

THE HAWKEYE

THE OFFICIAL NEWSLETTER OF THE 1956 STUDEBAKER GOLDEN HAWK INFORMATION EXCHANGE CLUB



KEEPING A WATCHFUL EYE ON INFORMATION CONCERNING THE 1956 STUDEBAKER GOLDEN HAWK

NUMBER 008

ESTABLISHED JANUARY 1, 1989

SEPTEMBER 1990

TWIN ULTRAMATIC, IS IT A CURSE OR A BLESSING?

Packards International Motor Car Club has, for some time, been providing their members a transmission conversion from the Ultramatic to a Chrysler 727 Torqueflite. Harold Gibson of Pasedena, California has been the point of contact on this project. I contacted Harold a few years ago, but he was unable to offer any help for us 1956 Golden Hawk Owners. Harold's letter follows:

Frank: I'm sorry, but the conversion kit was not made to fit the Golden Hawk. Enclosed is the description of the Chrysler Torqueflite trans. Your trans has the short stubby tail shaft.

I think your best deal is to completely overhaul your transmission by a person who knows the fine points. If you go this route, be sure to remove the water cooler from your lower hose and install an air cooler (Haden makes this unit). Install in front of your radiator. This will drop the oil temp 100 degrees.

Sorry you don't live closer to my home. Happy Packarding - Harold E. Gibson

Member Ken Schmidt has followed up on this effort and has the following:

Sir: I originally joined your club in November 1989. Since then, I sent for and received a copy of the original production order for my 1956 Golden Hawk, a copy of which I have included for your files.

In my original letter, I also mentioned that I modified my Golden Hawk by replacing the Ultramatic transmission with a Chrysler 727 Torqueflite transmission. Since I have had several inquiries about the installation, I have also included a brief description of the installation if you think it should be shared with other club members.

The third item is a check to help offset your postal and reproduction charges.

Thank You:

Kenneth Schmidt 2826 E. Decatur Mesa, Arizona 85213

I read recently in Old Cars Weekly that the Ultramatic

was the only automatic transmission to be developed by an automotive independent. It is a rather complicated and sophisticated system and quite ahead of its time, according to a local transmission expert. Its lock up feature, which caused the entire planetary driving system to rotate as a solid coupling with no gear reduction, preceded more modern transmissions.

I have heard many stories about how these transmissions were leaking on the assembly line in Detroit, and how they simply couldn't hold up to the torque of the big Packard power plant. I don't know how it works, but I can sure tell when it isn't working correctly.

I have had mine repaired three times and each time it has worked better than before. I believe that each time the mechanic who worked on it has had more experience and perseverance and it haw shown up in the finished product.

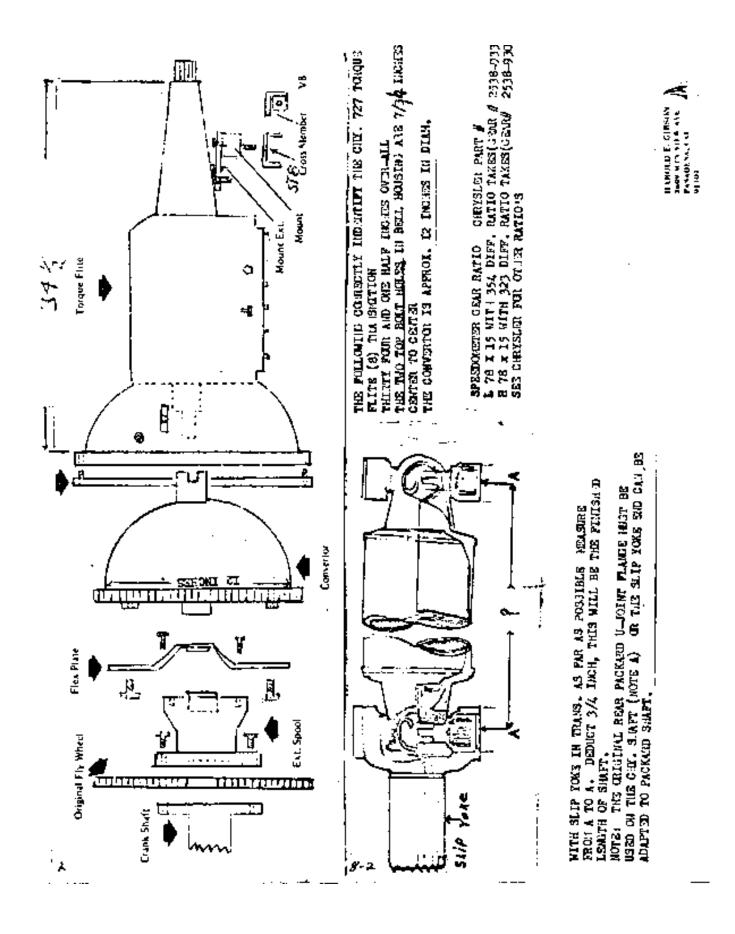
My experience has shown the Ultramatic to be a smooth, quiet transmission when it is working properly. It has also powered quite a few heavy Packards, Hudsons, and Nashs for many years. I don't know what kind of problems the Packard owners are having, but something must have triggered the Torqueflite conversion kit.

