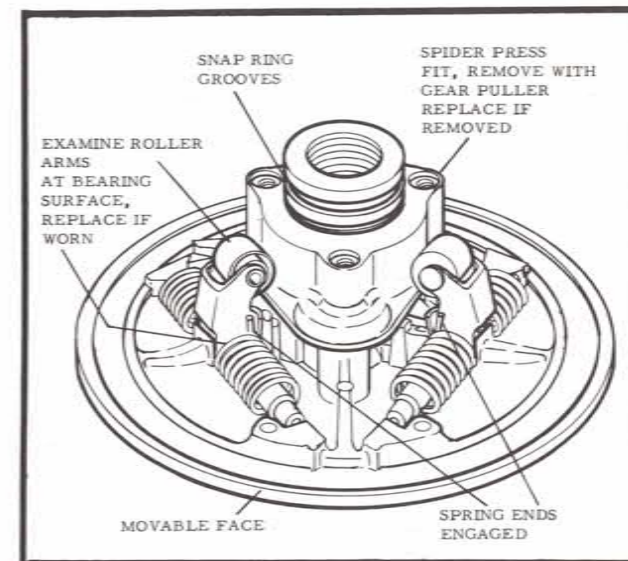


FIGURE 2-B-2

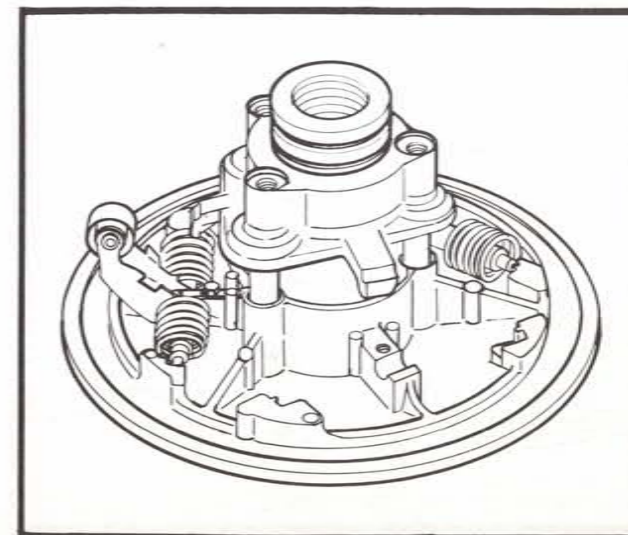


FIGURE 2-B-3

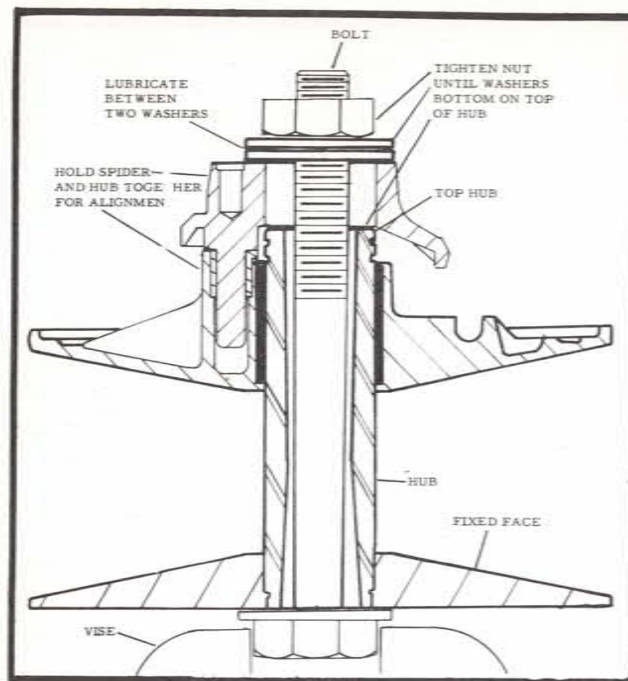


FIGURE 2-B-4

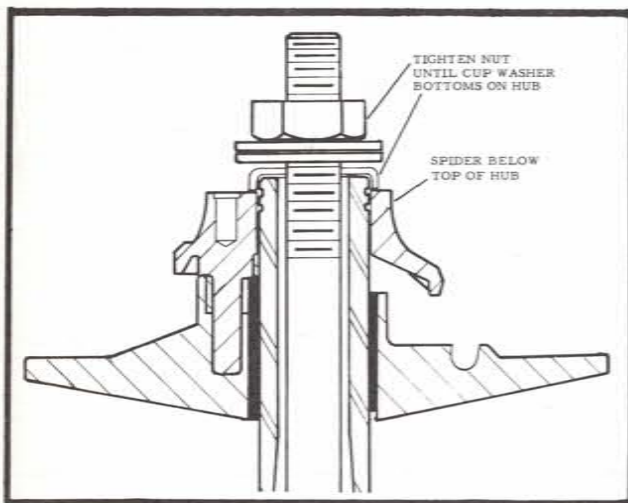


FIGURE 2-B-5

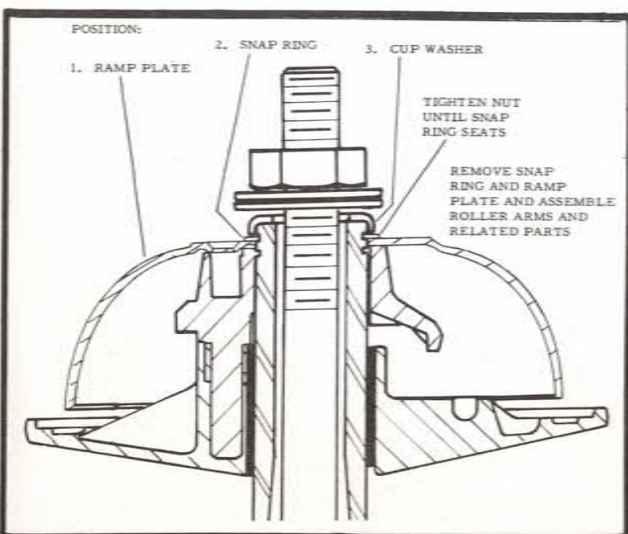


FIGURE 2-B-6

2-B-6 Check the belt surface of both faces with a straight edge. Replace if worn, grooved, or pitted.

2-B-7 During assembly spider must be accurately positioned on the hub. Use a large bolt or 12 inch length of threaded stock, 5/8 inch diameter, two nuts and two washers. Use the cup washer to position the spider. (figures 2-B-4, 2-B-5, 2-B-6) Heat spider to 180 - 250 degrees, press on hot, and dry.

1. Position spider into movable face for alignment and place on hub. Insert threaded stock, washers and nuts. (figure 2-B-4) Tighten nuts until spider flush with top of hub.

2. Remove nut and washer, place proper cup washer centered over hub and retighten until inside of cup washer bottoms on hub. (figure 2-B-6) See Drive Pulley Identifications, Chapter 1, for correct cup washer. Remove washer, nut, and cup washer.

3. Install ramp plate, cup washer, washer and nut. Tighten until cup washer bottomed and remove. (figure 2-B-6)

4. Position ramp plate, snap ring, cup washer, and nut. (figure 2-B-6) Tighten until snap ring locks into groove. Model 780 requires spacer between ramp plate and snap ring. Remove all items: nuts, washers, cup washers, and ramp plate.

5. Movable face must slide freely on hub. Correct binding by lightly tapping spider on top of leg that binds in movable face bushing.

2-B-8 Engage springs with roller arm tool 703152 or 703153. Position ramp plate, snap ring, locking plate and secure with bolts. Torque as required. Washers are placed between ramp plate and lock plate. Bend taps of lock plate to secure bolts.

2-B-9 If drive pulley is installed on a tapered shaft, clean shaft and inside taper of pulley before assembly. Tapers must be dry.

See torque chart for correct torque for bolt retaining drive pulley to crankshaft.

Use a good grade bolt, at least S. A. E. Grade 5 or better. This is indicated by three marks on the head of the bolt.

SERVICING PROCEDURE
1190 AND 1195 DRIVE PULLEY

2-C-1 Use puller number 702926 to remove from crankshaft.

Clean and examine the drive pulley for external damage.

2-C-2 These instructions apply to all models of the 1190 and 1195 drive pulleys. Model variations are identified by rivet or castellated nuts on the ramp plate. (figure 2-C-1)

2-C-3 Ramp plates are pressed on the splined hub. Do not remove the three castellated nuts. Use three or four evenly spaced 2 X 4 wood blocks to support the outer edge of the ramp plate raising the fixed face approximately 1/2 inch off the bed of an arbor press. Screw in the removal tool, 702926 and apply pressure to separate the ramp plate from the hub. (figure 2-C-1)

Examine the ramp plate. Replace the ramp plate if riveted torque pins are loose. Torque pins retained with nut are replaceable in sets.

2-C-4 Alignment of replacement torque pins is important. Start in ramp plate finger tight. Place movable face and ramp plate on hub with torque pins in guide bushings in movable face, tighten nuts and lock with cotter key if used. Torque nuts to 20 - 25 foot pounds. With springs disconnected from roller arms movable face should slide freely on hub.

2-C-5 Support the center of the hub when pressing on the ramp plate. Do not support on the outer edge of the fixed face. Use cup washer 703135 to press ramp plate on hub to correct position. (figure 2-C-2)

Cup washer 703135 must be used when securing drive pulley to crankshaft of driving shaft. Cup washer secures the ramp plate to the hub. (figure 2-C-2)

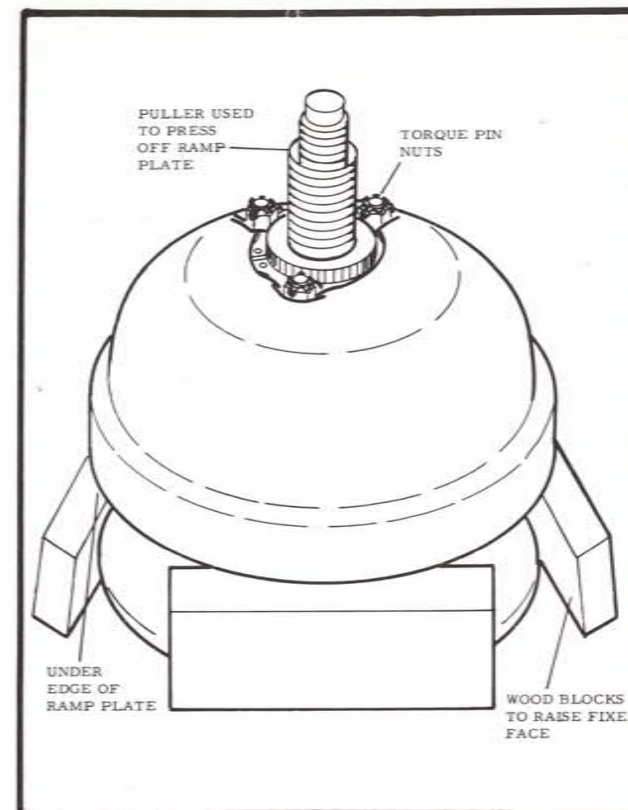


FIGURE 2-C-1

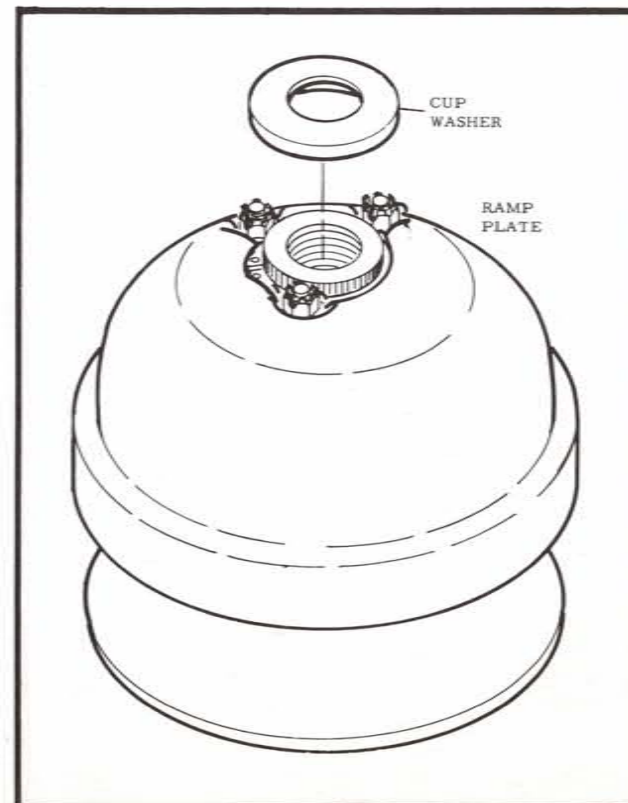


FIGURE 2-C-2

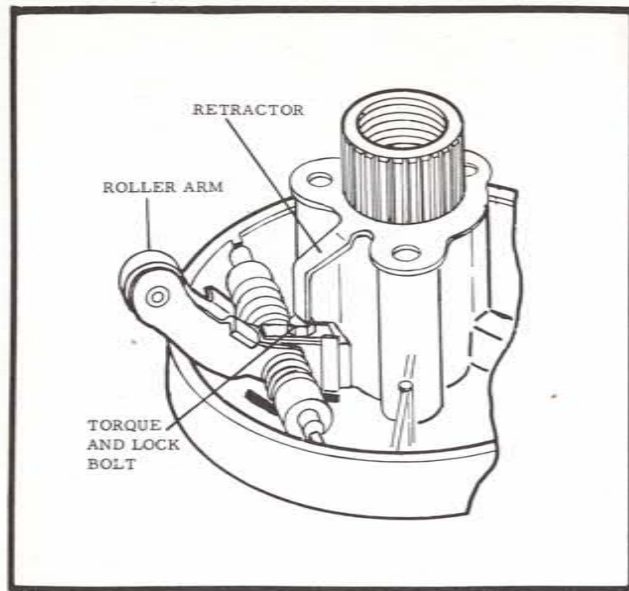


FIGURE 2-C-3

2-C-6 Remove roller arms, springs, pins, and bushings from movable face. Clean and examine. Replace if wear is found on springs, pins, roller arms, figure 2-C-3. Replace in sets as indicated on parts list. Use set of parts compete as received, do not combine new and used parts. Torque retainer bolts, bend up lock plate to secure bolt.

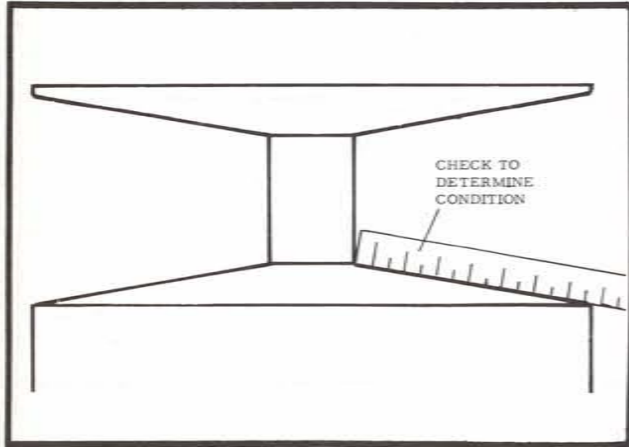


FIGURE 2-C-4

2-C-7 Examine the fixed and movable faces for wear on the belt surface. Replace if worn, scored, and pitted. (figure 2-C-4) Place a straight edge across the drive surface of the pulley faces to check for excessive grooving.

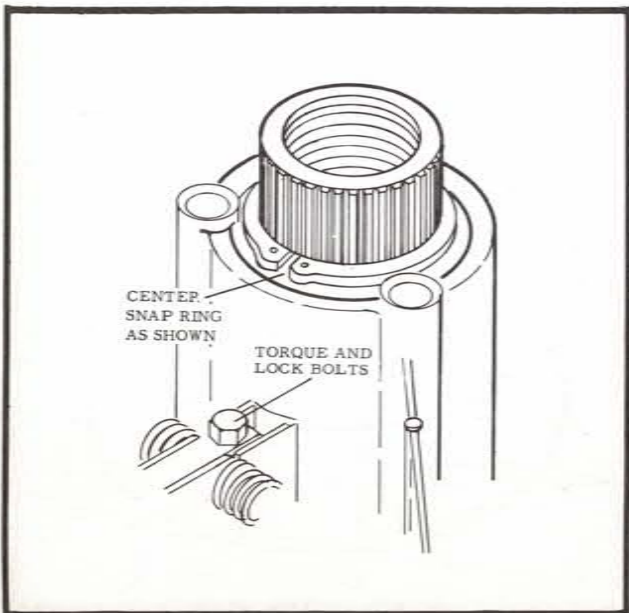


FIGURE 2-C-5

2-C-8 Position movable face to prevent binding with snap ring. Center snap ring ends between torque pin bushings. (figure 2-C-5)

SERVICING MODEL 880 DRIVE PULLEY

2-D-1 Use puller 702925 to remove drive pulley from crankshaft. Clean and examine.

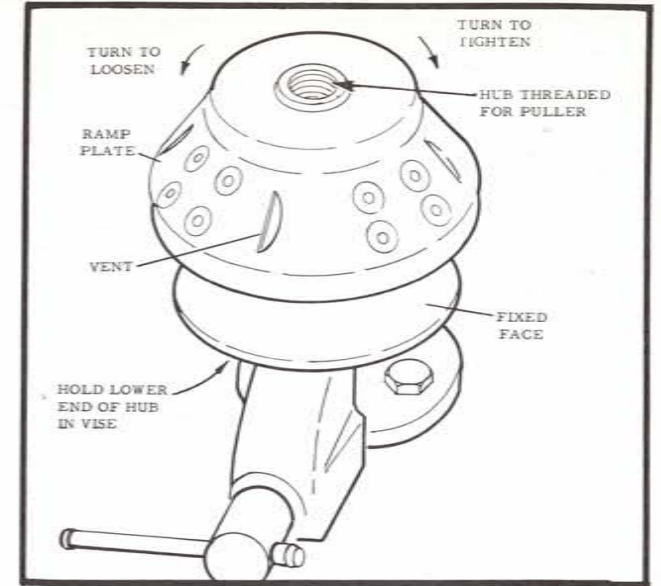


FIGURE 2-D-1

2-D-2 Disassemble by unscrewing ramp plate from fixed face. Clamp center hub protruding beyond fixed face in vise. (figure 2-D-1) Use strap wrench. Turn ramp plate counter clockwise.

2-D-3 Lift off ramp plate and movable face. Note position of spring, spring cup, thrust washers, and idler tire. All parts must have free fit, replace if excessively loose. (figure 2-D-2)

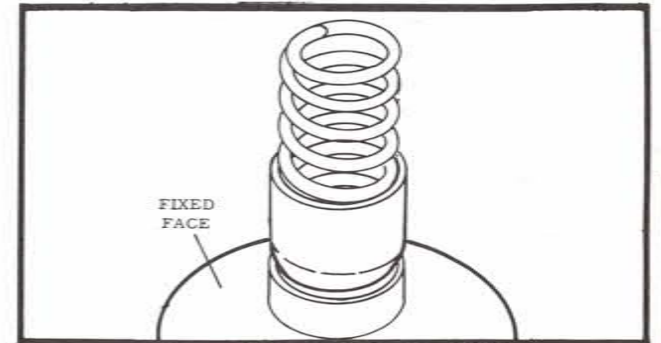


FIGURE 2-D-2

2-D-4 Examine the levers, they must pivot freely but not have side play. Replace lever and pivot pin if worn. Replace ramp plate if lever guides are worn. (figure 2-D-4)

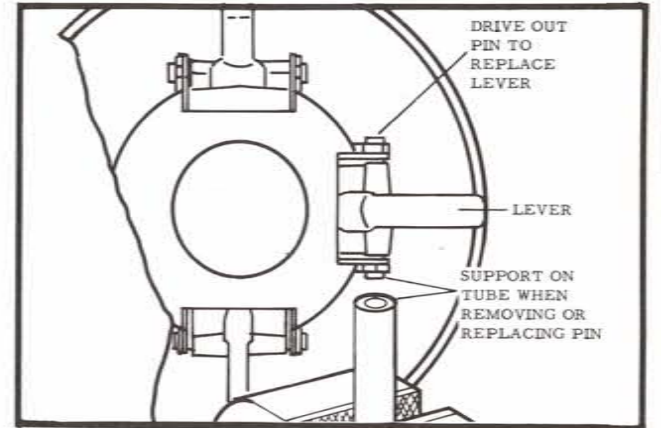


FIGURE 2-D-3

2-D-5 Position lever bracket on tubular support and drive out pivot pin with hammer and drift. Replace pin by supporting in same manner.

2-D-6 Assemble idler tire bushing spring cup and spring on fixed face clamped in vise. Place movable face into ramp plate so that levers seat into inserts in ramp plate. (figure 2-D-4) Hold movable face and ramp plate together as assembly and screw onto fixed face hub. Turn clockwise. Use strap wrench to tighten.

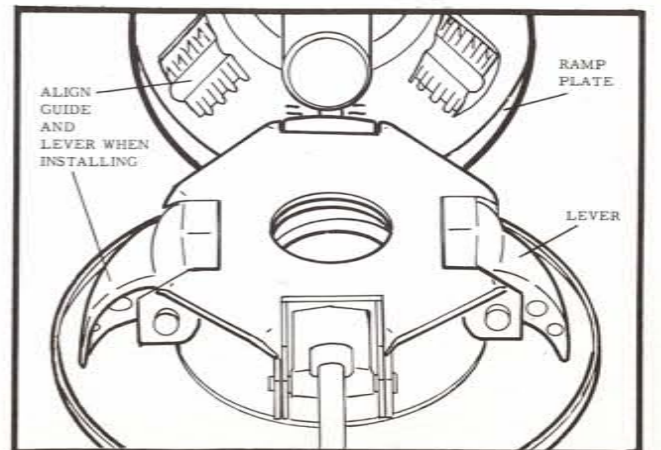


FIGURE 2-D-4

2-D-7 Use a good grade fastener to retain pulley to crankshaft. At least Grade 5 or better, indicated by three marks on bolt head.

SERVICING SPEED SENSITIVE
DRIVEN PULLEYS

3-A-1 Examine the pulley and determine if spring cups are restricted in movement by links. View from edge of pulley. (figures 3-A-1, 3-A-4)

If pulley has links, flatten lock tabs on nuts and remove cover. (figure 3-A-1)

If pulley does not have links, do not remove nuts until spring tension secured with tool. (figures 3-A-4, 3-A-6)

3-A-2 Use at least a 12 inch length of threaded stock, two nuts and washers. A drive pulley spider is also used to compress the spring below the center hub. (figures 3-A-2, 3-A-6)

3-A-3 After positioning the tools and pulley, compress spring to release links or nuts. (figures 3-A-2, 3-A-6) Turn nut to release spring tension. (figure 3-A-3)

3-A-4 Clean all parts and replace if worn. Examine bushings for wear.

3-A-5 Position parts and tools, align bolt holes and link seats. (figures 3-A-3, 3-A-5)

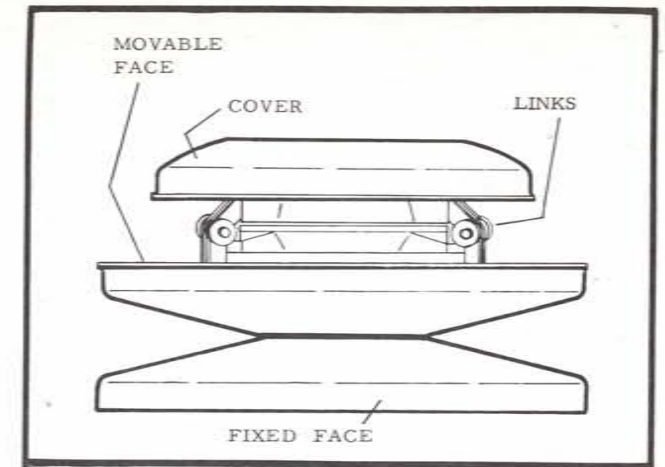


FIGURE 3-A-1

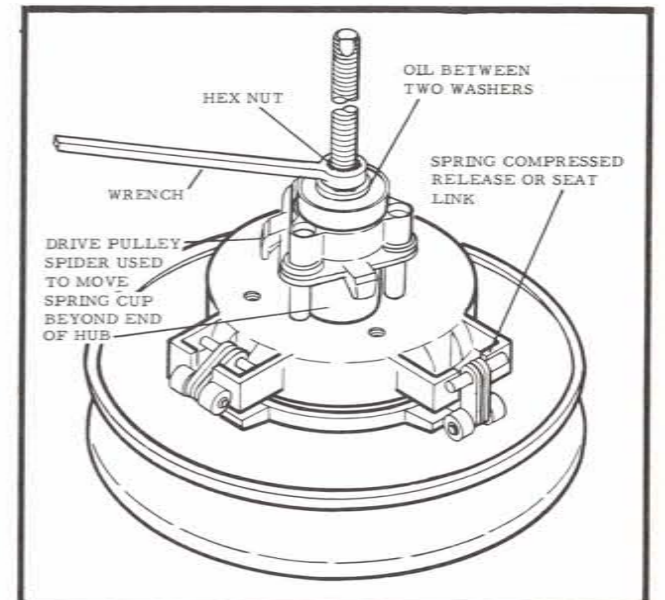


FIGURE 3-A-2

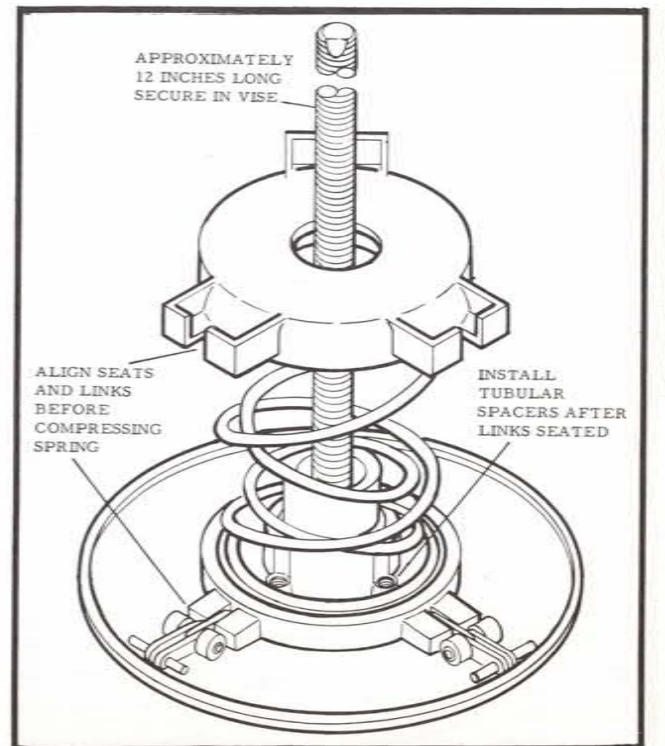


FIGURE 3-A-3

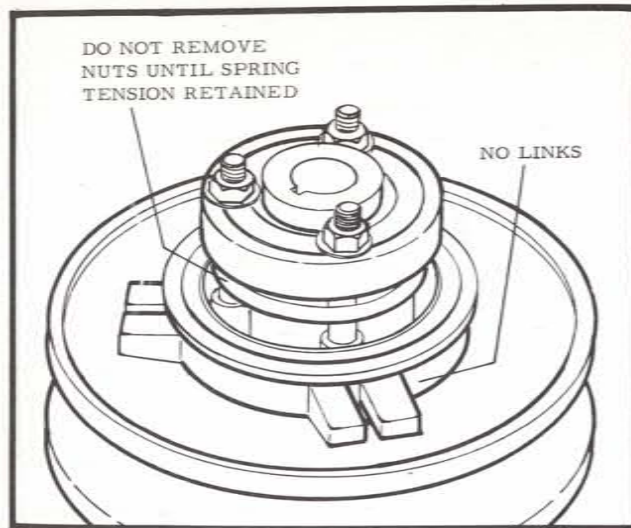


FIGURE 3-A-4

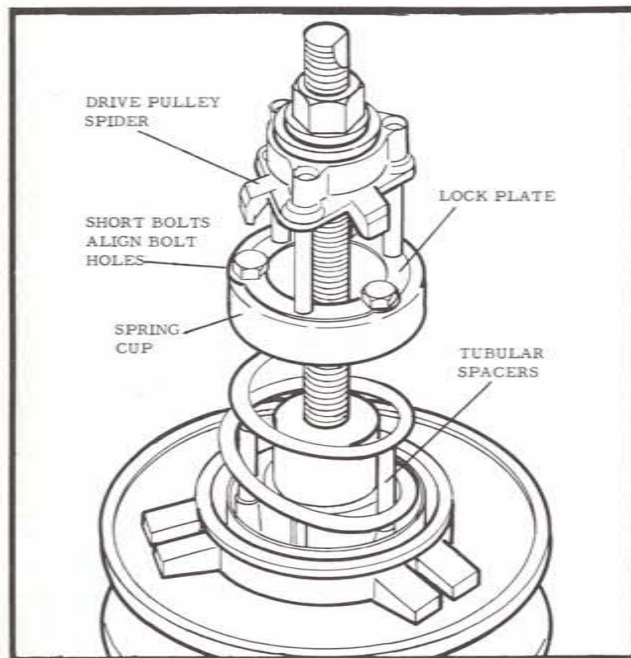


FIGURE 3-A-5

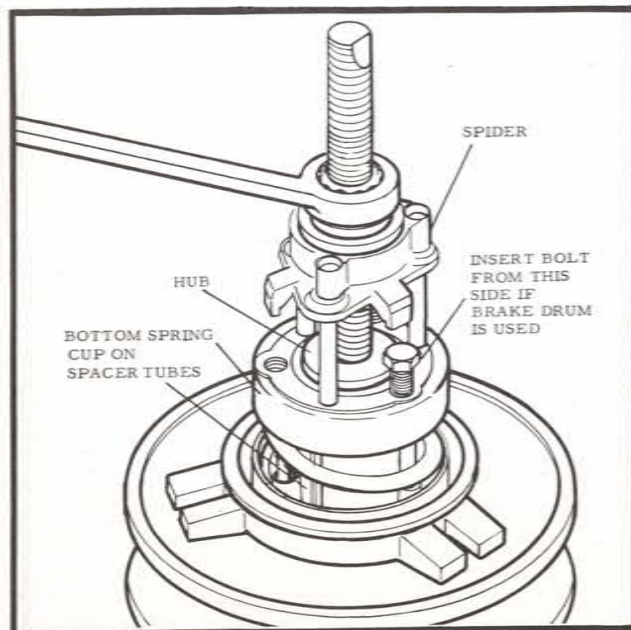


FIGURE 3-A-6

SERVICE HINT: Place short bolts in locking plate, figures 3-A-5, 3-A-6 to maintain bolt hole alignment in lock plate and spring cup.

3-A-6 Link type, compress spring completely (figure 3-A-2) seat link pins. Release assembly from tool, slide movable face off hub, position tube spacers in movable face, place on hub and secure with nuts. Nuts must be locked with lock plate.

3-A-7 Bolts are inserted from the spring end of both units when equipped with brake drums. Nut lock plate is the brake drum. Modify disassembly and assembly procedures to suit.

3-A-8 Driven pulleys with integral shafts will require use of arbor press and tubular adapters. Follow procedures beginning with paragraph 3-A-1, modify for integral shaft.

SERVICING TORQUE SENSITIVE DRIVEN PULLEYS

3-B-1 Clean thoroughly before disassembly. Examine for wear and operation. Replace worn parts. Note position of spring anchor points.

3-B-2 Release spring from anchor in torque bracket. (figure 3-B-1) Unhook with screwdriver.

3-B-3 Place on bench, fixed face down, position heels of hands on torque bracket. Press down to clear key in hub and turn to lock under key. (figure 3-B-2)

3-B-4 Remove snap ring. Turn torque bracket slowly to release and slide up hub. Hold securely to prevent sudden spring release. Model 330 (figure 3-B-1) Hold torque bracket while removing socket head screws, Carefully release spring tension.

3-B-5 Clean and examine all parts, replace if worn. Do not lubricate during reassembly.

3-B-6 Place movable face on hub; replace key. Engage spring with anchor point in torque bracket, paragraph 3-B-2, and anchor point in movable face.

Compress spring until 1/16 to 1/8 inch clearance between ramps. (figure 3-B-3) Turn movable face 1/3 turn counter clockwise, or 120 degrees, press torque bracket down hub and lock under key, paragraph 3-B-3. Replace snap ring. Release torque bracket to seat against snap ring.

Some models have ramp shoe in movable face portion of torque bracket. Service in same manner.

3-B-7 Drive pulleys with integral shafts are serviced in the same manner. Some models use a circle type retainer rather than a snap ring.

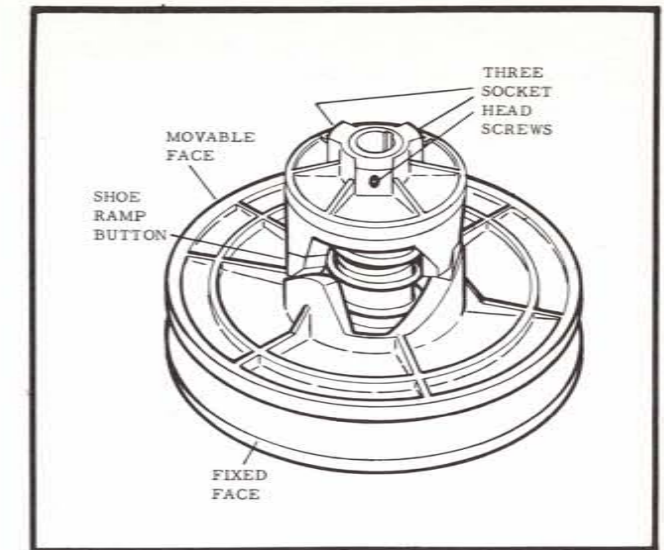


FIGURE 3-B-1

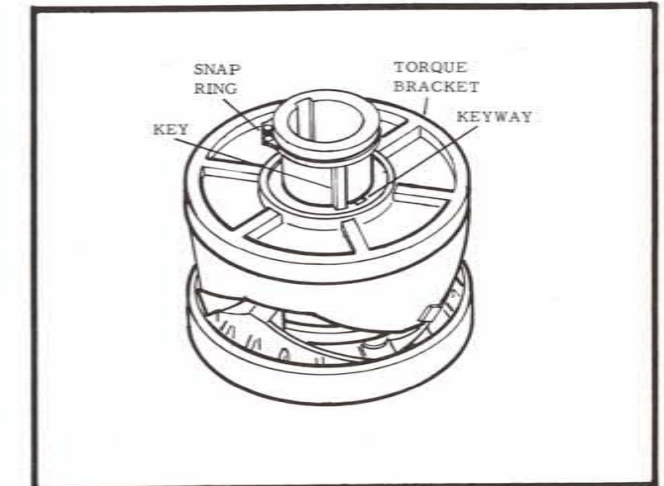


FIGURE 3-B-2

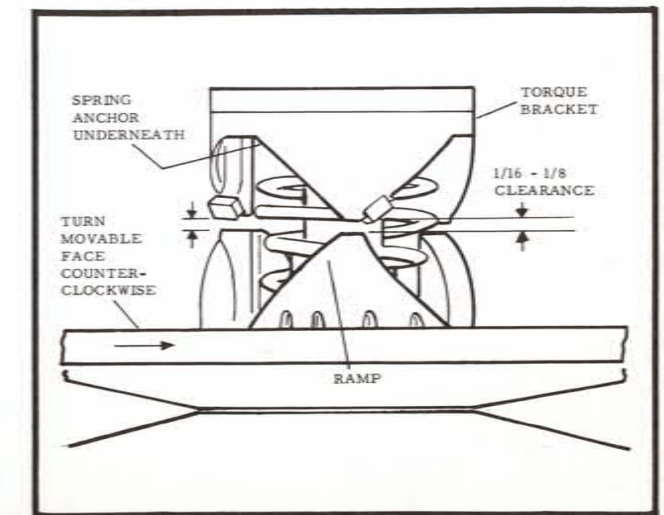


FIGURE 3-B-3

4-A-1 Belts are a very important part of the overall design of the Salisbury Torque Converter. Use only the specified belt for each application. (figures 1, 2, 3) A change in shaft center dis-

tance will also have the same affect as a loose or tight belt. (figures 2, 3) See Master Service Manual, Belts Section, for recommended belts and dimensions.

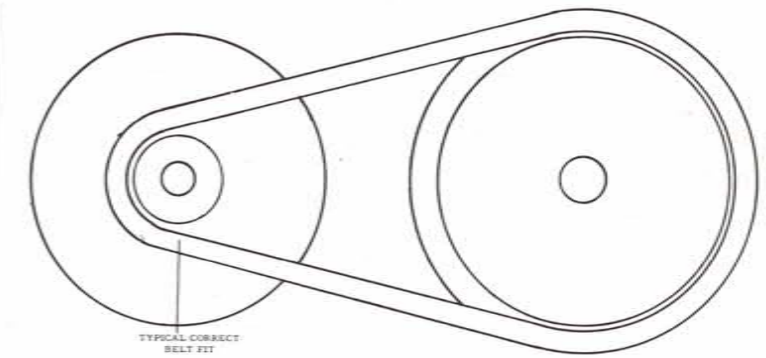
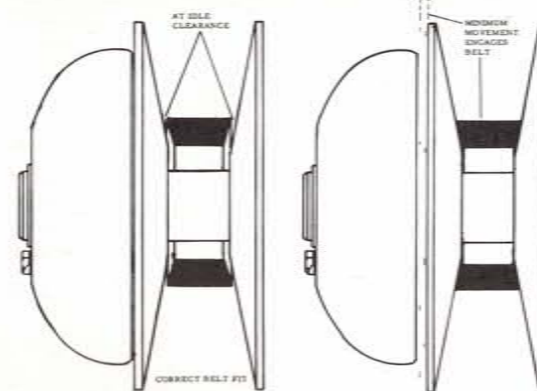


FIGURE 4-A-1 Correct Belt Size

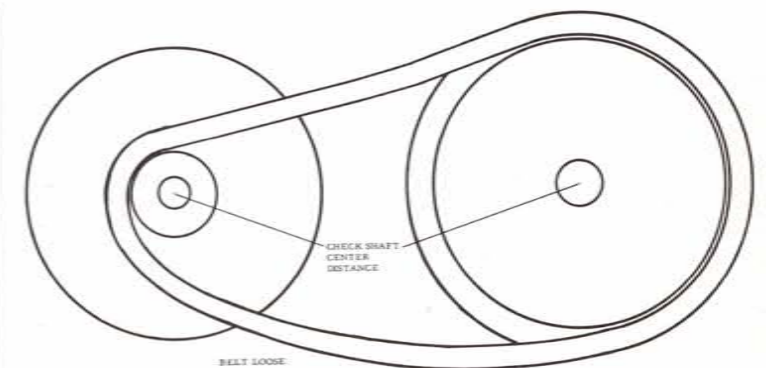
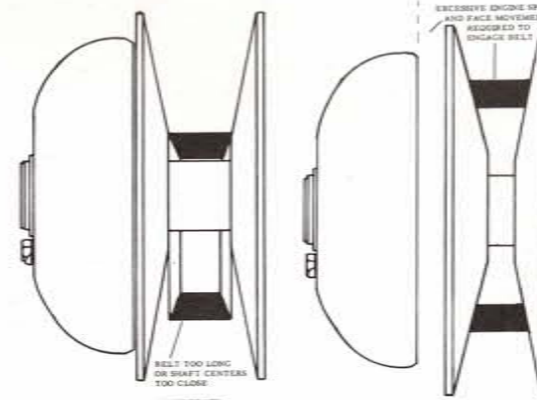


FIGURE 4-A-2 Loose Belt

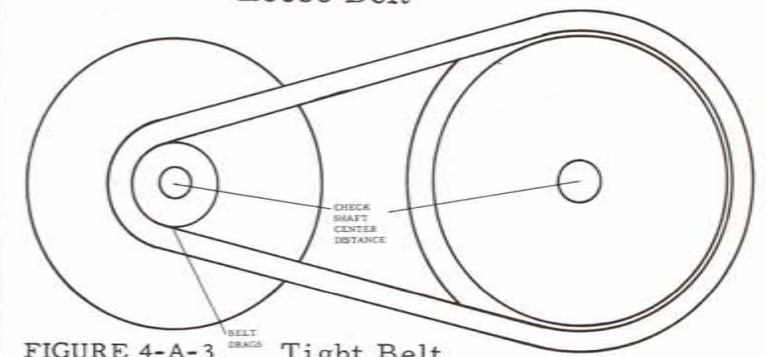
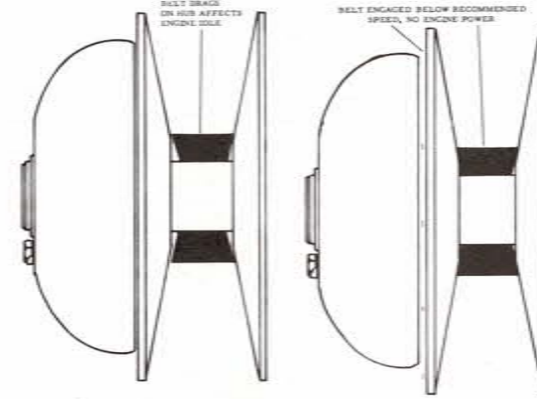


FIGURE 4-A-3 Tight Belt

4-A-2 Belts that are excessively worn will require a higher engine speed for engagement and the maximum ground speed of the vehicle will be reduced. (figure 4) The serviceable belt moves to the outer diameter resulting in a "high gear" ratio. (Upper solid belt, figures 4a and

4b). Figure 4b illustrates maximum travel of the movable face, worn belt, (hollow, lower) unable to move to greatest diameter of drive pulley. Vehicle performance is also affected if belts are coated with grease, oil or water.