It is not fair for me to condemn the Ultramatic at this stage because my only experience with it has been after ir was almost thirty years old. I don't know what kind of problems were encountered during the early years, however Studebaker issued many Service Bulletins covering Ultramatic modifications.

One thing for sure is the fact that sitting behind better than 275 HP, it probably was not babied for the major part of its life.

I have included Harold's description and Ken's discussion of the 727 Torqueflite conversion plus several Service Bulletin excerpts which address Ultramatic problems. I'll include the remainder of the Service Bulletin excerpts in issue 009.

Thanks to Ken for taking the time to submit this material and if I were him, I'd change my phone number in a hurry.



GULDEN RANK ULTRAMATIC to TORQUEFLITE CONVERSION

ADAPTER LIT:

The adapter kit was purchased from Earold Gibson, 3609 Mountain View Are, Pasadena, California, 91107. This is a partial kit since it was originally designed for installation of the torqueflite transmission into a 55/56 Packard car and only includes the parts to join the Packard motor to the Chrysler transmission. The remainder of parts must be fabricated similar to what I outline to the following text. Note: Harold's adapter plate must be cut down to the same external outline dimensions as the Torqueflite's casting, Harold did this modification for me.

BOTTOM ADAPTER PLATE:

The adapter plate raises on four boits in the upper balf of the bellhousing. To add extra rigidity to the installation I cut out a small adapter plate to bolt the bottom of the transmission and motor together. (See Eigure 1 for a tracing of the adapter.) To use this adapter plate requires two additional notches cut into the transmission. The plate is first bolted to the transmission and then to the engine by bolts installed via the notches.

TEARSHISSICE MODIFICETIONS:

It was necessary to saw off three boases from the transmission. The right side boas was eliminated to allow the Exp stick to be rerouted. The left side boas was eliminated because it bit the car's floor. The bottom boss was eliminated because it interfered with the transmission mount and cross-member.

DEGINE NEUTRS:

The front engine mounts were not modified.

TRANSMISSION NOTITE

A 3/4 inch thick adapter was fabricated to allow the transmission to be bolted to the original mount. This plate and the original modified mount allow clearance for the speedometer fitting in the transmission casting. See figure 2 for drawing of the transmission mount.

BODT NUDIFICATION:

As noted in the last paragraph the rear of the transmission was raised as high as possible. This results in the transmission and adapter plate rubbing the body. I removed the internal access floor plate, cut several 2 inch long slits between the access hole and the firewall, and then bent the sheet metal away from the transmission until there was about 1/2 inch of clearance. The floor plate can them be replaced by drilling some new screw holes and sealing with silicon rubber.

DRIVE SHAFT:

A new one piece drive shaft was fabricated. The rear of the transmission tail-shaft extends almost to the cross member which held the bearing for the two piece drive shaft. By enlarging the right side of the cross member hole (by about 1/2 inch) the universal joint will clear and the cross member can be left to retain body stiffness.