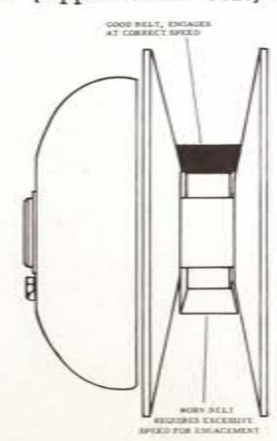
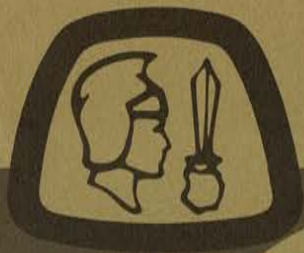


FIGURE 4-A-4

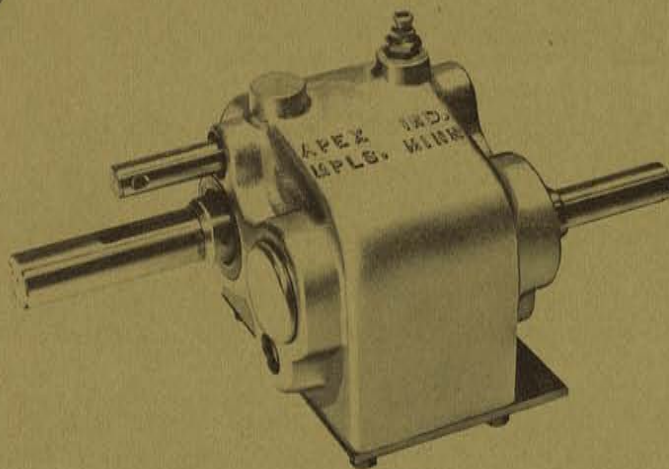
SERVICE NOTES:

SERVICE NOTES:





APEX INDUSTRIES



Model 800 Reversing Transmission

Apex Industries has combined imagination with sound engineering and design principles to produce what we call "IMAGINEERED" power transmission products. Every product we sell may be ordered out of stock, after specifying your desired options, or may be altered to meet special applications. Let us put our "IMAGINEERING" concept to work for you to produce lightweight, compact and low maintenance units in any quantity.

The Model 800 Transmission offers one forward speed, neutral and a reverse housed in a strong, one piece aluminum case. Quality tapered roller bearings with automotive type oil seals, combined with hardened alloy steel gears and stressproof shafts provide long life and low maintenance operation.

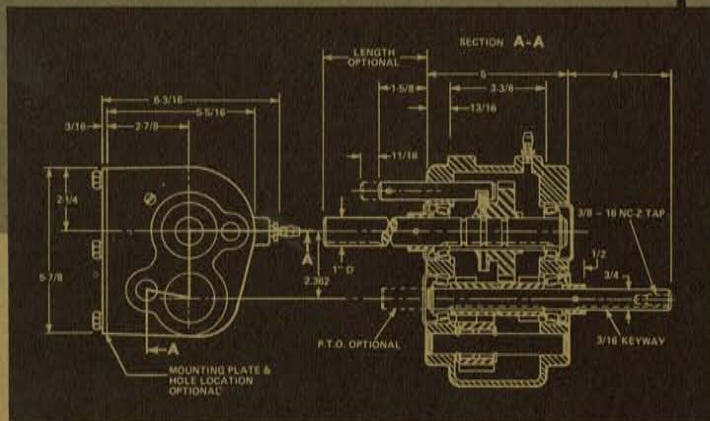
Designed to be adaptable to belt driven torque con-

verters, the Model 800 will operate up to 6,000 R.P.M. with inout horsepowers up to 25 H.P., depending upon application.

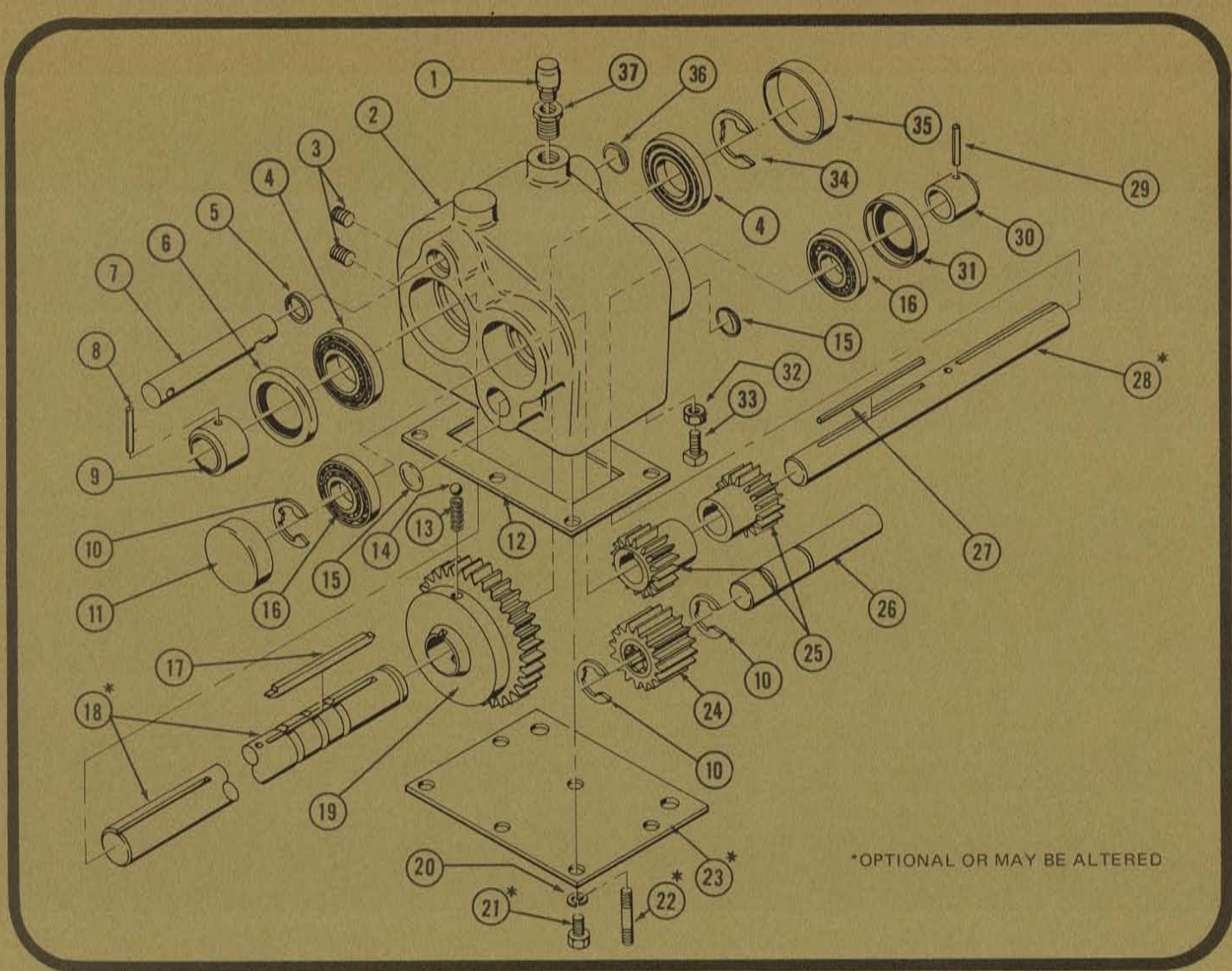
Shown above assembled with right hand input shaft location (output shaft location opposite). Left hand assembly also available. In addition, unit may be assembled with both input and output shafts on same side of case. Please specify assembly desired.

SPECIFICATIONS

Gear Ratios: Forward, 2.36:1.0 — Reverse, 2.36:1.0
 Average Shipping Weight: 14 lbs.
 Options (please specify): Power Take-off Shaft — Input and Output Shaft length, rotation and location — Mounting Plate configuration — Shift Lever Assembly



Additional Information, certified drawings and quotes promptly furnished with no obligation.



*OPTIONAL OR MAY BE ALTERED

PARTS LIST— Model 800 Reversing Transmission

Item	Part No.	Description	Qty.
1	538	BREATHER ASSY. (Incl. 1/4" x 1/8" pipe bush.)	1
2	112	CASE, Aluminium	1
3	527	PLUG, 1/8" Pipe	2
4	514/515	BEARING, Tapered Roller, 1" Cup and Cone	2
5	130	SEAL, Shifter Shaft	1
6	506	SEAL, Output Shaft	1
7	125	SHAFT, Shifter	1
8	530	ROLL PIN, 1/8" x 1-1/4"	1
9	120	COLLAR, Output Shaft	1
10	532	"E" RING, 3/4" Shaft	3
11	534	DUST CAP, 1-3/4"	1
12	124	GASKET, Base Plate	1
13	132	SPRING, Detent Ball	1
14	128	DETENT BALL, 5/16"	1
15	508	EXPANSION PLUG, 3/4"	2
16	512/513	BEARING, Tapered Roller, 3/4" Cup and Cone	2
17	123	KEY, 1/4" x 1/4" x 3-3/4"	1
18	118	SHAFT, Output, 1" (Specify Application)	1
19	126	GEAR, 33 Tooth	1

Item	Part No.	Description	Qty.
20	542	WASHER, 5/16" Spring Lock	6
21	540	CAP SCREW, Hex Hd., 5/16" x 3/4"	6
22	539	STUD, 5/16" x 1-7/16"	2
23	122	BASE PLATE	1
24	127	GEAR, 17 Tooth, Reverse (Incl. 2 no. 129 Brgs.)	1
	129	BEARING, Needle, 3/4" x 5/8" (for no. 127 Gear)	2
25	110	GEAR, Drive Pinion, 14 Tooth	2
26	108	SHAFT, Idler	1
27	517	KEY, 1/8" x 1/8" x 3"	1
28	121	SHAFT, Input, 3/4" (Specify Application)	1
29	529	ROLL PIN, 1/8" x 1"	1
30	119	COLLAR, Input Shaft	1
31	505	SEAL, Input Shaft	1
32	541	NUT, Hex 5/16"	1
33	543	SET SCREW, 5/16" x 3/4"	1
34	531	"E" RING, 1" Shaft	1
35	535	DUST CAP, 1-15/16"	1
36	131	EXPANSION PLUG, 7/8"	1
37	544	REDUCER BUSHING, Pipe, 1/4" x 1/8"	1



APEX INDUSTRIES
 2217 Snelling Avenue So. — Minneapolis, Mn. 55404 — (612) 729-8388

SAFEGUARD INDUSTRIES, INC.

ALSPORT PART NUMBER 617-102

APEX INDUSTRIES, INC.
 MODEL 800 REVERSING TRANSMISSION
 Repair Parts Price List

<u>ITEM</u>	<u>NEW PART NO.</u>	<u>OLD PART NO.</u>	<u>DESCRIPTION</u>	<u>LIST EACH</u>
2.	50065	112	CASE, Aluminum	\$32.95
3.	10096	527	PLUG, 1/8" Pipe	.25
4.	10087	514	BEARING, Tapered roller, 1" Cup	4.15
	10088	515	BEARING, Tapered roller, 1" Cone (INCLUDED IN ABOVE PRICE)	
5.	10108	130	SEAL, Shifter Shaft	1.10
6.	10076	506	SEAL, Output Shaft	1.70
7.	20073	125	SHAFT, Shifter	3.75
8.	10126	530	ROLL PIN, 1/8" x 1-14"	.25
9.	20034	120	COLLAR, Output Shaft	2.25
10.	10116	532	"E" RING, 3/4" Shaft	.25
11.	10081	534	DUST Cap, 1-3/4"	.90
12.	20064	124	GASKET, Base Plate	1.20
13.	10110	132	SPRING, Detent Ball	.25
14.	10109	128	DETENT BALL, 5/16"	.25
15.	10084	508	EXPANSION PLUG, 3/4"	.25
16.	10073	512	BEARING, Tapered roller, 3/4" Cup	4.15
	10074	513	BEARING, Tapered roller, 3/4" Cone (INCLUDED IN ABOVE PRICE)	
17.	20068	123	KEY, 1/4" x 1/4" x 3-3/4"	2.10
18.	30094	118	SHAFT, Output 1" (Specify Application)	11.75
19.	30095	126	GEAR, 33 Tooth	27.45
20.	10018	542	WASHER, 5/16" Spring Lock	.25
21.	10046	540	CAP SCREW, Hex Head, 5/16" x 3/4"	.25
23.	20065	122	BASE PLATE	2.80
24.	20070	127	GEAR, 17 Tooth, reverse (Incl. 2 no. 10224 brgs.)	18.25
	10224	129	BEARING, Needle, 3/4" x 5/8" (for no. 20070 gear)	2.75
25.	20072	110	GEAR, Drive pinion, 14 Tooth	9.95
26.	20074	108	SHAFT, Idler	4.25
27.	10145	517	KEY, 1/8" x 1/8" x 3"	.70
28.	30093	121	SHAFT, Input, 3/4" (Specify Application)	11.50
29.	10125	529	ROLL, PIN, 1/8" x 1"	.25
30.	20029	119	COLLAR, Input Shaft	1.50
31.	10183	505	SEAL, Input Shaft	1.05
32.	10094	541	NUT, Hex, 5/16"	.25
33.	10121	543	SET SCREW, 5/16" x 3/4"	.25
34.	10115	531	"E" RING, 1" Shaft	.25
35.	10083	535	DUST CAP, 1-15/16"	.80

S-N S-N MODEL 5101B

PARTS CATALOG

REVERSING TRANSMISSION

MODEL 5101-B and 5101-E

U. S. PATENT 2,370,484



THE SNOW-NABSTEDT

GEAR DIVISION OF
GRANITE STATE MACHINE CO., Inc.
124 Joliette St., P.O. Box 779, Manchester, N.H. 03105
(603) 668-1900 Telex 94-3458

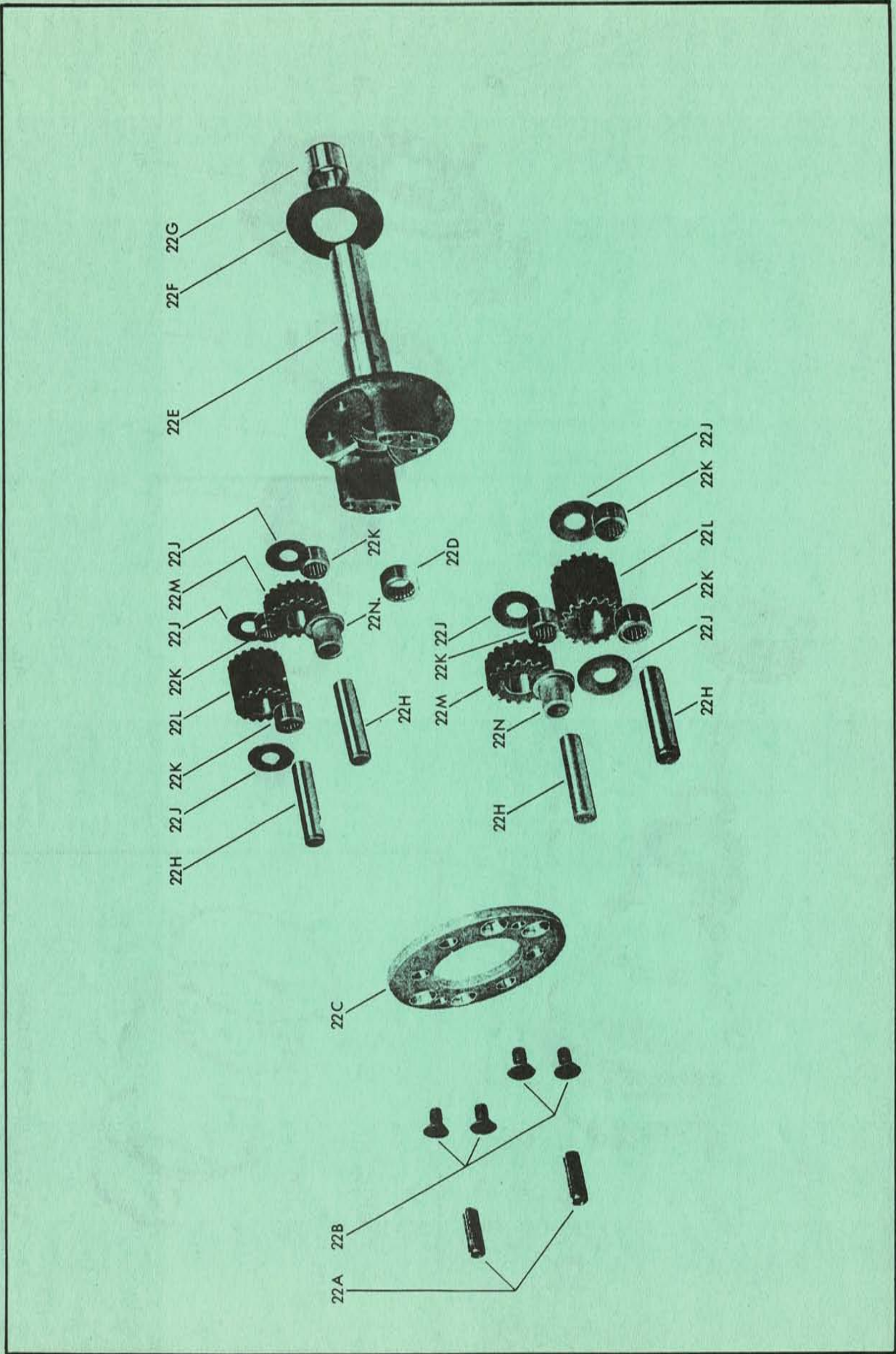


FIGURE 2. SUB-ASSEMBLIES
 Parts are identified by reference number. See parts list for correct part number.

PARTS LIST

MODEL 5101 REVERSING TRANSMISSION

ITEM NO.	PART NO.	QUAN.	NAME	ITEM NO.	PART NO.	QUAN.	NAME
				22F	8TR-5134	1	Nylon Washer
2	20186	1	Oil Seal	22G	10237-2	1	Bearing Inner Race
3	2607	6	Screws	22H	7938	4	Dowel
4	1302	6	Lockwasher	22J	9E-5105	6	Nylon Washer
				22K	10495	6	Bearing
6	26-5109	1	Shaft	22L	9-5103	2	Long Pinion
7	10736	1	Bearing	22M	9A-5103	2	Short Pinion
				22N	6271	2	Bushing
9	20187	2	Oil Seal	23	27A-5106	1	Cross Shaft
10	30-51027	1	Housing	24	1228	3	Key
11	5X-5104	2	Brake Band Assembly consisting of:	25	10-5104	2	Cam
	5-5104	1	Band	26	5061	2	Snap Ring
	5L-5103	2	Linings	27	8TR-5134	1	Nylon Bushing
	7101	1	Roll Pin	28	7A-5102	1	Ring Gear
	7121	1	Roll Pin	29	6268	1	Bushing
	22-5101	1	Cam Roll	31	31A-5103	1	Gasket
12	8TF-5101	1	Nylon Washer	32	30-5106	1	Housing
13	8A-5102	1	Drum	33	6267	1	Bushing
14	8-5102	1	Forward Gear	34	30H-5102	1	Breather
15	50142	1	Snap Ring	35	4527	2	Screws
16	6272	1	Bushing	36	1703	2	Nuts
17	26A-5101	1	Spacer	38	T0237-1	1	Bearing
18	8TR-5101	1	Nylon Washer	41E	31A-5104	1	Gasket
				42E	31-5103	1	Adapter
				43E	31A-5103	1	Gasket
				44E	30-5106	1	Housing
				45E	41A-5101	1	Stud
21	2101	3	Pipe Plugs	46E	1302	1	Lockwasher
22	3X-5104	1	Pinion Carrier & Shaft Assembly	47E	1802	1	Nut
				48E	6273	1	Washer
22A	7101	2	Pin	49E	2642	3	Screws
22B	9403	4	Screws	50E	1304	3	Lockwasher
22C	3-5104	1	Cage	51E	27A-5107	1	Cross Shaft
22D	10238	1	Bearing	52E	10-5104	2	Cam
22E	48-5106	1	Shaft	53E	5061	2	Snap Ring
				54E	1228	1	Key

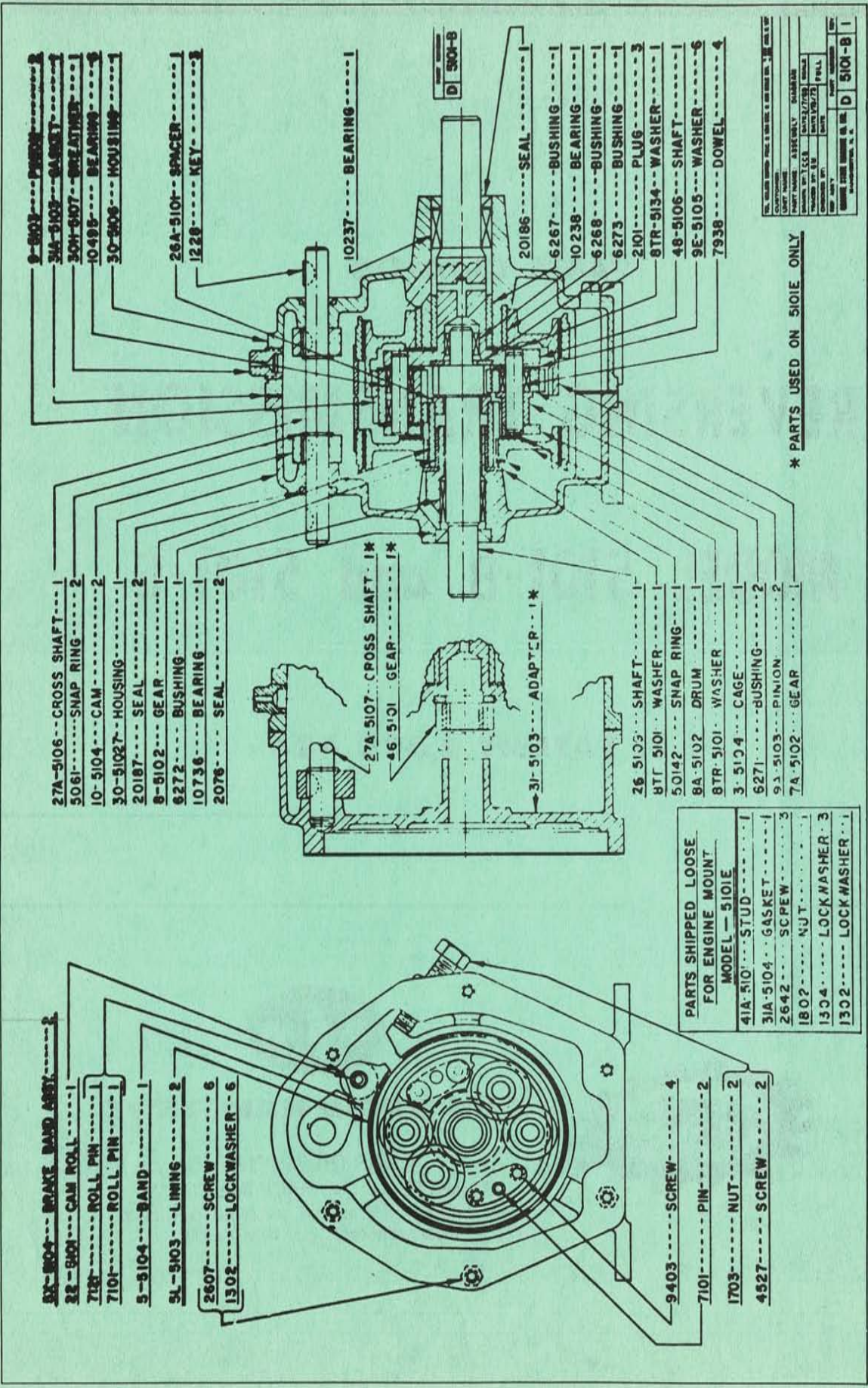
PRICE LIST FOR PARTS AND ASSEMBLIES

SN 5101B -3, -4, -5, -6

REVERSING TRANSMISSIONS

PARTS

Part No.	List Price	Part Name	Assembly	Quantity used in Assembly	Quantity used in Complete Transmission
3-5104	14.45	Gear Cage	A	1	1
*5-5104	-----	Brake Band	B	1	2
*5L-5103	-----	Lining	B	2	4
7A-5102	51.85	Internal Gear	C	1	1
8-5102	18.15	Gear	D-E	1-1	1
8A-5102	35.15	Drum	E	1	1
8TF-5101	.90	Washer			1
8TR-5101	1.05	Washer			1
8TR-5134	.90	Washer	A	1	1
9-5105	7.80	Long Pinion	A-F	2-1	2
9A-5108	6.00	Short Pinion	A-G	2-1	2
9E-5105	.25	Washer	A	6	6
10-5104	12.30	Cam	H	2	2
10-5106	11.10	Cam (-3)			2
22-5101	1.70	Cam Roller	B	1	2
26-5109	45.20	Input Shaft			1
26-5106	74.10	Input Shaft (-4)			1
26A-5101	2.35	Spacer	D-E	1-1	1
27A-5106	19.00	Cross Shaft	H	1	1
30-51027	72.90	Housing (Input)	J	1	1
30-5106	62.90	Housing (Output)	K	1	1
30-51019	71.10	Housing (Input) (-4)	L	1	1
30H-5105	2.40	Breather (-5)			1
30H-5107	1.00	Breather			1
31A-5105	1.70	Gasket			1
48-5106	90.35	Output Shaft	A-M-N	1-1-1	1
48-51019	100.65	Output Shaft (-6)			1
10237-1	3.80	Bearing (Outer Race)	K	1	1
10237-2	3.40	Bearing (Inner Race)	A-M-N	1-1	1
10238	1.65	Bearing	M-N	1-1	1
10495	1.40	Bearing	A-F-G	6-2-1	6
10736	9.00	Bearing			1
10558	8.00	Bearing (-4)	L	1	1
1228	.30	Key	H	3	3
1302	.15	Lockwasher			6
1703	.40	Nut			2
20186	2.20	Oil Seal			2
20187	1.00	Oil Seal	J-K-L	1-1-1	2
20202	5.05	Oil Seal (-4)	L	1	1
2101	.70	Plug			3
2607	.30	Screw			6



- 9-5103---PINION-----1
- 31A-5103---GASKET-----1
- 30M-5107---BREATHING---1
- 10-495---BEARING-----1
- 30-5106---HOUSING-----1

- 26A-5101---SPACER-----1
- 1228---KEY-----2

- 10237---BEARING-----1

D 5101-B

- 20186---SEAL-----1
- 6267---BUSHING-----1
- 10238---BEARING-----1
- 6268---BUSHING-----1
- 6273---BUSHING-----1
- 2101---PLUG-----3
- 8TR-5134---WASHER-----1
- 48-5106---SHAFT-----1
- 9E-5105---WASHER-----6
- 7938---DOWEL-----4

- 27A-5106---CROSS SHAFT---1
- 5061---SNAP RING-----2
- 10-5104---CAM-----2
- 30-51027---HOUSING-----1
- 20187---SEAL-----2
- 9-5102---GEAR-----1
- 9272---BUSHING-----1
- 10736---BEARING-----1
- 2076---SEAL-----2

27A-5107---CROSS SHAFT---1*

46-5101---GEAR-----1*

31-5103---ADAPTER---1*

- 26-5103---SHAFT-----1
- 8TF-5101---WASHER-----1
- 50142---SNAP RING-----1
- 8A-5102---DRUM-----1
- 8TR-5101---WASHER-----1
- 3-5104---CAGE-----1
- 6271---BUSHING-----2
- 9A-5103---PINION-----2
- 7A-5102---GEAR-----1

* PARTS USED ON 5101E ONLY

REV. NUMBER	DATE	BY	CHKD BY
1			
PART NAME		5101E ONLY	
DRAWING NO.		5101E/5101E	
CHECKED BY		P/LL	
APP. NO.			
REV. NO.		D 5101-B 1	

- 8A-5104---BRAKE BAND ASST---2
- 3E-5101---CAM ROLL-----1
- 7128---ROLL PIN-----1
- 7101---ROLL PIN-----1
- 5-5104---BAND-----1
- 5A-5103---LINING-----2
- 2607---SCREW-----6
- 1302---LOCKWASHER---6

- 9403---SCREW-----4
- 7101---PIN-----2
- 1703---NUT-----2
- 4527---SCREW-----2

PARTS SHIPPED LOOSE FOR ENGINE MOUNT MODEL -- 5101E	
41A-5101---STUD-----1	
31A-5104---GASKET-----1	
2642---SCREW-----3	
1802---NUT-----1	
1304---LOCKWASHER---3	
1302---LOCKWASHER---1	

FIGURE 1. CROSS SECTION

Parts are identified by correct part number.

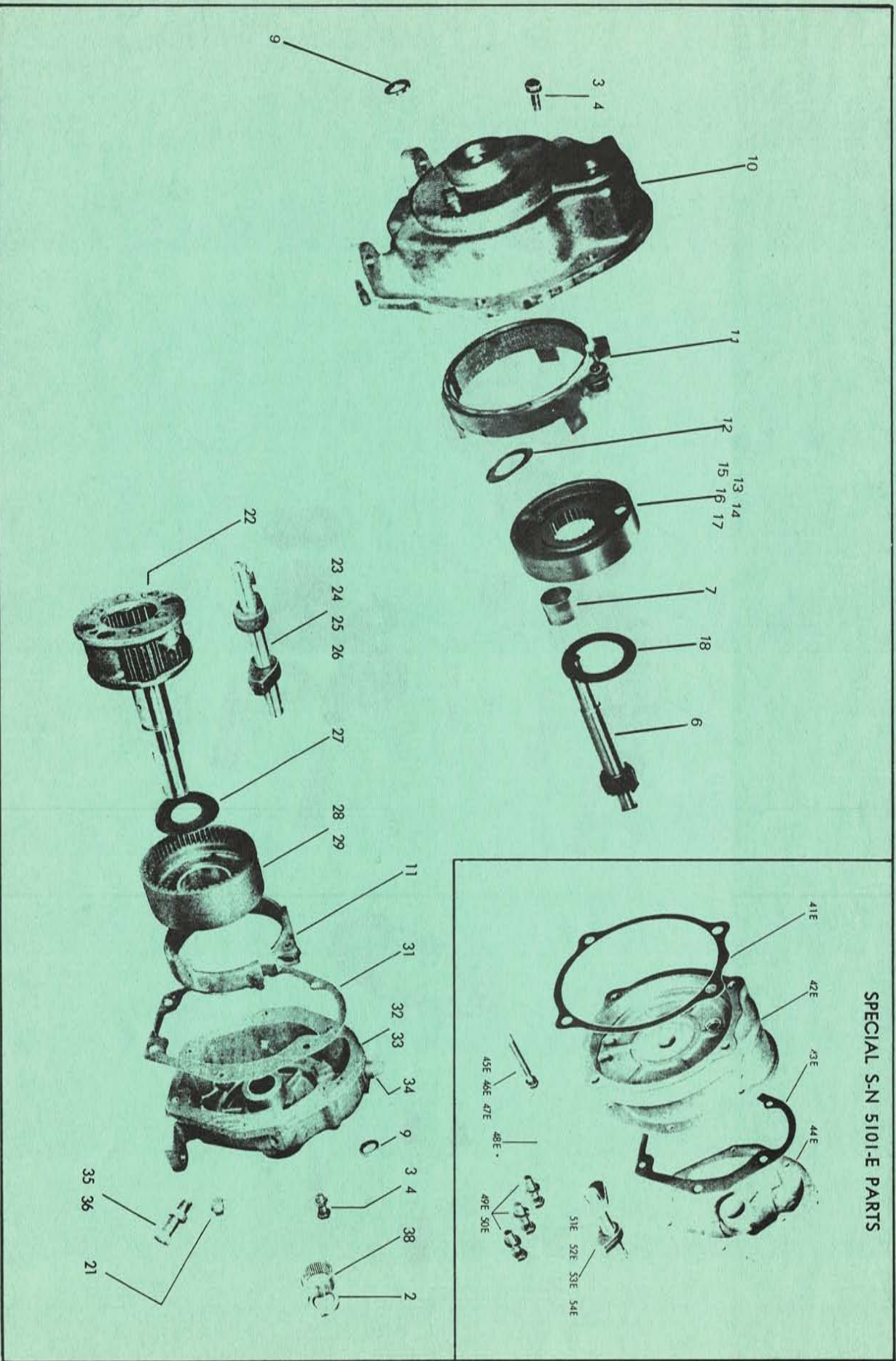


FIGURE 3. GEAR CAGE ASSEMBLY

Parts are identified by reference number. See parts list for correct part number.

REVERSING TRANSMISSION

MODELS 5101-B AND 5101-E

1. WARRANTY

The Company's products are guaranteed to be made of first class material, and in a skillful and workmanlike manner, and to be in perfect running order at the time they leave the factory. They are guaranteed against any defective material or workmanship, and any part proven defective within twelve months from the date of shipment will be replaced free of charge, F. O. B. our plant, on return of such defective part to the Company, transportation charges prepaid. No parts, however, shall be returned without the express authorization of this Company so to do.

There are no warranties, expressed or implied, except such warranties as are definitely set forth herein. Any part or parts manufactured, altered or repaired outside the factory without written approval from the factory shall void all warranties set forth herein. Under no circumstances will the Company be charged for labor to install parts furnished under warranty unless it agrees in advance to do so. Shipping charges on warranty parts shall be for the account of the customer unless the Company agrees in advance to pay them.

The Company shall in no event be held liable for any consequential damages or other damages or delay caused by defective material. Equipment and accessories, including bearings, not manufactured by the Company are guaranteed only to the extent of the original manufacturer's guarantee.

The Company reserves the right to improve its products through changes in design or material without being obligated to incorporate such changes in products of prior manufacture.

2. ADJUSTMENTS

The forward and reverse clutches are adjusted externally with the screws which project from both sides of the case. Adjust one clutch at a time. Loosen the jam nut. Turn in the adjusting screw a fraction of a turn if more tension is desired. Turn out the adjusting screw for less tension. Test the adjustment by moving the operating lever towards its respective adjusting screw. Tighten the jam nut.

Do not tighten clutches excessively since this only increases the operating effort without improving clutch action and may result in damaged brake bands. Occasionally, during cold weather operation, the clutches may

slip even though correctly adjusted. In such a case the lubricant must be changed to a lighter grade as specified in lubrication instructions.

3. LUBRICATION

Important: All gears are shipped dry from the factory. Be sure to add oil before running.

Quality of Oil — Use a good grade of straight mineral oil — SAE 30 above 32° F; SAE 10 below 32° F. Examples of recommended lube oils: Esso Lube Motor Oil; Gulf Lube Motor Oil; Quaker State Non-detergent Motor Oil (ML MM), or equivalent.

Fill unit with lubricating oil through breather hole on top of unit until oil flows from oil level hole on either side. Sometimes oil will follow the internal parts and oil will flow out the oil level holes before the unit is filled with oil to the level holes. Be sure unit is filled to oil level hole.

OIL CHANGE

1. The transmission should be drained and refilled after the first 30 hours of operation.
2. After this, a change of oil every 100 hours of operation or every six months, whichever occurs first, for units operating under favorable conditions.
3. Where operating conditions are severe, such as rapid rise and fall in temperature of the gear case with accompanied condensation on the inside walls and resulting formation of sludge, or where operation is in moist or dusty atmospheres, or in the presence of chemical fumes, it may be necessary to change the oil at intervals of one to three months.

4. REPLACEMENT OF PARTS

Should it become necessary to replace any gear due to wear or breakage, the mating gears must be carefully examined for wear or cracks. If any doubt exists as to the condition of the mating gears, they should be replaced.

In general, all gearing is sold complete with bearing and bushings installed.

The sintered bushings and needle bearings used in this transmission requires special assembly and sizing tools as specified by the respective manufacturers. Therefore, the replacement of these parts should not be attempted unless proper equipment is available.



GEAR DIVISION OF
GRANITE STATE MACHINE CO., Inc.
124 Joliette St., P.O. Box 779, Manchester, N.H. 03105
(603) 668-1900 Telex 94-3458

Part No.	List Price	Part Name	Assembly	Quantity used in Assembly	Quantity used in Complete Transmission
4527	1.35	Screw			2
5041	.80	Snap Ring			1
5061	.70	Snap Ring	H	2	2
50128	.20	Snap Ring			2
50142	.50	Snap Ring	E	1	1
6267	1.50	Bushing	K	1	1
6268	2.20	Bushing	C	1	1
6271	.70	Bushing	A	2	2
6272	.75	Bushing	D-E	1-1	1
7101	.20	Roll Pin	A-B	2-1	4
7121	.70	Roll Pin	B	1	2
7938	1.15	Dowel	A	4	4
8203	.95	Screw			3
9403	.95	Screw	A-M-N	4-4-4	4

*Not Supplied Separately

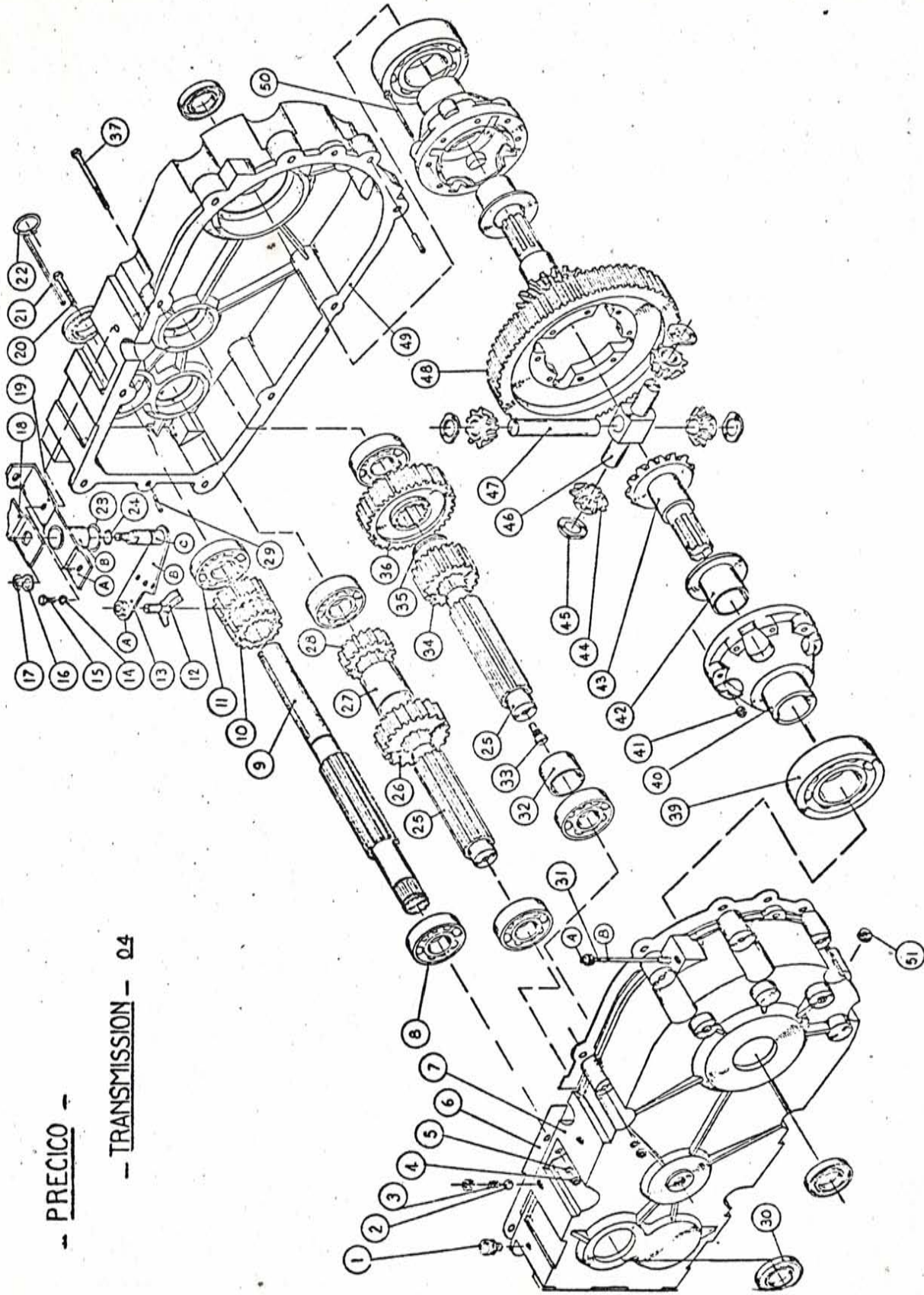
ASSEMBLIES

To determine which components make up each assembly match key letters shown in columns headed "Assembly."