TEROTTLE LINEAGE:

For the throttle linkage between the carburator and transmission. I obtained the linkage off of a Chrysler car with a 318 engine and a Torqueflite transmission and then salvaged the pivot points. The top pivot point was modified so it could be mounted between the intake manifold and the original left side throttle rod bracket. The bottom pivot point was mounted to the bottom of the transmission adapter plate with a piece of angle iron. New interconnecting rods were fabricated because the original ones were to short.

GON SHIT LINGS:

The shift linkage came from the same Chrysler mentioned above. The engine side pivot point was nounted on the engine, with a piece of angle iron, on the side of the flywheel cover plate. The other pivot point was nounted to a scapter plate mounted to the frame. The linkage pivot rod was shorten and one are was revelded at the correct angle. New connecting rods were fabricated because the original ones are too short.

STORAULIC OIL LINES:

New hydraulic oil hose was used between the transmission and the radiator.

DIP STICK:

The original Torqueflite transmission dip stick and tube merm used. It was bent so it passed along side the transmission (were the boss was removed) and up to a fabricated bracket bolted to the engine with the back exhaust manifold bolt.

STATES AND AND ADDRESS

I purchased a new speedometer Chrysler cuble and cut it off just in front of the transmission connector. The plastic tube remaining in the connector was drilled out to the same size as the outside of the original Studebaker speedometer cable. I then removed the transmission connector from the Studebaker cable and pushed the cable into the Chrysler connector.

PARE/REPTRAL SECTOR:

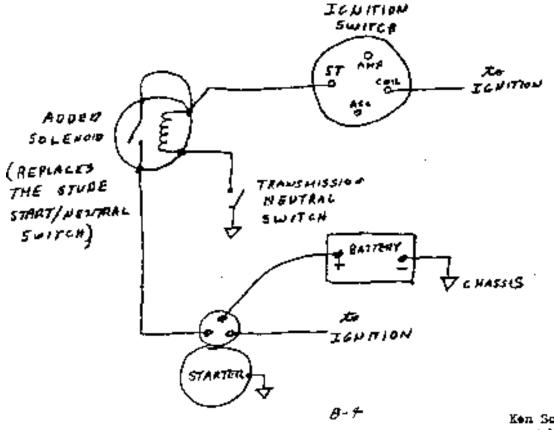
I removed the Studebaker park/neutral switch and wired in the forqueflite switch with a solenoid as shown in the attached schematic on the bottom of this sheet.

CHEASE FIFTS:

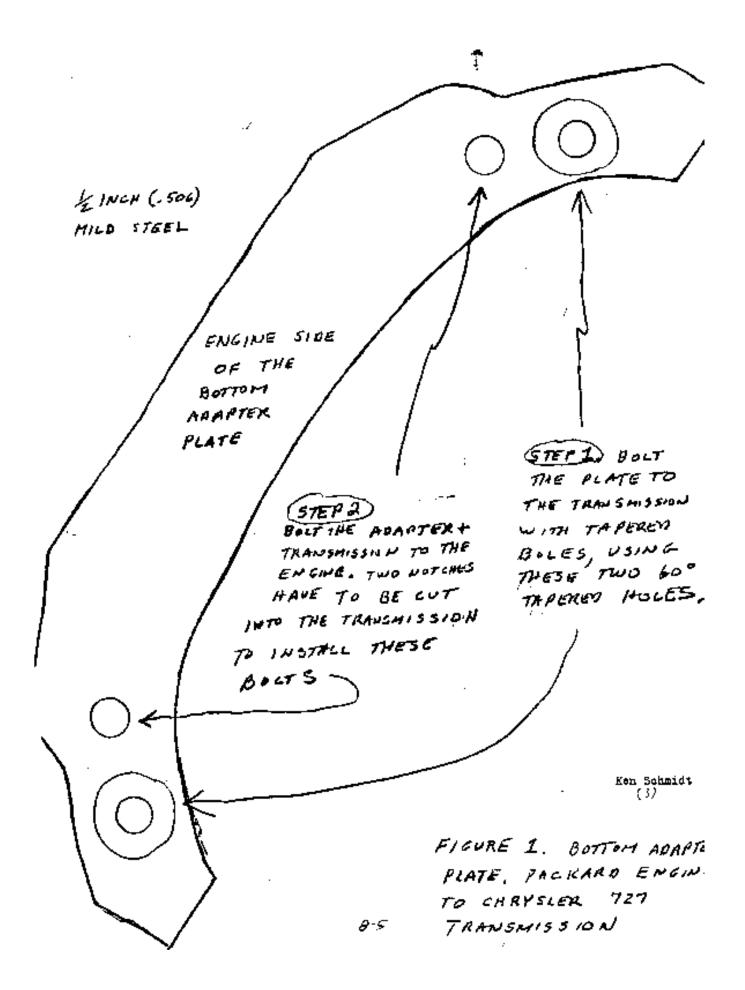
I do not know what modifications, if any, would be required. I had a new set fabricated by a local muffler shop when I completed the installation.