Part No.	List Price	Part Name	Models Used In	Assembly	Quantity of Assemblies Used
3X-5104	155.95	Gear Cage Assembly	All	A	1
5X-5104	37.50	Brake Band Assembly	All	B	2
5X-5104R	19.60	Relined Brake Band			
7AX-5102	54.00	Gear Drum Assembly	All	C	1
8X-5102	21.15	Gear Assembly	All	D	1
8AX-5102	56.75	Drum Assembly	All	E	1
9X-5105	12.50	Long Pinion Assembly	All	F	2
9AX-5106	10.05	Short Pinion Assembly	All	G	2
27AX-5106	45.80	Cross Shaft Assembly	All	H	1
30X-51027	73.90	Input Housing Assembly	5101,-3,-5,-6	J	1
30X-5106	68.75	Output Housing Assembly	All	K	1
30X-51019	85.10	Input Housing Assembly	-4	L	1
48X-5106	99.55	Output Shaft Assembly	5101,-3,-4,-5	M	1
48X-51019	109.90	Output Shaft Assembly	-6	N	1

-- PRECICO --

-- TRANSMISSION -- 04



PRECICO TRANSMISSION
ALSPORT PART NO. 617-105

Page 1 of 3

<u>ITEM NO. & PART NO.</u>	<u>DESCRIPTION</u>
1 40430-016	Air Vent
2 40430-000	Locker Ball
3 40416-001	Locker Ball Spring
4 41212-023	Hex Nut
5 41213-003	Lock Washer
6 40420-000	Transmission Casing Gasket
7 40402-007	Transmission Casing LH
8 41218-000	Ball Bearing
9 40402-003	Input Shaft
10 40419-007	Transfer Gear 21T
11 40418-000	Ball Bearing
12 40402-008	Shifter Fork
13 40404-002	Fork Lever
14 41213-003	Lock Washer
15 41211-005	Hex Cap Screw
16 41213-006	Flat Washer
17 41212-015	Lock Nut
18 40403-004	Shifter Lever
19 40404-003	Shifter Housing
20	Hex Head Bolt
21 40402-019	Square Key
22 41214-202	Snap Ring

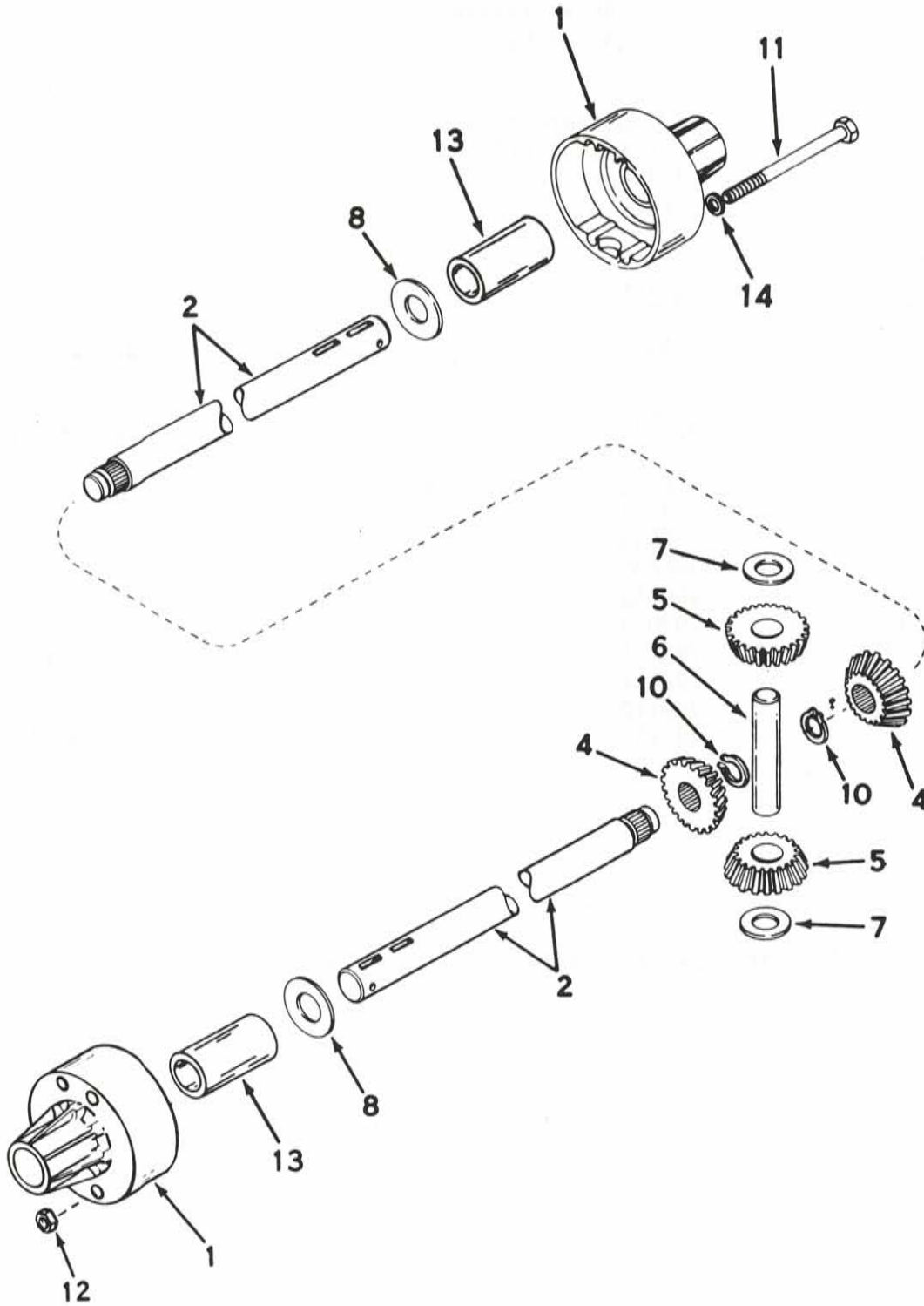
10-74

<u>ITEM NO. & PART NO.</u>	<u>DESCRIPTION</u>
23 41220-002	Shifter Housing Gasket
24 41220-001	"0" Ring
25 40402-002	Transmission Shaft
26 40419-006	Gear 30T
27 40402-005	Spacer
28 40419-004	Gear 21T
29 41214-001	Dowel Pin
30 41220-000	Oil Seal
31 40404-004	Oil Gauge
32 40402-023	Spacer
33 40430-015	Square Driver Plug
34 40419-005	Gear 23T
35 40402-004	Spacer
36 40419-015	Gear 45T
37 40211-007	Hex Head Bolt
38	NOT USED
39 41218-001	Ball Bearing
40 40402-001	Differential Body
41 41212-005	Lock Nut
42 41217-003	Flanged Bearing
43 40419-014	Bevel Gear 18T
44 40419-011	Pinion 12T
45 40402-026	Thrust Bearing
46 40402-011	Pinion Axle

10-74

<u>ITEM NO. & PART NO.</u>	<u>DESCRIPTION</u>
47 40402-010	Pinion Pin
48 40419-017	Gear 87T
49 40402-006	Transmission Casing RH
50 41211-004	Hex Head Bolt
51 41215-000	Plug

PEERLESS DIFFERENTIAL PART NO. 717-126



ALSPORT, INC.
84 Whittlesey Ave.
Norwalk, OH 44857

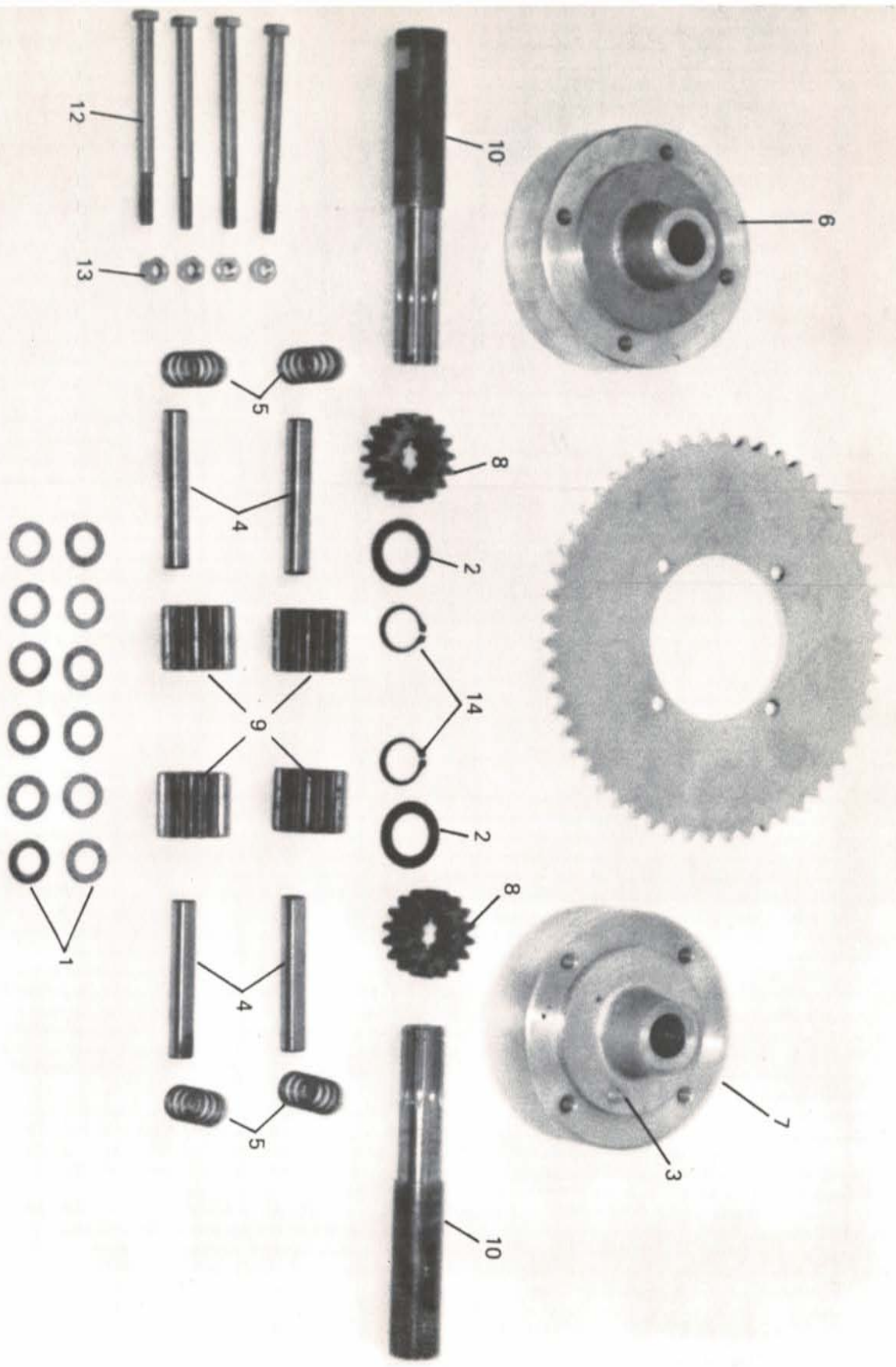
Replacement Parts for
PEERLESS DIFFERENTIAL
(Alsport Part No. 717-126)
(Peerless Part No. EP-3766)

<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>
1.	774314	Housing, Differential carrier (incl. No. 13)
2.	EP-3763-A *738-112	Inner Axle Outboard Axle & Hub Ass'y (see Tri- Sport Parts Price List)
4.	778130	Gear, Bevel
5.	778131	Gear, Pinion
6.	778040	Pin, Drive
7.	780096	Washer, Thrust
8.	780045	Washer
10.	792018	Ring, Snap
11.	792041	Screw, Hex Hd. 5/16-18 x 3 3/4
12.	792042	Nut, Lock
13.	780110 *748-127	Bushing Sprocket 54 tooth (see Tri-Sport Parts Price List)

* Indicates that this part is available from ALSPORT

All other parts must be purchased from a Tecumseh Dealer.

Revised 7-74



Ha.252 Holtan Limited Slip

ITEM NO.	PART NUMBER	DESCRIPTION
	717-122	Differential (TS-290)
	717-123	Differential (RTS-models)
1.	21830	Thrust Washer
2.	31837	Thrust Washer
3.	45109	Lube Fitting
4.	49091	Pinion Pin
5.	49352	Spring
6.	49861	Housing Cover - Sprocket Side
7.	49862	Housing Cover w/Fitting
8.	49901	Axle Gear
9.	49902	Pinion Gear
10.	738-105	Inner Axle (RTS-models)
	738-106	Straight Axle (TS-290)
11.	748-120	Sprocket 54 tooth #40
12.	FC1-516-64	Hex Hd. Bolt 5/16-18 x 4
13.	FNI-516	Hex Lock nut 5/16-18
14.	RS-14-002	Retaining Ring
	738-112	Outward Axle & Hub Weldment (RTS-models)
	738-114	Tapered Outward Axle (RTS-models)

HOLTAN DIFFERENTIAL
HA252
Part Number 717-123

<u>Key #</u>	<u>Part Number</u>	<u>Retail</u>
1	21830	.20
2	31837	.20
3	45109	.20
4	49091	2.85
5	49352	.20
6	49861	26.70
7	49862	26.70
8	49901	6.70
9	49902	6.70
10	738-105 Inner Axle - RTS	12.75
	738-106 Straight Axle - TS	24.95
11	748-120 Sprocket 54T	9.95
12	FC1-516-64	.20
13	FNI-516	.20
14	RS-14-002	.25



TECHNICAL DATA SHEET

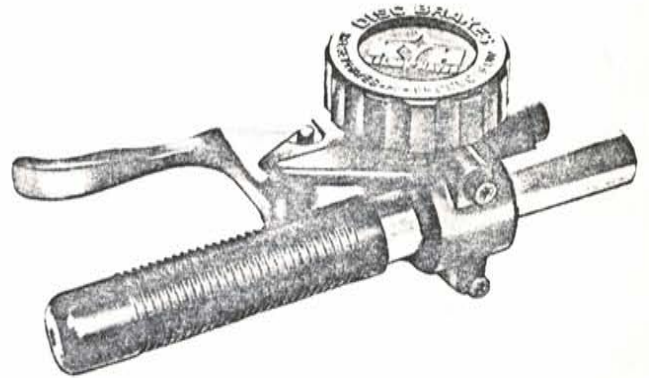
HB SERIES HANDLEBAR MASTER CYLINDERS

1A4

Handlebar controlled recreational vehicles such as snowmobiles, mini-bikes and motorcycles require an efficient, dependable hand lever operated braking system to ensure optimum performance and safety.

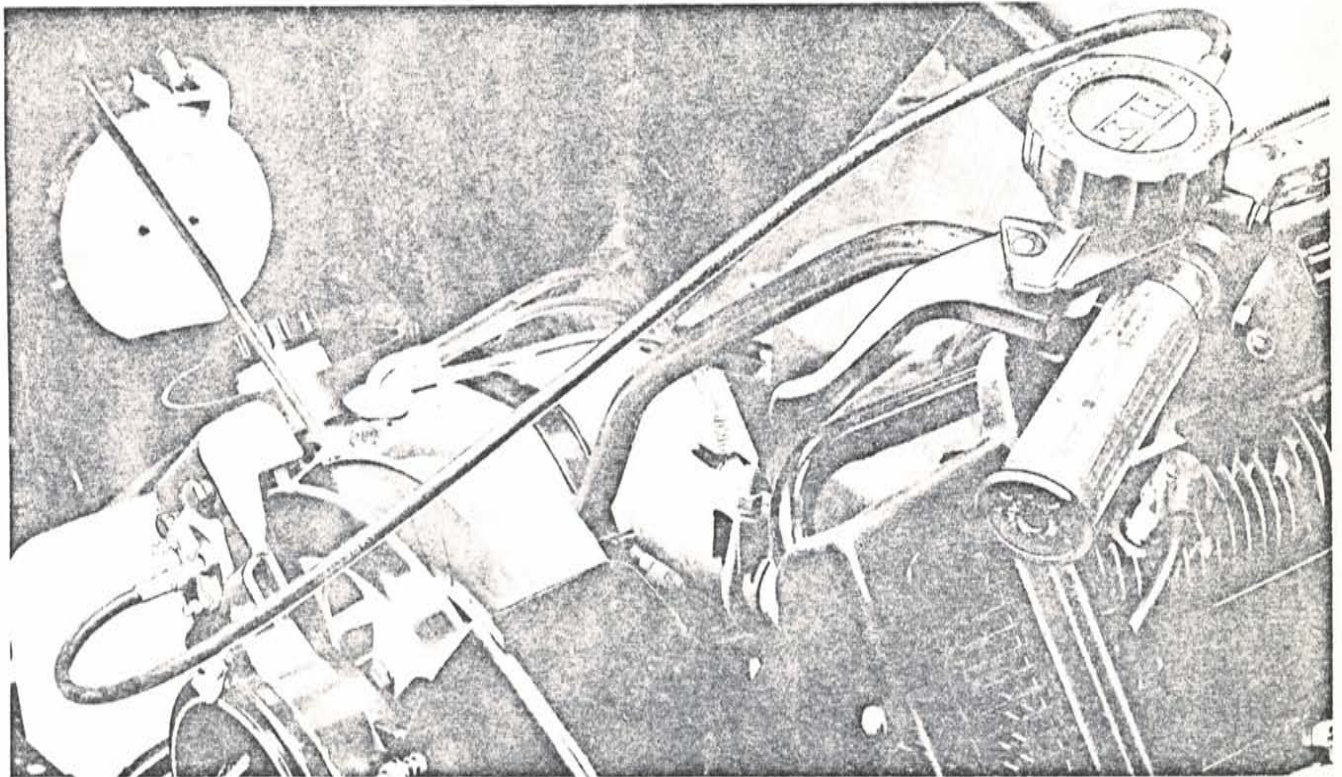
Now, for the first time, the Kelsey-Hayes handlebar mounted master cylinder makes the extra stopping power of hydraulic disc brakes available for these machines. Kelsey-Hayes hydraulic disc brake systems have earned almost instant acceptance for the more powerful and competition type snowmobiles and are already appearing as standard equipment on some motorcycle models. H-H Products Division offers the new model HB master cylinder in two sizes. These compact units are designed specifically for use in conjunction with the Kelsey-Hayes caliper type disc brakes and provide more braking effort and controllability than can reasonably be attained with conventional hand lever and cable systems and mechanical brakes.

The technical data presented in this publication covers both models of the HB master cylinder series,



The HB series master cylinder is a rugged compact unit featuring an integral fluid reservoir protected by a locking cap. Full use is made of space-age, high impact, engineering plastic resulting in a lightweight durable unit.

designated 625HB and 750HB. These units are of 5/8 (0.625) in. and 3/4 (0.750) in. bore respectively. They are available for either left or right hand mounting.



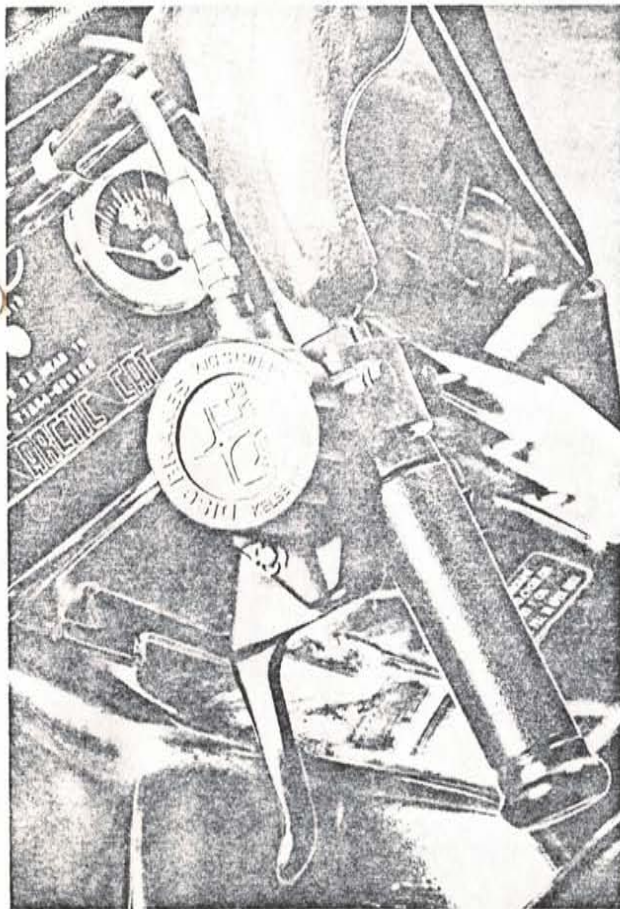
The open engine cowling of this Ski-doo "TNT" reveals the entire hydraulic disc brake system, from the compact Model 220H2 floating mount caliper unit to the handlebar mounted master cylinder.

H-H Products Division/Kelsey-Hayes Company
5800 W. Donges Bay Road • Mequon, Wisconsin 53092

INSTALLATION

The availability of this new line of hand operated master cylinders makes it easy to apply highly efficient and powerful hydraulic disc brake systems to many kinds of recreational vehicles that were previously dependent entirely on cable actuated mechanical brake systems with their inherent disadvantage of low torque attainable with a hand lever system. Using a Kelsey-Hayes hydraulic system, the individual components are comparable in size to the corresponding mechanical parts, yet in many instances it is easier to adapt a flexible hydraulic line to the tight space limitation found in snowmobiles, for instance, than the springy cable of a typical mechanical linkage. All the compatible hydraulic caliper units offered by H-H Products Division are available with a choice of fixed or floating mounts to simplify application engineering still further.

The master cylinders are available for either left or right hand mounting and are attached directly to the



The Arctic Cat "EXT" snowmobile is equipped with the new Kelsey-Hayes master cylinder and a Model 400H2 caliper type disc brake for outstanding braking performance. The handlebar clamp is clearly visible in this view.

handlebar with a simple bolted clamp. Bushings are available to suit 3/4 in. or 7/8 in. handlebars. Once the hydraulic line connections are made between the master cylinder and the brake, it is only necessary to fill the reservoir with one of the recommended fluids and purge the system of air as described under the heading "Bleeding Instructions" and then the system is ready for operation.

ROUTINE MAINTENANCE

Adjustment

No adjustment of any kind is required. The simple design offers long life and reliable operation and eliminates any need for adjustment.

Brake Fluid

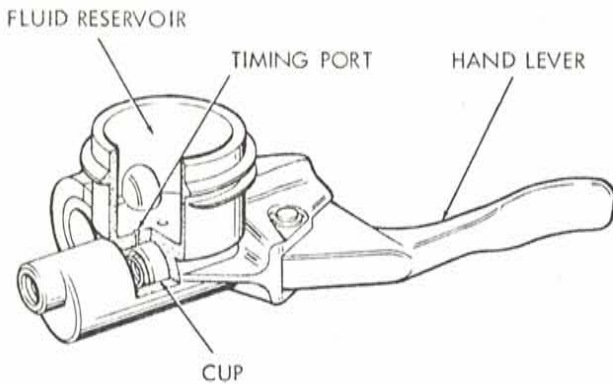
HB series master cylinders are designed for use with SAE type disc brake fluids or high-silicone brake fluids only, such as Kelstar SAE J1073, Wagner-Lockheed FC-59250, Dow 200 Silicone, Union-Carbide Y7085 Silicone, or equal. Do not, under any circumstances, use hydraulic oil, mineral oil, aircraft type or red oil fluids since they will cause cups and seals to expand or deteriorate and the system can no longer operate properly. If at any time hydraulic oil is used, inadvertently, completely drain and flush the master cylinder and brake system.

Replace all cups and seals as soon as possible and refill with fluid of the approved type.

Under normal conditions of service, with the correct type of fluid, there is no need for periodic changes of fluid. Simply keep the reservoir full at all times. Make frequent checks of fluid level (at least every 10 hours of operation) by removing the screw cap from the master cylinder and fill to within 1/32 in. of the top when additional fluid is required.

Timing Port

The unique design of the combined cylinder and reservoir includes a timing port which offers a simple, convenient method of checking brake operation. This port (shown in the cutaway view) is the smaller of the two holes connecting the fluid reservoir with the master cylinder within the one-piece body moulding. When the lever is in the released position the spring in the cylinder pushes the cup back so that this port provides a passage between the reservoir and cylinder. As the cylinder cup moves forward, on brake application, it covers the timing port to seal off the cylinder so that it can apply hydraulic pressure to the caliper. Thus it establishes the effective stroke of the cylinder. This little hole must be kept clear of obstructions or sediment at all times. Visually check for proper operation by first removing the cover.



The timing port in the fluid reservoir offers a simple, convenient method of checking brake operation.

As the hand lever is moved, to apply the brake, a small squirt of fluid from the timing port should be visible.

If this squirt of fluid is not visible, press and release the lever rapidly several times to see if it will clear the port. If the squirt of fluid still does not occur, disassemble the master cylinder by removing one of the rings (4) and pivot pin (3) so that the lever (5), piston (6), O-ring (7), cup (8) and spring (9) may be removed. Examine the cup (8) and O-ring (7) carefully for signs of swelling, due to use of improper oil, or other deterioration. Replace spring, cup and O-ring unless you are sure that all are in good condition.

Then reassemble the parts, in the relationship shown in the exploded view, and check to be sure that the cup uncovers the timing port in the released position. This can be done by inserting a pin (less than 0.020 inch in diameter) into the port. If the port is not completely open, return to place of purchase for correction.

Inspection and Repair

All parts should be inspected periodically for signs of wear or damage and replaced as required. Repair kits are listed below. Disassembly and reassembly is shown in the exploded view. On reassembly, check operation of timing port, as directed in the preceding "Timing Port" paragraph.

BLEEDING INSTRUCTIONS

These procedures apply to hydraulic brake systems with HB series master cylinders.

All brakes are fitted with bleeder valves which seal securely when turned in tight, but will allow air or fluid to pass out through the hole in the nipple end of the valve when loosened. Check all fluid line connections before bleeding and check frequently to see that fluid level in the master cylinder reservoir is well up at all times. Add brake fluid as necessary. Proceed as follows:

1. Remove cap from fluid reservoir of master cylinder.
2. Attach a flexible bleeder tube to the nipple of the bleeder valve on the brake. Use only the top valve if two are fitted. Place the other end of the tube in a jar containing a little clean fluid. The end of the tube must be below the surface of the fluid to prevent ingestion of air. Loosen the valve one turn.
3. Press the master cylinder hand lever slowly. Observe air bubbles rising in the fluid as the air is expelled through the bleeder tube.
4. Repeat step 3, above, until no more air bubbles appear as the lever is moved and only fluid escapes, indicating that no more air is left in the brake system. Check reservoir fluid level to avoid accidentally pumping air into the line at the master cylinder.
5. Tighten the bleeder valve as the lever is being pressed. Check the system carefully for leaks.
6. Finally, top up the fluid level to within 1/32 in. of the top of the reservoir and replace the cap securely.

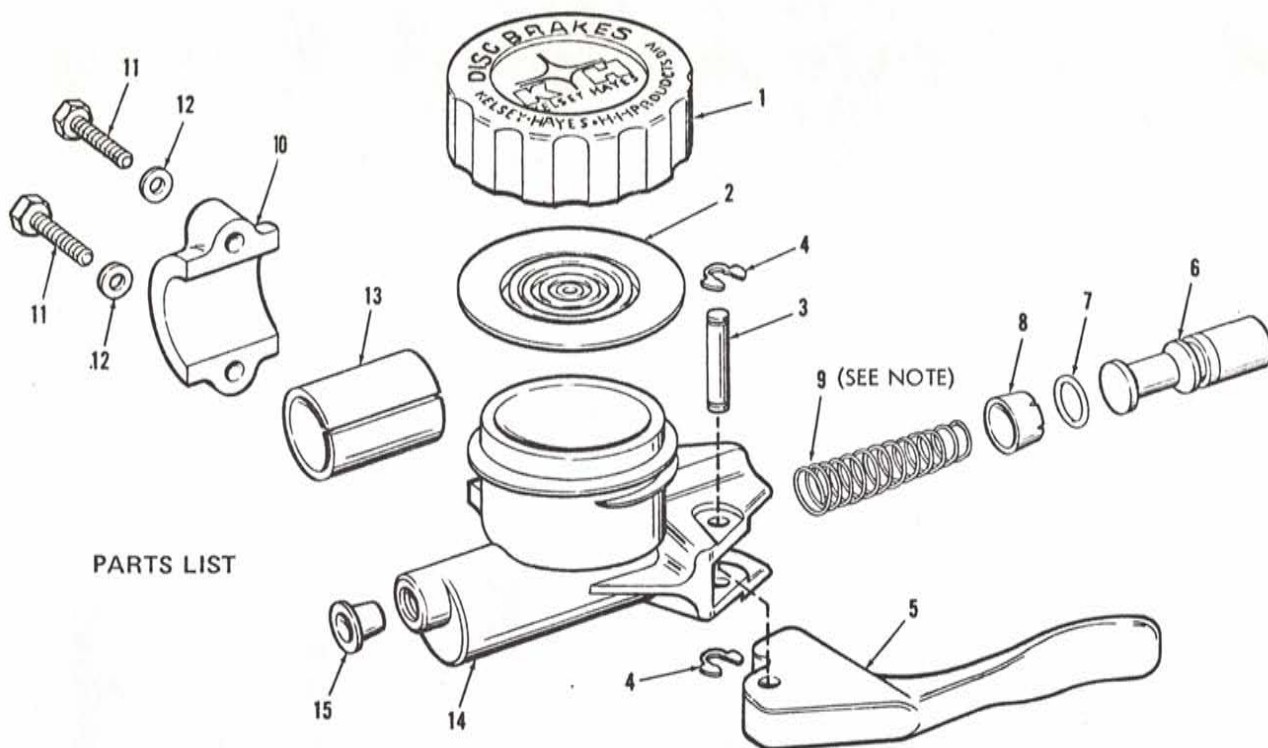
CAUTION

Do not pour any of the purged fluid back into the reservoir since it is aerated and the air trapped within it will again enter the system.

REPAIR PARTS KITS

Kits of replacement parts are available for repairing both the 625HB and 750HB models. Parts included in kits are shown in the parts list and cover all parts that are likely to wear or deteriorate in normal service.

Technical Data Sheet



PARTS LIST

Model 625HB		
Index No.	Part No.	Part Name
	00-02393	CYLINDER ASSY, Handlebar master, L. H.
	00-02872	CYLINDER ASSY, Handlebar master, R. H.
1	22-02364	. COVER
2	09-02322*	. GASKET, Bellows
3	05-02365	. PIN, Pivot
4	07-02207*	. RING, Klip
5	18-02660	. LEVER, Hand
6	13-02352*	. PISTON
7	08-02973*	. O-RING
8	13-02371*	. CUP, Cylinder
9	06-02391*	. SPRING, Return
10	98-02362	. CLAMP, Half
11	01-02370	. SCREW, Hex hd cap, 1/4-20 x 1 in.
12	03-02369	. WASHER, Flat, 1/4 in.
13	11-02368*	. BUSHING, Rubber, 7/8 in.
	11-02367*	. BUSHING, Rubber, 3/4 in.
14	12-02392	. BODY, L. H.
	12-04437	. BODY, R. H.
15	98-03061	. PLUG, Cap
	98-04557	REPAIR PART KIT

Model 750HB		
Index No.	Part No.	Part Name
	00-02816	CYLINDER ASSY, Handlebar master, L. H.
	00-02873	CYLINDER ASSY, Handlebar master, R. H.
1	00-02364	. COVER
2	09-02322*	. GASKET, Bellows
3	05-02365	. PIN, Pivot
4	07-02207*	. RING, Klip
5	18-02660	. LEVER, Hand
6	13-02379*	. PISTON
7	08-02120*	. O-RING
8	13-02116*	. CUP, Cylinder
9	06-02391*	. SPRING, Return
10	98-02362	. CLAMP, Half
11	01-02370	. SCREW, Hex hd cap, 1/4-20 x 1 in.
12	03-02369	. WASHER, Flat, 1/4 in.
13	11-02368*	. BUSHING, Rubber, 7/8 in.
	11-02367*	. BUSHING, Rubber, 3/4 in.
14	12-04438	. BODY, L. H.
	12-04439	. BODY, R. H.
15	98-03061	. PLUG, Cap
	98-04552	REPAIR PART KIT

*Part included in repair part kit.

Note: Shown as assembled on Model 625HB only. For Model 750HB, assemble with large end of spring in cylinder cup (8).

H-H Products Division/Kelsey-Hayes Company
 5800 W. Donges Bay Road • Mequon, Wisconsin 53092

SERVICE DATA SHEET

400 SERIES - HYDRAULIC
CALIPER TYPE DISK BRAKES

400 SERIES—HYDRAULIC CALIPER TYPE DISK BRAKE

The following procedures apply specifically to the 400 Series Caliper Type Disk Brake. This series includes the following models: 400H1, 400HR1, 400H2, 400HR2, 400H3, 400HR3. Parts lists for each of these models are included in this bulletin. A complete brake system consists of a disk and its hub or mounting, a caliper unit which is mounted over the outside edge of the disk, the caliper unit mount, the master cylinder and connecting tubing. Two or more caliper type disk brakes may be operated from one master cylinder.

INSTALLATION

Models 400H1 and 400H2 are both single-acting units, 400HR2, however, has a floating mount. Model 400H3 is a double acting unit with two opposed pistons.

ATTACHING THE DISK

Bolt the disk securely to the hub but do not overtighten the securing bolts.

CAUTION

The disk must be perpendicular to the shaft. To prevent excessive wear and vibration, it must run true when the hub is rotated.

FLOATING MOUNT (400H2, 400HR2)

With the disk fixed to the axle, the caliper unit must be able to float or slide on its mount so that when the brake is applied the caliper can center itself on the disk to ensure equal pressure application through the friction pads on both sides. A bent or distorted disk will drag on the pads causing excessive wear and will prevent development of full brake torque. If the caliper unit is mounted correctly it will automatically compensate for wear of the pads.

INSTALLING THE CALIPER UNIT AND MASTER CYLINDER

1. Coat the threads of the 1/8 in. line fittings with Loctite or similar jointing compound and attach the fittings to the caliper unit and to the master cylinder.
2. Mount the master cylinder in accurate alignment with the actuating push rod. Check to see that the master cylinder is level.

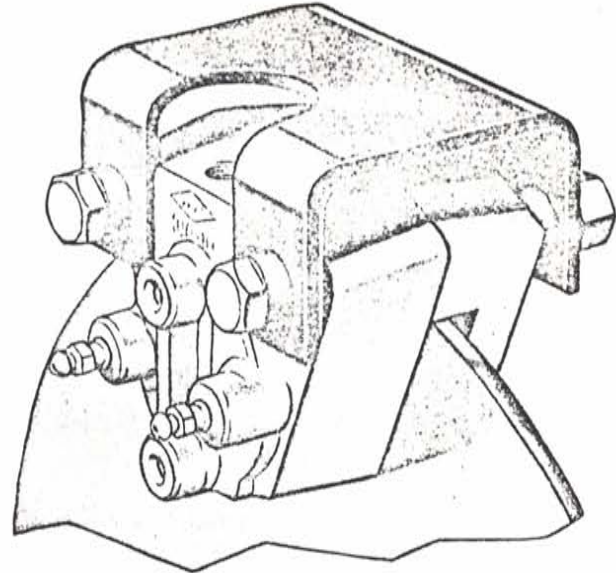


Figure 1. Model 400H2 with Floating Mount

3. Mount the caliper unit with one of the bleeder valves at the top. See that it is parallel to the disk and that it clears the edge of the disk. Use shims under the mounting bracket if necessary. The floating mount bolts must be able to slide in the holes provided in the bracket.

NOTE

Caliper unit must line up exactly with the disk. In the case of floating mount units the caliper must be approximately centered on its mount to provide float in both directions.

4. Tighten the caliper unit mounting bolts securely.
5. Install hydraulic lines from master cylinder. Check all connections and then fill the system with hydraulic fluid; check carefully for leaks.

NOTE

Before putting the brake system into service, bleed all air from the cylinders and lines in accordance with the following instructions.



H-H PRODUCTS
DIVISION
KELSEY-HAYES COMPANY
5800 W. DONGES BAY RD., MEQUON, WISCONSIN 53092

BLEEDING INSTRUCTIONS

All brakes are fitted with bleeder valves which seal securely when turned in tight, but will allow air or fluid to pass out through the hole in the nipple end of the valve when loosened. Check all fluid line connections before bleeding and check frequently to see that fluid level in the master cylinder reservoir is well up at all times. Add brake fluid as necessary. Proceed as follows:

1. Remove cap from fluid reservoir of master cylinder.
2. Attach a flexible bleeder tube to the nipple of the bleeder valve. Use only the top valve if two are fitted. Place the other end of the tube in a jar containing a little clean fluid. The end of the tube must be below the surface of the fluid to prevent ingestion of air. Loosen the valve one turn.
3. Depress the brake pedal slowly. Observe air bubbles rising in the fluid as the air is expelled.
4. Repeat step 3 above until all air bubbles disappear and only fluid escapes, indicating that no more air is left in the brake system. Check reservoir fluid level to avoid accidentally pumping air into the line at the master cylinder.
5. Tighten the bleeder valve as the pedal is being depressed. Check the system carefully for leaks.

CAUTION

Do not pour any of the purged fluid back into the reservoir since it is aerated and the air trapped within it will again enter the system.

6. Repeat the above procedure at all other caliper units supplied from the same master cylinder.
7. Finally, top up the fluid level to within 1/8 in. of the top of the reservoir and replace the cap securely.

ROUTINE MAINTENANCE

The following checks are suggested to keep the brake system in good operating condition. Frequency will depend largely on the severity of the service encountered.

1. Keep the fluid level in the master cylinder reservoir to within 1/8 in. from the top at all times.
2. Check system for fluid leaks.
3. Check brake for excessive travel or spongy feel.
4. Check the friction pads for wear, damage and looseness.
5. Check caliper unit mount for free floating action.
6. Check security and surface condition of the disks.

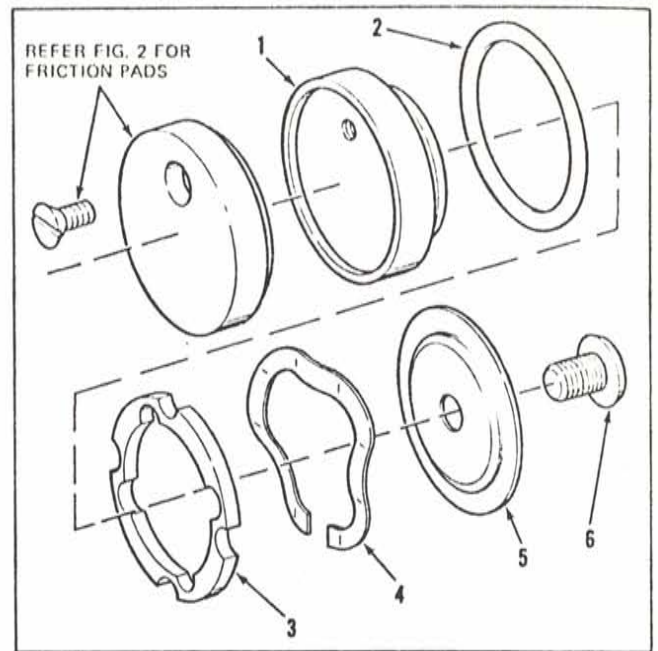


Figure 3. Self-Retracting Piston Assembly (1127-A1 as used on Models 400HR1, 400HR2 and 400HR3)

PARTS LIST

Piston Assembly (1127-A1)

Key	Part No.	Description	Qty.
1	1127	Piston	1
2	8-1046	Seal, O-Ring	1
3	7-1137	Ring, Press fit	1
4	6-1334	Spring, Wave	1
5	1125	Plate, Back-up	1
6	1-1121	Screw, 1/4 - 20 x 3/8 in.	1

REPLACING THE FRICTION PADS

In this procedure refer to the exploded view of the brake in Figure 2. Index numbers refer to basic model 400H1, except where special references are made.

If the installation is an automotive or trailer type application, it is first necessary to remove the road wheel in order to gain access to the caliper unit. Then proceed as follows:

1. Remove mounting screws (2); retaining bushings (12), Models 400H2 and 400HR2 only.
2. Separate caliper castings (3) and (4) from spacer (14) or bracket depending on type of installation.
3. Remove screws (5) then withdraw friction pads (6).
4. Replace new friction pads and reassemble.

SERVICE DATA SHEET

DISASSEMBLY

This procedure refers to the exploded view (Figure 2). In general, only disassemble as far as is necessary to effect repairs. Proceed as follows using index numbers as a guide to disassembly.

1. Disconnect the hydraulic lines.
2. Remove screws (2) holding the two castings of the caliper unit together. Separate the two halves.
3. Withdraw the piston assembly (8), then remove the O-ring seal (9).

NOTE

Piston removal is facilitated by the use of an air line applied to the hydraulic inlet port. Exercise extreme caution with this method to avoid injury or damage.

REPAIR OR REPLACEMENT

Examine all components for damage. Replace any defective parts.

Replace the O-ring seal and examine the piston for evidence of scoring. In the case of units fitted with self-retracting pistons, considerable effort is required

to press the self-retracting piston assembly back into the caliper bore. If it slips in easily it should be replaced.

Evidence of severe scoring in the caliper bore will mean replacing the caliper housing assembly since it would be impossible to effect a proper piston seal.

REASSEMBLY

Reassembly is basically the reverse of disassembly procedures. Be sure that all components are clean and serviceable before reassembling the unit. Observe the following points:

1. Dip the piston assembly and the O-ring seal in hydraulic fluid; assemble the seal to the piston. Press the piston into the caliper bore keeping it square to avoid scoring the bore. Push it firmly all the way in.
2. Install the bleeder valve (10).
3. Reassemble the caliper unit castings and spacer to the mounting bracket.
4. Connect the hydraulic lines.
5. Fill the reservoir with fluid; check for leaks.
6. Bleed brakes to purge system of air.