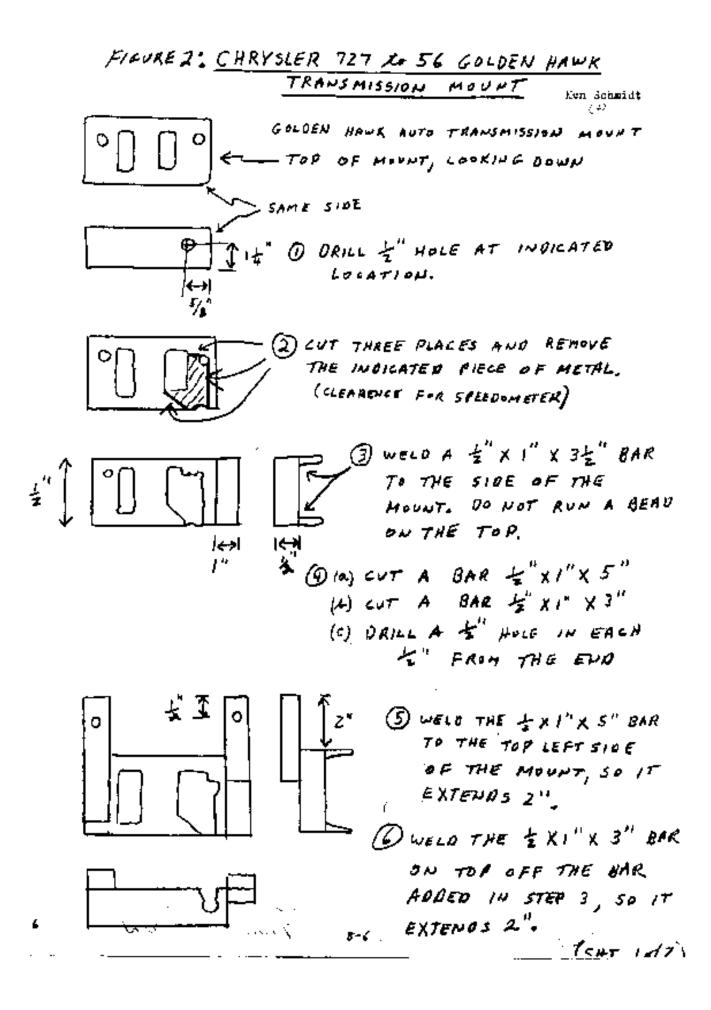
That's about it in a nutshell, if you have additional questions please write or call.