H-H PRODUCTS
DIVISION
KELSEY-HAYES COMPANY
5800 W. DONGES BAY RD., MEQUON, WISCONSIN 53092

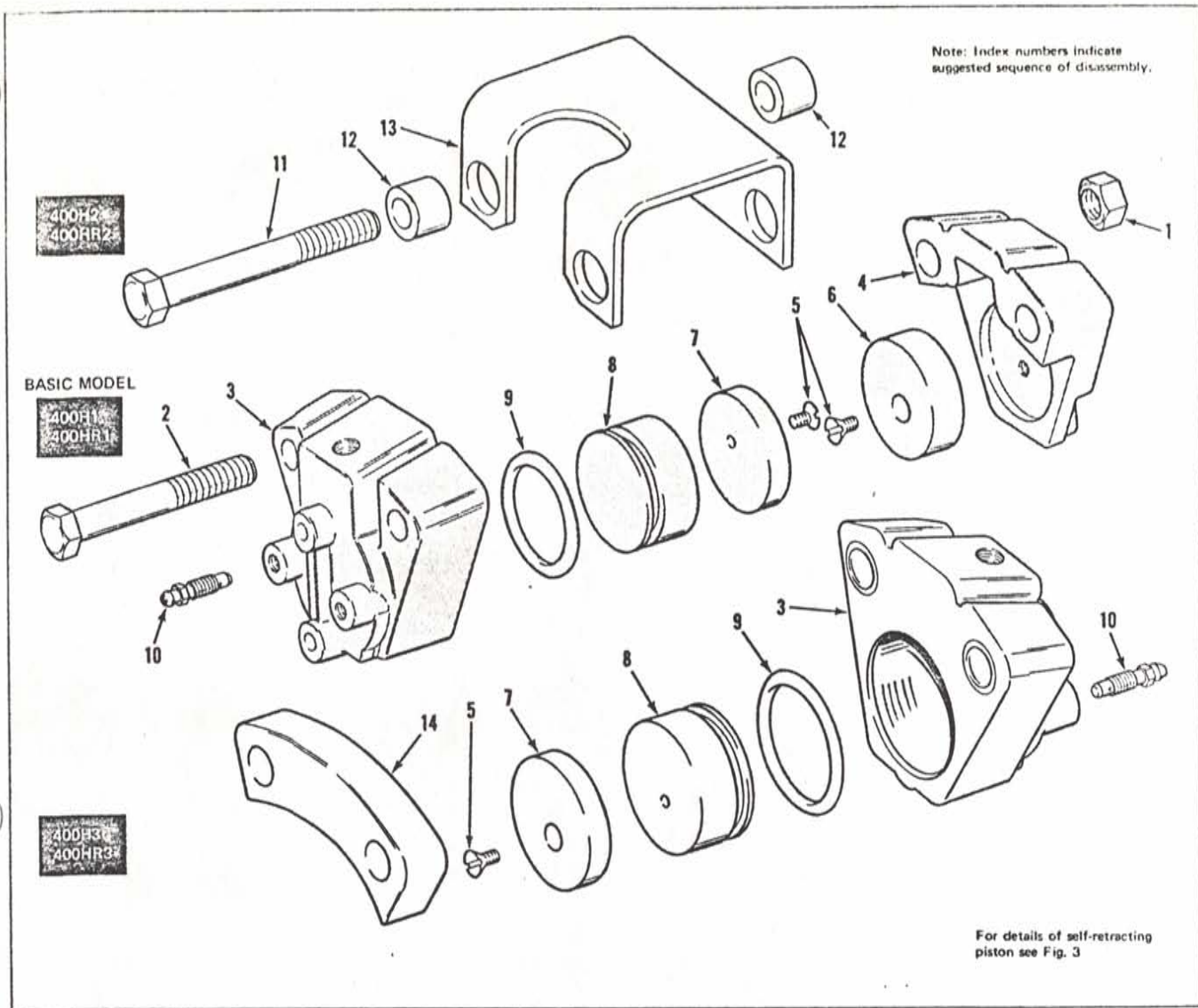


Figure 2. Exploded View of 400 Series Hydraulic Units

PARTS LIST

400H1 (Single Acting)

Key	Part No.	Description	Qty.
1	2-1043	Nut, Lock, 3/8 - 24	2
2	1-1349	Screw, 3/8 - 24 x 3 in.	2
3	1044	Casting, Caliper, Piston side	1
4	1049	Casting, Caliper, Carrier side	1
5	1-1092	Screw, 10 - 24 x 3/8 in.	2
6	1372-A-613	Pad, Friction	1
7	1375-A-613	Pad, Friction	1
8	1045	Piston	1
9	8-1046	Seal, O-Ring	1
10	10-1131	Screw, Bleeder	2

400H2 (Floating Mount) . . . additional parts

Key	Part No.	Description	Qty.
11	1-1458	Screw, 3/8 - 24 x 3 1/2 in.	2
12	1170-3	Bushing	4
13	1168-B	Mount, Floating	1

400H3 (Double Acting)

Key	Part No.	Description	Qty.
1	2-1043	Nut, Lock, 3/8 - 24	2
2	1-1349	Screw, 3/8 - 24 x 3 in.	2
3	1044	Casting, Caliper, Piston side	2
14	1578	Spacer, 1/4 in. thick, for 3/16 in. disk	1
5	1-1093	Screw, 10 - 24 x 3/8 in.	2
7	1375-A-613	Pad, Friction	2
8	1045	Piston	2
9	8-1046	Seal, O-Ring	2
10	10-1131	Screw, Bleeder	4

400HR1

Same as 400H1 except for self-retracting piston — see figure 3

400HR2

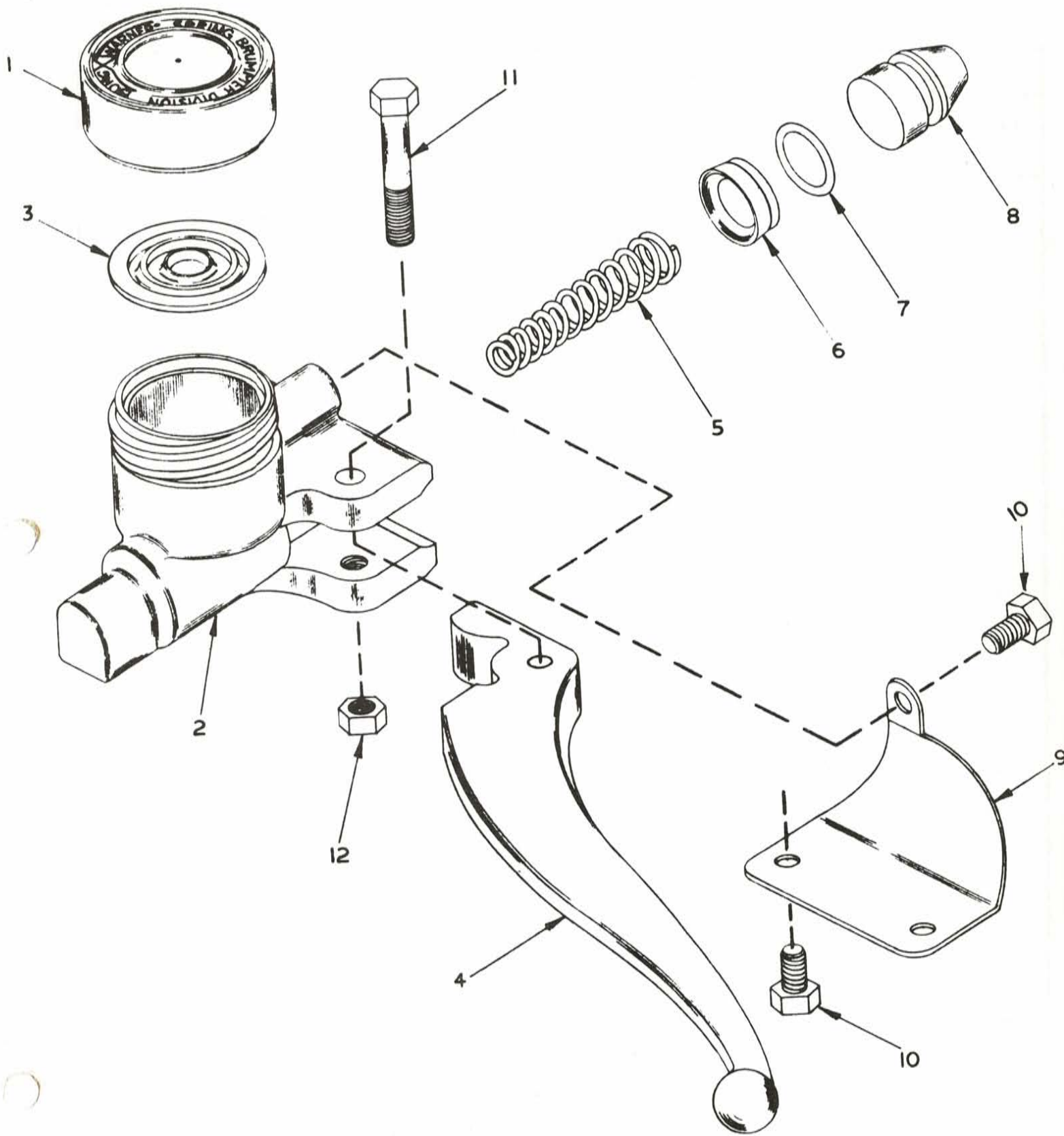
Same as 400H2 except for self-retracting piston — see figure 3.

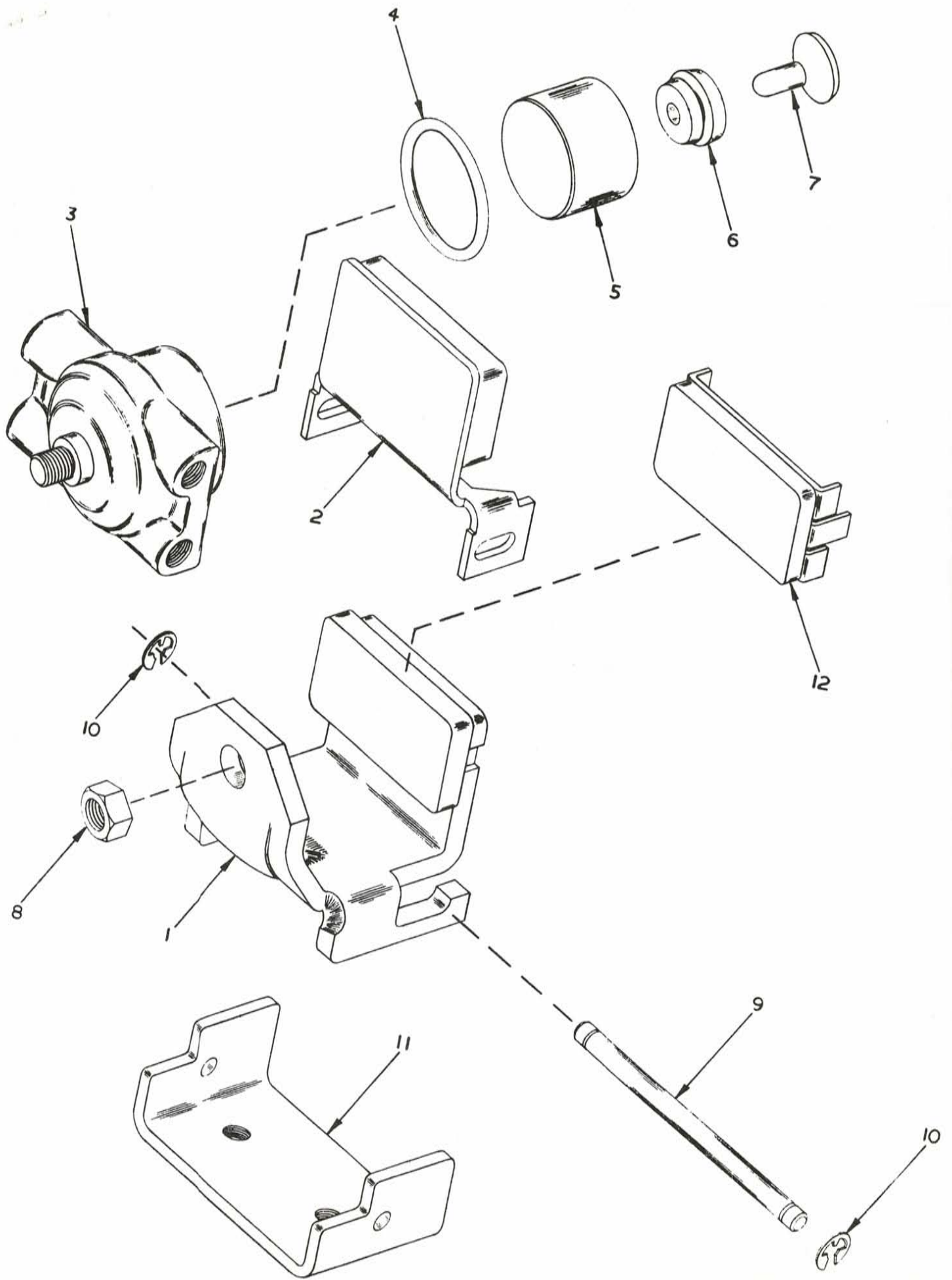
400HR3

Same as 400H3 except for self-retracting piston — see figure 3.

KELSEY-HAYES BRAKES

<u>PART NUMBER</u>	<u>DESCRIPTION</u>	<u>LIST PRICE</u>
12-04438	Housing	\$21.95
22-02364	Cover	2.70
98-05236	Brake Line 100"	4.80
18-02660	Lever	3.50
15-05202	Pucks	5.50
11-02368	Rubber Bushing	1.10
10-03106	Fitting	1.50
09-02322	Bellows Gasket	1.00
07-02207	Snap Rings	.15
05-02365	Pins	.60
98-02362	Clamps	1.50
12-03052	Piston Side Casting	11.80
12-03063	Carrier Side Casting	3.90
15-05202	Pucks	3.90
15-05201	Pucks	4.65
10-03134	Bleeder Screws	.30
11-03172	Spacers	.30
14-03170	Mounting Bracket	1.10
98-04522	Repair Kits	5.50
22-02364	Cover	3.55
18-02660	Cam	2.65
01-03101	Screws	.15
10-03105	Fittings	1.10
08-03058	O-Ring	.45
01-02370	Bolt	.15





MODEL 812 MC

ITEM NO.	PART NO.	DESCRIPTION
	20-734	R.V. MASTER CYLINDER ASSEMBLY (LEFT HAND MOUNT)
1	20-735	CAP
2	20-736	MASTER CYLINDER HOUSING (LEFT HAND MODEL)
3	20-737	BOOT
4	20-738	LEVER
5	20-743	SPRING
6	20-742	SEAL
7	20-744	"O" RING
8	20-741	PISTON
9	20-739	CLAMP
10	20-747	SCREW, HEX. HD. MACH., 1/4-20 x 3/8 IN.
11	20-740	SCREW, HEX. HD. MACH., 1/4-20 x 1 5/16 IN.
12	20-746	NUT, HEX. JAM , 1/4-20

MODEL

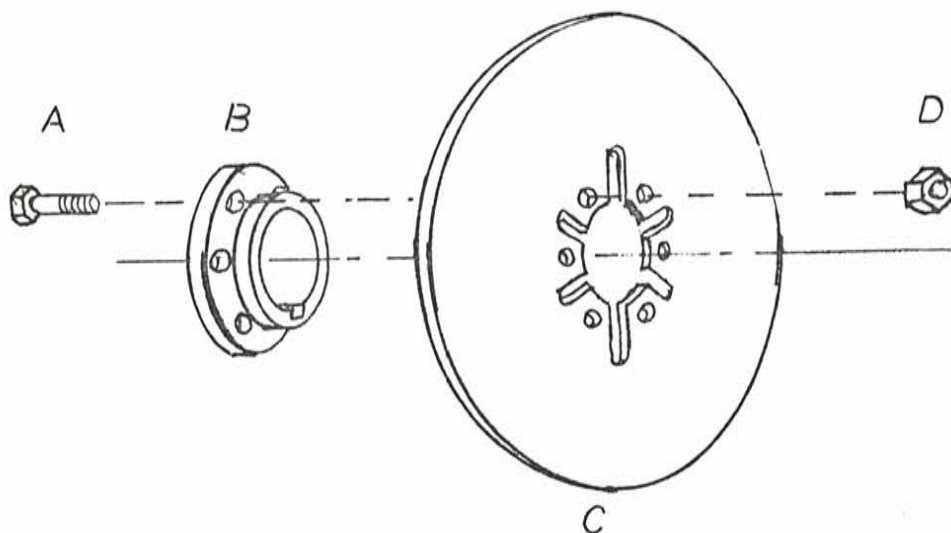
ITEM NO.	PART NO.	DESCRIPTION
	20-748	HYDRAULIC DISC BRAKE CALIPER ASSEMBLY
1	20-712	FRAME SUB-ASSEMBLY
2	20-714	SLIDE SUB-ASSEMBLY
3	20-730	HYDRAULIC CYLINDER (1 3/8 IN. DIA. BORE)
4	20-749	SEAL RING
5	20-729	PISTON
6	20-717	GROMMET
7	20-719	PRESSURE DISC ASSEMBLY
8	20-723	NUT, HEX. JAM, 3/8-16
9	20-696	SHAFT
10	20-695	"E" RETAINING RING
11	20-726	MOUNTING ADAPTOR
12	20-727	BRAKE PAD SUB-ASSEMBLY (REPLACEMENT PAD ONLY)

B O R G - W A R N E R

ITEM	PART NUMBER		DESCRIPTION	LIST PRICE
	Old#	New#		
	20-734	2069	Master Cylinder Assy. w/	27.00
	20-736		Housing	
1.	20-735	2070	Cap Only	1.95
3.	20-737	2072	Boot	.65
4.	20-738	2073	Lever	6.00
5.	20-743	620	Spring	.50
6.	20-742	620-1	Seal	.95
7.	20-744	620-2	"O" Ring	.75
8.	20-741	620-3	Piston	2.00
9.	20-739	2074	Clamp	1.80
10.	20-747	2084	Screw 1/4-20 x 3/8	.40
11.	20-740	2075	Screw 1/4-20 x 1-5/16	.40
12.	20-746	2083	Nut, Hex 1/4-20	.40
	20-748	2085	Hydraulic Disc Brake Caliper Assy.	18.00
1.	20-712	2123	Frame Sub Assy.	4.00
2 & 12	20-714	608	Slide Sub Assy. w/	10.00
	20-727		Brake Pad Sub Assy. (replacement)	
3.	20-730	2056	Hydraulic Cylinder	6.40
4.	20-749	2086	Seal Ring	.40
5.	20-729	2045	Piston	3.45
6.	20-717	2028	Grommet	.75
7.	20-719	2024	Pressure Disc Assy.	1.75
8.	20-723	2029	Nut, Hex 3/8-16	.25
9.	20-696	622-1	Shaft	1.00
10.	20-695	622-2	"E" Retaining Ring	.40
11.	20-726	622-3	Adaptor Mount	1.00
	20-750	2057	Rotor 8"	4.20
	20-755	2058	Shaft Adaptor	9.80
	20-758	2090	1032 Whiz Lock Nut	.40
	20-757	2089	1032 x 9/16 Bolt	.40
	20-756	610	Rotor & Shaft Assy.	14.80
	20-763-1	2095	Short Tube 16"	.40
	20-763-2	2138	Long Tube 110"	2.40
	20-762	2094	Male 90° Elbow	1.00
	20-761	2093	Male Branch "T"	2.20
	20-759	2091	Bleed Fitting	1.00

NOTE: PLEASE USE "NEW PART NUMBERS" ONLY, when placing your orders.

DISC ASS'Y



BORG WARNER

757-141

	ALSPORT NO.	DESCRIPTION
A	710-155	10-32X 5/8" HHCS
B	757-144	HUB 1" BORE
C	757-143	DISC
D	712-118	10-32 HEX LOCKNUT

KELSEY HAYES

760-138

	ALSPORT NO.	DESCRIPTION
A	710-155	10-32X 5/8" HHCS
B	757-107	HUB 3/4" BORE
	757-118	HUB 1" BORE
C	757-108	DISC
D	712-118	10-32 HEX LOCKNUT

PART NO. 759-311

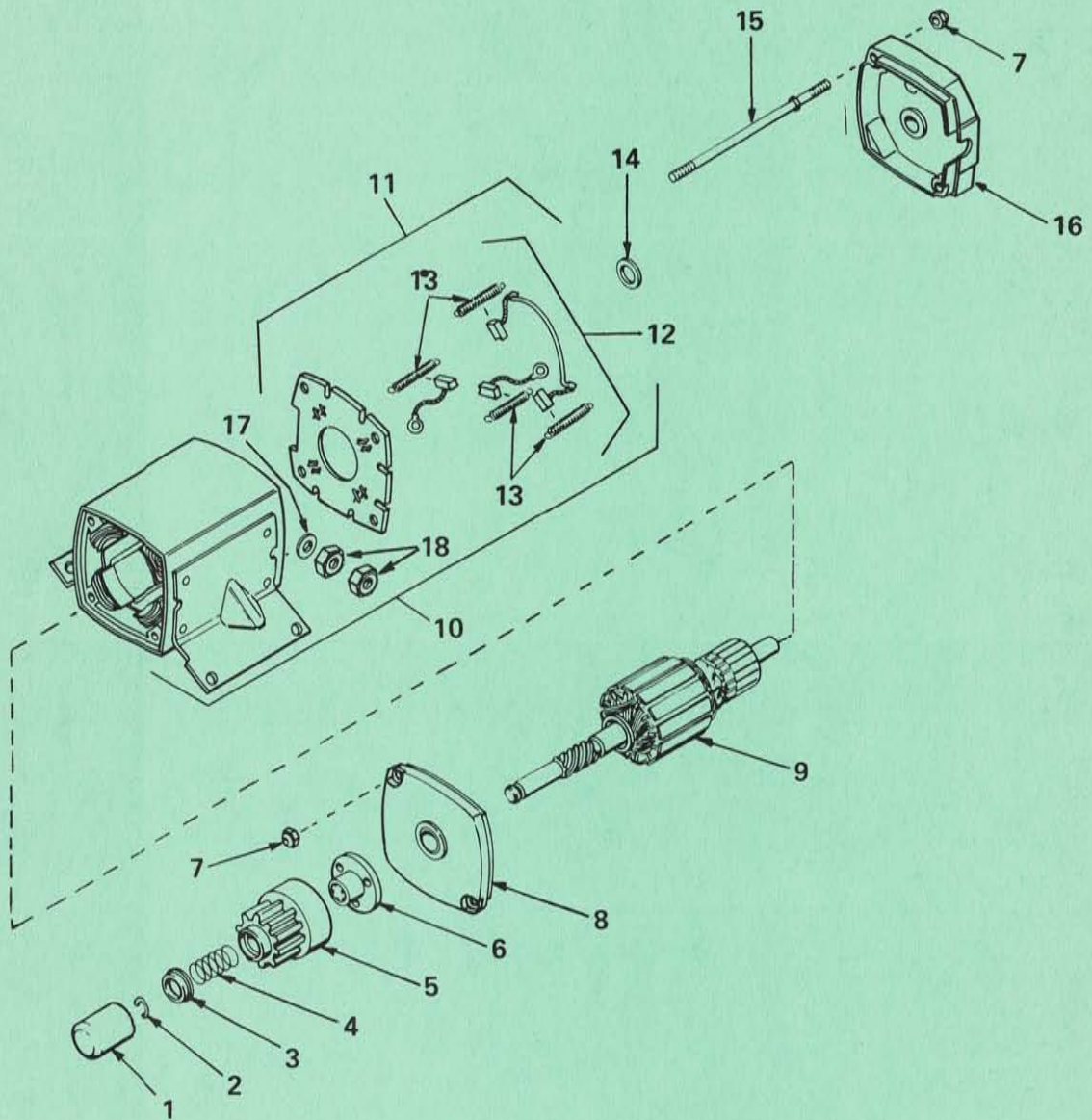
TECUMSEH PRODUCTS COMPANY
 Lauson-Power Products Parts Depot Division
 Grafton, Wisconsin