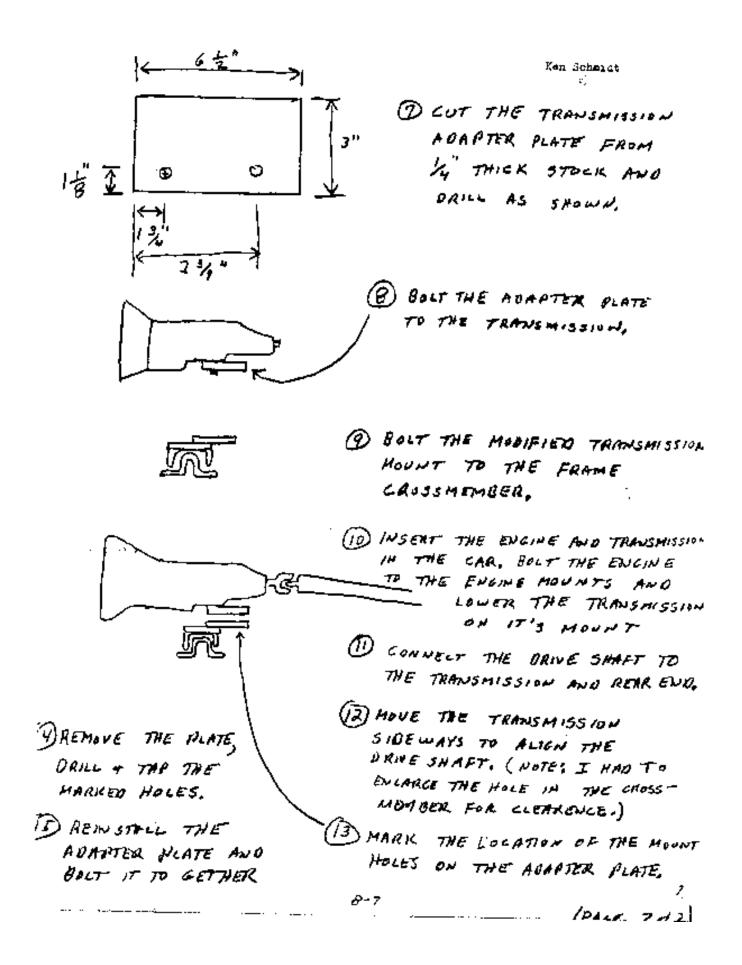
Kenneth Schmidt 2826 E Decatur Mesa Ar #5213 Phone 602-832-5925



Ken Schmidt (2)







ULTRAMATIC TRANSWISSION THROTTLE LINKAGE ADJUSTMENT - 68J

No. 315 April 1996 Please record this orticle on Service Bulletin

Reference page 186 of the back of the frontwission Section of your 1956 Pastroger Cur Shap Hanual.

To provide a shoother shift and better shift pettern, the adjuster to cross-shaft rod is non assembled in the center bole of the cross-spars lever. This is a cannye from the original apecification to the 1956 Passanger Car Shop Wanual to Install the idjuster to cross-shaft fod in the lower sole of the cross-shaft lever.

This revision should be made in cases where rough shifting of early shift speeds cannot be corrected by a complete shrottle linkage adjuntaces.

LOW RANGE BRAKE INFORMATION -ULTRAMATIC

00.314 (m/ 1)50 -

Please record this article on the Service Bulletin Deference page 100 at the end of the Promemizsion section of your 1950 fastenger Car Shop Manual.

Early Vittabutic transmissions incorporated two coll springs to the low range brate assembly: an inner spring and up outer spring.

In later production units, the inner spring was climinated and the design of the value body manifold separator plate was changed. These modifications went into effect with transmission serial number \$-2463. "The reason for these changes was to overcome possible occurrenced of engine "fare" or "tun-away" during the transmission upshift from job range converter to high fange converter,

Transmissions incorporating the foregoing changes. In some Lontances, were found to be susceptible to a harm or solay los range brace band application on deceleration at approlimately ? aph. The for range brake inner spripg recently was reinstated to overcome the possibility of noisy band application. Engineering tests indicated that the late design acparator plate, Part No. 6409478, would adequately minimize engine "Timps" with the two springs in the low range brake. The inner spring was reinatated in transalsmions starting with serial number S-4028.

The foregoing data say be suggarized as follows:

COOUP |

Two Springs and Early Separator Plate Prior co-N+24 03

Engine "Tob-sway" of "fists" algot occasionally be encountered to Group 1 transmissions, If no. instati only the Intest design separator plate, Part No. 446978,

GROUP 2

One Spring and Late Separator Plate Agraeca S-3463 - S-4020

If knewh hand application is recountered in Group 2 transmissions, install the low range brate innet spring, Part No. 470163.

ChOU7 3

Two Springs and Late Separator Fials After Number 5-1428

FRONT PUMP RESTRICTION -ULTRANATIC TRANSMISSION -56J MODEL

Ro. 314 Car 1795

Flaase record this article on the Service Sulletin Reference Page at the end of the Sitramatic framewission section by your 105d Passenger Car Shop Kanual.

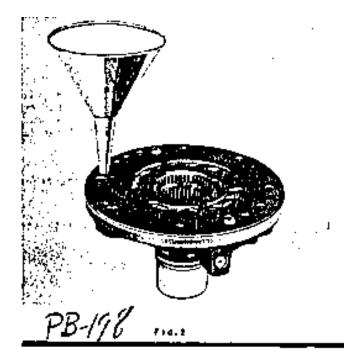
A few cases have been found of a restriction in the high range clutch oil passage in the from pump of Ultragatic transmissions. This restriction is caused by the core shifting warm

the pump bounings are cast. If the passage is restricted, possible engine receively on low range converter to algo range converter upshifts may occur, or the high range clutch may burn out pressurely.

It is advisable when replacing a burned out high range clutch or on a complaint of engine receaves under the conditiona described, that an oil from trat be made to determine if any restriction exists in the oil passage.

The all flav test may be made as follows:

Place the complete front pump assembly in a shallow pas with the pump plate upward and in a horizontal position. Use a small funnel with the end reworked to obtain a close fit in the high range old circuit hote of the pump plate as shown in Fig. 2.



Use only Autoestic Transmission Fluid during the test. To obtain accurate regults, at is important that the comperature of the fluid is Detween 650 F. and 750 F. Pour enough field in the funnel to fill the high range passage in the pump, sijon the fluid to drain down to a level slightly above the funnel spout. At this time, powr an additional 1/2 pint of transminsion fiuld in the funnel and observe the time required for the fluid level to reach the predeternines level.

If it requires once than 2 aloutes and 15 seconds for passage of the 1/2 pint of field. it will indicate the passage is restricted and the pusp should be replaced. Reprat the test if restriction is indicated before replacing Lie peep.

SHIFT SPEEDS -ULTRAMATIC TRANSMISSION No. 315 June 1956

Alonsa record this article on the Service Authoria deference page at the end of the Eltromotic tronamission section of your 1938 Possenger Car Shop Monuel.

Listed below are the shift speeds for 1954 Golden Rawk podsis equipped with Ultragatic transpission. This shift speed data does not seconselly fix limits for adifs poters but is intended to serve as a general pattern which in subject to slight variations.

" B SELECTOR LEYER POSITION

_	HAC to HAD	FURD to IDCC
Light throttle upshift	23-28 mph.	*********
Richdon upshift	\$5-85 mpE.	
Maximum Tictdows		70-80 mpk.
Closed throctle dormahift		20-25 mpb.

D' SELECTOR LEVER POSITION

•	LIC to HIC	KOLD to FOID	HOLD to LNC	IRD to HRC	MRC to LRC
Light throitie upshift	17-93 moh.	23-28 hph.	•		
Alcedown wpshift	{60 B	bićt)			
Masters Ficktown	********		40-50 mph.	70-80 mph.	40-50 mph.
Closed through downshift	******			20-25 ept.	10-15 MAR.

KANVAL LOW SELECTOR LEVER POSITION

	LEC 14 LED	LMD to IAC
Light throutle upshift	23-28 mph.	****
Elchdown upshift	(30 38111)	
MARINE TICKDOWS	*********	48-50 mph.
Closed throttle domablit		20-25 pph.
LRC + Los Mange Converter	MRC - High S	Lage Converter

LRD - Low Annge Direct HAD - High Longe Direct

LOW SPEED GOVERNOR -ULTRAMATIC TRANSHISSION

- No. 3™, այան 1)յա

Plause record this orticle on the Service Bulletin Reference page at the end of the Ditromatic Promonission section of your 1055 Passanger Car Shop Xanual.

A new Low Speed Governor Asseebly, PART NA. 4400137, bus been rolessed. After present stack of No. 410334 Las Spard Gavernar Assembly is exhausted. The Photo Department s(1) substitute and carry the intest Part No. 4488827.