12 VOLT ELECTRIC STARTER NO. 33835

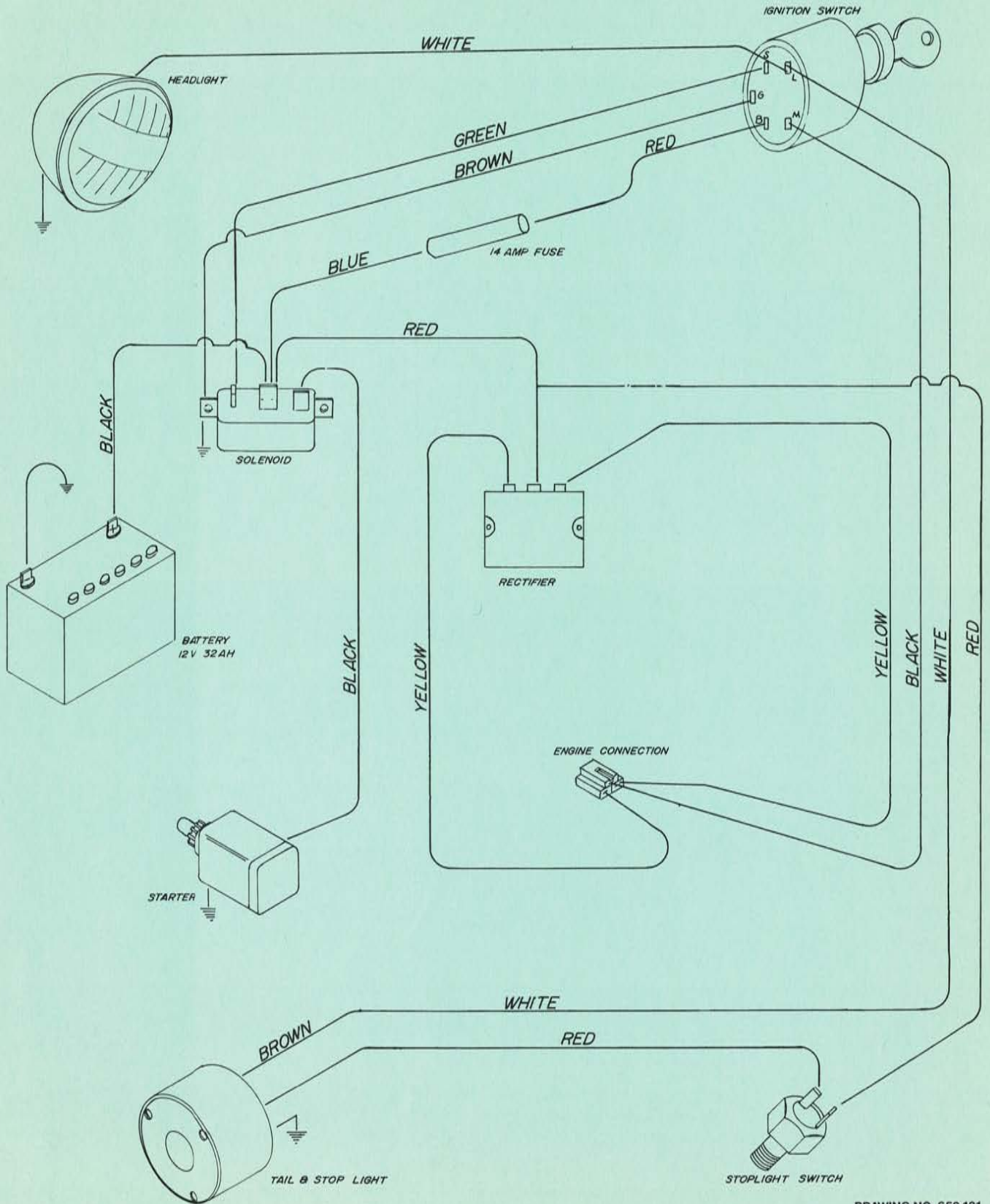
REF. NO.	PART NUMBER	PART NAME	NO. REQ.
1	33841	Cover, Dust	1
2	33842	Ring, Retainer	1
3	33843	Retainer, Spring	1
4	33854	Spring, Anti-drift	1
5	33844	Gear	1
6	33433	Nut, Engaging	1
7	33450	Nut, Lock	4
8	33845	Cap Assy., Drive end	1
9	33846	Armature	1
10	33847	Housing Assy. (Incl. No. 11)	1
11	33848	Card Assy., Brush (Incl. No. 12)	1
12	33849	Brush & Spring Kit (Incl. 4 pcs. of No. 13)	1
13	33850	Spring, Brush	4
14	590500	Washer, Thrust	1
15	33851	Bolt, 10-32 x 5-1/4	2
16	33852	Cap Assy., Commutator end	1
17	650168	Washer, Flat	1
18	28710	Nut, Hex	2

A-1538

Model No. 523-927-0 1A173-45(33835)

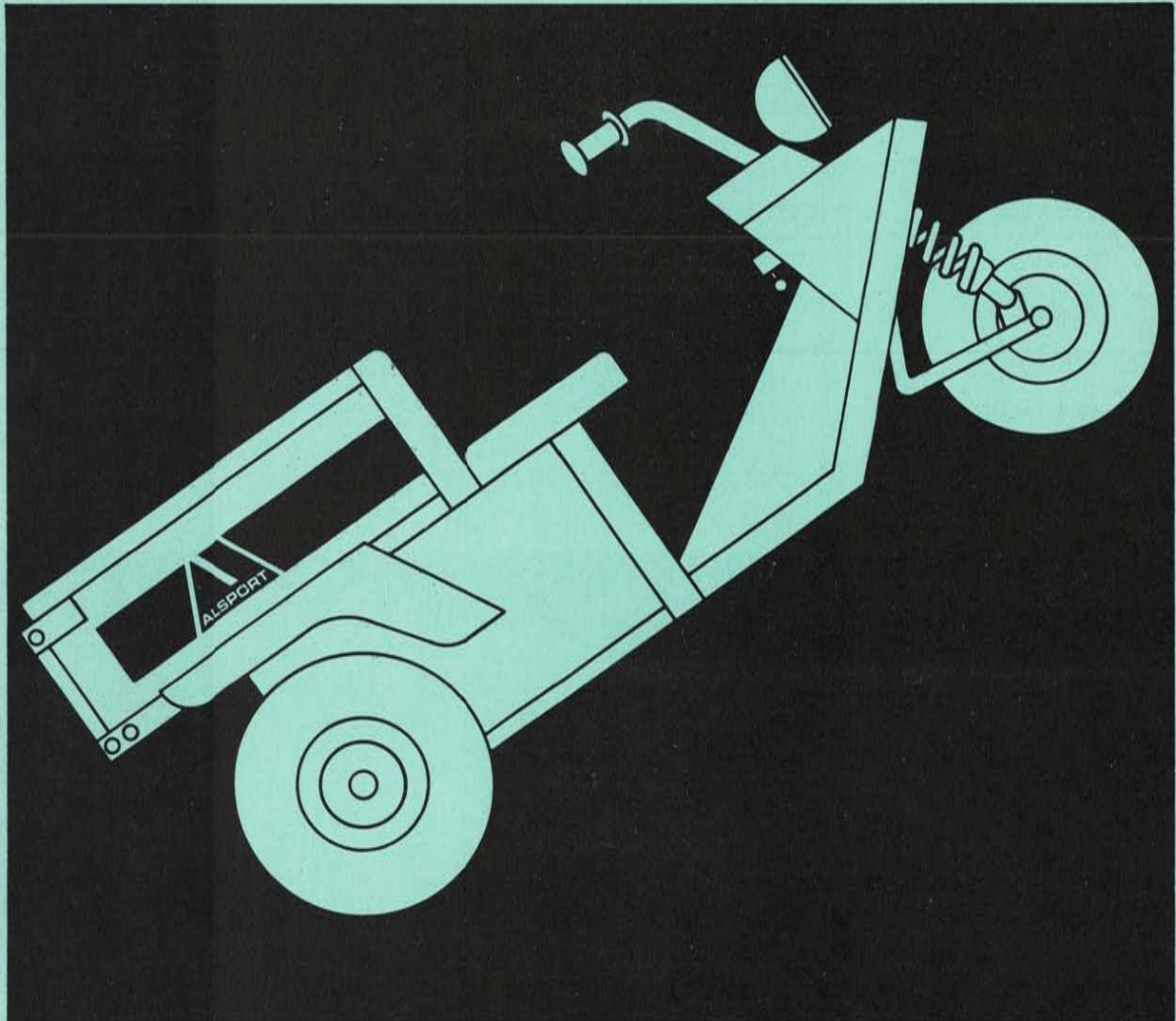


UTILITY TRUCK 10-WIRING SCHEMATIC





Utility Truck



WARRANTY POLICY AND PROCEDURES

ALSPORT, INCORPORATED
84 Whittlesey, Norwalk, Ohio 44857

UTILITY TRUCK WARRANTY POLICY

Alsport, Inc. will warrantee any part on the Utility Truck for a period of six (6) months from date of purchase, if we manufactured it. We will replace it through any one of our Authorized Dealers. All you pay for are service calls or transporting the unit to and from dealer.

Labor shall be covered for the first 90 days only. The second 90 days labor shall be covered by the customer.

This warranty shall not apply to any Alsport Utility Truck which has been repaired or altered outside of the dealership in any way so as to affect its stability, nor which has been subject to misuse, negligence or accident, or operated for some type of racing purposes or rental application.

Alsport shall be under no liability whatsoever in respect of an loss, damage, injury, or expense arising from any defect in said product.

Your Authorized Dealer will repair or replace, free of charge any parts that are found to be defective within the warranty period, subject to the "condition" as follows:

Purchased component parts (example: clothes, and engines, etc..) are subject to the individual manufacturer's warrantee, which Alsport shall abide by.

Alsport, Inc. warrantee is limited to products sold to original retail purchaser, and is not transferable in any form.

Nor does the warranty extend to repairs made necessary, by the use of inferior parts or accessories, or by the use of types of accessories not recommended by Alsport, Inc. nor does it apply to normal wear.

We make no warranty in respect to trade accessories, or parts not of our manufacture, inasmuch as they are usually warranteed separately by their respective manufacturers.

Equipment excluded from all warrantees of Alsport, Inc. are considered normal wear items, and are belts, chains, bulbs, upholstery, etc.

Parts CANNOT BE SHIPPED to the factory unless an R.G.A. number has been assigned.

Alsport, Inc. reserves the right to make designs and specification changes, additions and improvements, in its products, without notice and without incurring obligation to install them on products already manufactured.

Alsport's purchased parts for the Utility Truck shall be covered by that manufacturer's warranty.

ENGINE WARRANTY

The Tecumseh engine is covered by Tecumseh Products. Refer to the engine Owner's Manual for details.

No vehicle will be considered under warranty unless the warranty registration card has been properly completed, signed, and returned to Alsport with 10 days of sale. Four cycle engine repair or service will be done by an authorized Tecumseh repair station

RETURNED GOODS AUTHORIZATION

All parts to be returned to Alsport, Inc. must have proper authorization. The authorization to return parts or equipment is the discretion of our Warranty-Service Director. This authority may be attained by communicating with Alsport, in either letter form or telephone.

PROCEDURE

The Authorization to return parts, is accomplished upon receipt of a RGA form. The forms is multi-copy, with a copy to be retained in your files. The remaining copies are to be packed inside the box or carton of equipment being returned. In addition, you will receive a label pre-addressed with the RGA number on it. This number must be on the outside of each carton being returned.

All parts returned without prior approval and the RGA number assigned, will be promptly returned to sender, freight collect.

CONDITIONS

Warranty will not apply to machines sold by persons other than Authorized Alsport Dealers.

Warranty registration card MUST be completed by the selling dealer and mailed to Alsport, Inc. and distributor within 10 days of sale.

Warranty will not apply to any machine that has been modified, used for racing purposes or types of competitive operation or used as rental units.

Normal wear and tear parts such as: spark plugs, drive belts, seat cushions, and light bulbs are exempt from all warrantee.

Warranty will not apply when in the judgment of the factory that failure due to neglect is the result of lack of or improper owner maintenance. The warranty does not cover maintenance services.

Warranty applies to the original retail purchaser only and is not transferable.

Alsport, Inc., its Distributors, and its Dealers shall not be liable for transportation charges, consequential expenses nor loss of time, inconvenience of use of the vehicle in connection with the repair or replacement of defective parts. The warranty period for any product is not affected or prolonged because the part or machine it was installed on was inactive for a portion of the warranty period.

ACCESSORY WARRANTY

(Accessory items submitted for warranty must be accompanied by a completed warranty claim form and a copy of the sales receipt showing the date of sale.) All returned equipment must be authorized, see page 2.

Our obligation under this warranty is expressly limited to the replacement of defective parts only and does not apply to parts that have been subjected to any misuse, accident of improper installation.

CLOTHING

Alsport garments are warranted for a period of thirty (30) days from date of sale against defects in material and workmanship originating at point of manufacture.

Normal "Wear" and misuse of the garment is not covered by this warranty.

Alsport, Inc. will repair or replace at our option any garment found to be defective. Sales slips with date of purchase must accompany all claim forms.

REPLACEMENT PARTS WARRANTY

Genuine Alsport replacement parts are warranted for a period of thirty (30) days from date of sale.

(Any replacement parts submitted for warranty must be accompanied by a completed claim form and a copy of the sales receipt showing date of sale, if no sales receipt is given please give the invoice number purchased on. This is a MUST. If the above is not done, claim is subject to REJECTION.

"Our obligation under this warranty is expressly limited to the repair or replacement of any genuine Alsport replacement part that is found to be defective. The warranty does not cover labor charges on any machine that is beyond its new product warranty."

CUSTOMER SERVICE

All inquiries concerning the handling of customer complaints, warranty services and the processing of warranty, including inquiries on warranty credit memos and claims, must be directed to your area distributor. The Dealer must provide the following information when a customer complaint or warranty service questions are involved.

- A. Model Number
- B. Serial Number
- C. Date of Sale
- D. Owner's Name & Address
- E. Complete description of the problem or failure, corrective action taken and dealer's recommendations regarding additional action needed or requested to solve the claim.
- F. Depending on the type of complaint, problem of failure, additional information on such as the warranty claim or credit memo number may be required.

WARRANTY COSTS ---- HOW TO REDUCE THEM

Warranty work is remunerated on a non-profit basis.

I. Know the Warranties ...

Understand which parts are covered by warranty and for how long. Some of our products have components which are warranted by their respective manufacturer. Therefore, you may not be the authorized warranty station for the engine. Also, don't have a claim rejected because you failed to determine whether or not it was still within warranty.

II. Explain the Warranties to your Customer ...

This means at the time of sale, explain to the customer what the warranty covers and as importantly, what it doesn't. Never assume the customer understands warranties, that he will read in the Owners Manual after he leaves your shop, or that he would fully understand the warranty if he read it.

Many customers believe their warranty covers everything, even tune-ups and damage caused by abuse. Whether a customer is right or wrong, he will go away unhappy if he expects a free warranty repair but doesn't get it. The few minutes it takes to explain the warranty at the time of sale may save you a lot of money and a customer later.

III. Provide Prompt/Courteous Warranty Service ...

When warranty work comes in, don't treat it as a second class project. Do it cheerfully and willingly.

You aren't likely to make a profit on warranty work. In fact on some jobs you'll lose money. But this is a part of the business. If you accept it, treat warranty work as you would normal repair jobs, your warranty customers will come back for regular service work on which you do make money.

IV. Fill in Warranty Forms Completely ...

Completeness includes accuracy and legibility. If the form is wrong or unreadable, it's not complete.

Be sure all required information is included on the warranty claim form. This may be the least liked and most neglected part of warranty work.

V. Submit Warranty Promptly ...

Don't let the paper work pile up on you. Fill out and get warranty claims ready for turn in as soon as the work is done. We require that claims be submitted within 10 days. Claims submitted late will be rejected. Doing everything else right and forgetting or failing to turn in the warranty on time could be a costly lesson. Follow through ... for higher profits.

VI. Maintain Accurate Records ...

Be sure to keep a copy of each claim in your records. Have an open and closed file. The open file is for claims submitted but for which you have not received credit. The closed file would be a record of warranty for which you have been reimbursed.

Review the open file frequently to insure you received the credit you have coming.

PRE-DELIVERY PROCEDURE

Time of customer pick up is a big moment for the customer and for the dealer and his dealership. In addition, the event marks the beginning of the dealer's continuing sales relationship with a customer.

Therefore, every effort should be made to show the customer that the dealer regards the delivery of an Alspert product to him as the most important event of the day in the dealership. The delivery time should be scheduled so that the proper person is available to deliver the Alspert product to the owner.

Everything the dealer does following delivery of the Alspert product, particularly during the early months of ownership, should be directed toward selling the owner continually on the product, earning the loyalty of the customer, and the dealership's way of doing business.

The following is a delivery procedure that will create good Dealer-Owner relations and build good customer satisfaction and loyalty:

1. Explain to the new Utility Truck owner the Pre-Delivery Service Check which was performed prior to delivery.
2. Present to the owner the Owner's Manual. Explain the warranty policy and the operating and maintenance instructions.
3. Be certain the owner understands the proper operation is a condition of the warranty coverage, and also the Required Maintenance Services. Explain any additional recommended services and their importance to the owner's maximum enjoyment of his Utility Truck, even though they are not required to assure warranty coverage.
4. Have the customer sign the pre-delivery inspection check list to verify that the service has been satisfactory and that he understands the warranty policy and the operation and maintenance instructions.

PREFERRED WARRANTY RETURNS

The following parts must be returned to Alsport for credit. Any other parts do not have to be returned, unless otherwise specifically requested by the Warranty Department.

However, from time to time we may require a spot inspection of defective parts for quality control purposes.

You should retain parts for a 30 day period after submitting a warranty claim. This only applies to parts not listed in this directive.

1. Driven Torque Convertor
2. Drive Torque Convertor
3. Torque Convertor Jackshaft
4. Torque Convertor Mounting Bracket
5. All Differential Parts
6. All Wheels & Tires
7. Front Forks
8. All Frame Weld Assemblies
9. Transmission, Reversing
10. Any items requested to be returned by the Warranty Department

UTILITY TRUCK
LABOR RATE SHEETS

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RATES: \$6.50 per hr., \$.12 per minute, \$.65 per tenth hr.

1. FRONT FORK & RELATED PARTS

CODE	DESCRIPTION	TIME ALLOTMENT
UA	R & R Tire	5 min.
UB	R & R Shocks	10 min.
UC	R & R Spindles	5 min.
UD	R & R Handle Bars	5 min.

2. BASIC FRAME & RELATED PARTS

UE	R & R Frame	5 hr.
UF	R & R Rear Axle	1 hr.
UG	R & R Rear Tire	3 min.
UH	R & R Seat	5 min.
UI	R & R Jackshaft	1 hr.
UJ	R & R Large Sprocket	5 min.
UK	R & R Small Sprocket	15 min.
UL	R & R Drive Clutch	5 min - 4 cycle
UM	R & R Driven Clutch	15 min.
UO	R & R Jackshaft Bearings	1 hr.
UP	R & R Rear Shocks	15 min.
UQ	R & R Rear Axle U-Joints	1 hr.
ULL	R & R and Overhaul Drive Clutch	30 min.
UMM	R & R and Overhaul Driven Clutch	15 min.

UXX This will be used for misc. warranty repairs and Alsport will allot time and price for these repairs. Dealers will be required to give full details on all XX repairs. All other repairs will require dealer to use letter or letters to designate repairs performed. All pricing will be done by Alsport.

UN	R & R Hydraulic Brake Lever	2 min
UR	R & R Hydraulic Brake Caliper	5 min.
US	R & R Hydraulic Brake Line	15 min.
UT	R & R Brake Disc	5 min.
UU	R & R Muffler	
UV	R & R Engine (RTS-8, Mac)	10 min.
UX	R & R Motor & Mount Plate	15 min.
UY	R & R Bearing Axle	5 min.
UZ	R & R Bearing Wheel	10 min.

PROPER CLAIM FORM PROCEDURE

- A. DATE: Insert date claim is completed.
- B. Unit Owner Name & Address: Insert complete owners name & address.
- C. Serial#: Insert serial number of the unit. The number can be found stamped into front seat mount tube. We check each warranty claim for the serial # of the machine with the warranty cards; if there is not a card in the file for the machine we will not issue you any credit.
- D. Date of purchase: Record the date purchased here, and this date must match the date on your warranty card. It is the distributor's responsibility to insure that this is the correct date before sending in to the factory.
- E. Model: Make sure that you put the correct model name and number of the machine in this box. (see attached model name & number sheet).
- F. Warranty Expires: Record date of expiration, which is 180 days from date of purchase.
- G. Dealer Name & Address: Your name & Address in this box.
- H. Make of Engine: Correct model and engine number designation.
- I. Parts replaced: Record by part number all defective parts replaced.
- J. Work performed: Insert in this box a letter (s) designating the work that you have performed. Please use the code on your flat rate sheet.
- K. Date of repair: Record date of your repairs.
- L. Dealer's Signature: Dealer must sign here.
- M. Owner's Signature: Owner must sign here.
- N. For Distributor-Factory Use Only: Please do not write in this space; this is for the factory-distributor use only.
- O. Distribution of Copies for 1974 Warranty Claims: Canary copy - dealer keeps for his files, pink copy - distributor keeps for his files, if a distributor in your area; yellow copy - Alsport returns to you when fully processed, Aqua & White Copy - Alsport keeps for their files.