This change the made to dilabante possible interference of the gavernos with the rear of The transmission case. The new 100 speed governor wear into production effective with (FREELISION BETTEL #5-1935.

te Linc	IRD to HRC	MRC to LRC
a moh.	70-80 mph.	40-50 mph.
	20-25 ept.	10-15 MAR.

BILL GLASS VALHALLA, NEW YORK Enclosed are some pictures of entire front end rebuild that we undertook, just as we were going to assemble the car. I noticed things that just did not look quite right, so we replaced everything associated with the front end.

Two weeks ego, Ellen and I mated the transmission to the engine and then installed the engine.

After having all the major components around, as we were ready to install, we dismantled all of them and were quite surprised to find very little weer in the starter motor, or generator. But the front end was another story. The upper control arm bushings were completely worn, and disfigured, plus the lower bushings were marginal. I also replaced the pin in front X-member that the steering bell crank rides on. Years ago most people never knew that there was a fitting there for fubrication, and over the geers that pin would wear.

Each day as we go along, we discover new grease fittings that were forgotten by owners and mechanics elike. To solve this dileme, after cleanings part(s), and essembling, we lubricate than paint the fitting a bright red or yellow depending on visibility. This serves two functions. One, showing where the fitting is and two, by being painted, it tells me that during essembly we did in fact lubricate.

For anyone needing to remove paint from small parts or assemblice lot me recommend a product from W. W. Graingers, called PAINT AND DECAL REMOVER, comes in a spray can, and is inexpensive, but the good thing is that not only does it work quick, the spray pattern lots you sim the meterial and keep it confined.

At this point, I am getting too particular on how a part does look, in the scope of assembly. Example, the hood hinge. Heck, could have just put it in place but no! I had to take it apart, aand blast the hinge, prime and paint. This is what is happening, I am going for prize vinning looks on things nobody will ever see.

As fer as being totally slupid, i just went out and bought a 1947 Commander Convertible. I need this like a hole in the head, but since I now know Studes, how can I go wrong?

Came across on old TURNING WHEELS column on TYPE A transmission fluid. It basically tells you that you can use either Ford or GM Dexron, but don't mix the two. Anybody have any other ideas? I was also informed that unless you have a solid body, and Ultrematic will not work or shift properly. Something to do with springs and such, so I am waiting to have transmission serviced once car is done rather than having it gone over off the car

Does anyone have pictures or diagrams of replacement weather stripping in place or installation procedures? Big quastion, is there any gap between front fender and weather strip, or is outer sheet metal butted up tight?

If you or anyone could, I would appreciate any photos of how front fenders are mated with chassis frame. I remember specers being used between frame and sheet metal, but do not know if that was because car was hit once or if it was that SOP at the factory.

Have you or anyone had any chrome work done, and if so were you satisfied?

I am not sure that I told you that Ellen and I run a pod transfer and silk screening company called BBAT/MRS. D'S TEES, The BBAT stands for BILLY'S BUCK A TRAIN Enclosed I sent you free, a sample of a 56 Goldan Hawk T shirt. I just did it for myself, but everyone says I should sell them. S0, if you think the guys would buy them let me know, or put it in the newsletter with a suggested price of \$9.95 + \$1.50 postage.

DENNIS LARKINS SANTA FE, NEW MEXICO

Thanks for the back issues of the Hawkeye. I'm already delighted to have joined the Club. I've enclosed a modest sum to help cover expenses (a bargain at any price). I've learned that my car was the 19th produced at the LA plant and finally found my engine number.

I have some confusion about the correct paint scheme for the early models and would like some input from a knowledgeable person. This car also needs complete re-uphoistery including headliner. I'm going to attempt to reconstruct the headliner with ven headliner material as per Hawkeye suggestion.

I'm interested in finding original type materials for the seats and door penels. Also, I'd like to find a set of original seat belts as mine were lost somewhere along the line. I'd also like to find a NOS gear selector indicator for the steering column and a new shifter knob.

One of my wire wheel covers has started to fall spart and lost a few wires. I'd like to buy either one good one or another "junker" for parts. I also need a "dual guad" air cleaner. Keep up the good work.

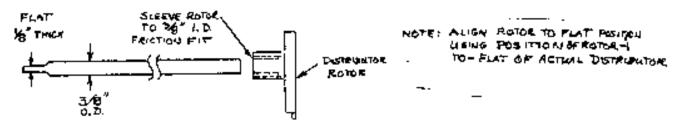
ADDRESS CHANGE:

DEBORAH SHIPIDNE 3650 W. Sahuaro Divide Tucson, Arizona 85741 602-744-9739 To: Hawkeye

Notes on Distributor Replacement - I recently had a distributor failure on a 62 Hawk. I pulled the distributor and utilized a local shop to rebuild the unit. To reinstall the distributor, I rotated the engine to place the timing on the "IGN" mark. This required that I pull the left bank valve cover off so that I could ensure that I was on No. 1 cylinder by observing that the No. 1 cylinder intake valve had closed prior to coming up on the "IGN" mark on the damper wheel. When I tried to install the distributor, I found that I could not fully seat the distributor because the slot for the oil pump drive did not align with the distributor shaft oil pump drive.

The shop manual instructions say to place the distributor in and if it doesn't align with the oil pump drive slot to put slight down pressure on the distributor and crank the engine using the starter motor. The rotation of the distributor together with a slight downward pressure will then allow the oil pump shaft of the distributor to engage the slot of the oil pump. I did not like that solution as it destroyed the timing relationship that I had varified.

So I made my own tool to allow me to rotate the oil pump slot to match the Cylinder No. 1 position of the distributor shaft while the engine is in the No. 1 firing position ("IGN" on the damper wheel). A drawing of the tool that I built is as shown below. The tool also allows one to pre-oil the engine by using a 3/8 in. drive drill motor to drive the oil pump when the distributor is removed. The drill motor must have CCW rotation (same as distributor rotation) and one must verify that oil pressure is achieved when turning the oil pump using the shaft driven by the drill motor.



56 GH Frame - Does your 56 GH have a weak frame? No if no rust decay has occurred for the frame, body floor pan or "hog troughs" over the 34 years of the 56 GH existence. I have 3 hawks that exhibit a "weak frame". One easy check to determine overall condition of frame and body members is to jack up any one of the four corners of the frame and see if you can open and shut both doors. If you can't open and shut the doors the condition of the car indicates that the frame is flexing. How do you rectify that problem? One way is to remove the body from the frame and replace all areas of the body floor pan and "hog troughs" which exhibit rust decay since they provide strenghthening of the frame. The "new" unibody construction, as used on many new cars, relies soley on body members (no frame members) to provide rigidity.

I have all of Dick Datson's books on the Hawk and chose not to add up to an inch thick fiber glass reinforced epoxy to "hope that I fixed the problem". None of his solutions appealed to me. Since I am a registered professional engineer. I, with advice from engineering associates designed my own frame strenghthener. I also repair hog trough areas and body floor pan areas by sectioning in new metal in those areas which have exhibited rust decay.

A Horror Story - This story explains what can happen if you paint over existent auto body paint. I purchased one of my 62 GT Hawks from a gentleman who had did an amateur restoration just prior to my pur-

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chase of the car. I purchased the car in 1985. The paint job accombished by the seller was application of new paint over the original paint. Today the paint is peeling off in areas or developing extensive surface cracking. Worse than that, however, is the cancerous rust that is occurring <u>under</u> the paint due to rust from the back-side of the front and rear fenders. That's the problem one faces if a body shop repaints the car. They will not remove the fenders and will section in new metal only when conditions are significantly detioriated. Often they will apply "bondo" over the rusr-out pin holes in the fender and paint over that.

My paint jobs involve removal of all 4 fenders so that I take care of any rust-out areas by removal of the rusted out section and sectioning in new sheet metal. I do utilize sheet metal sections which I have been able to obtain from a salvage yard when available. Otherwise I order the required sheet metal section from Classic Enterprises. This includes repair of body panel members not accessible unless the fenders are removed. I then paint the entire fender and body member areas with a 2-part epoxy primer prior to application of primer-surfacer. This provides the rust protection for the sheet metal, Final or color finish is applied after only after ensuring smoothness of the surface areas. The underside or backside of the fender is undercoated prior to installation of the fenders.

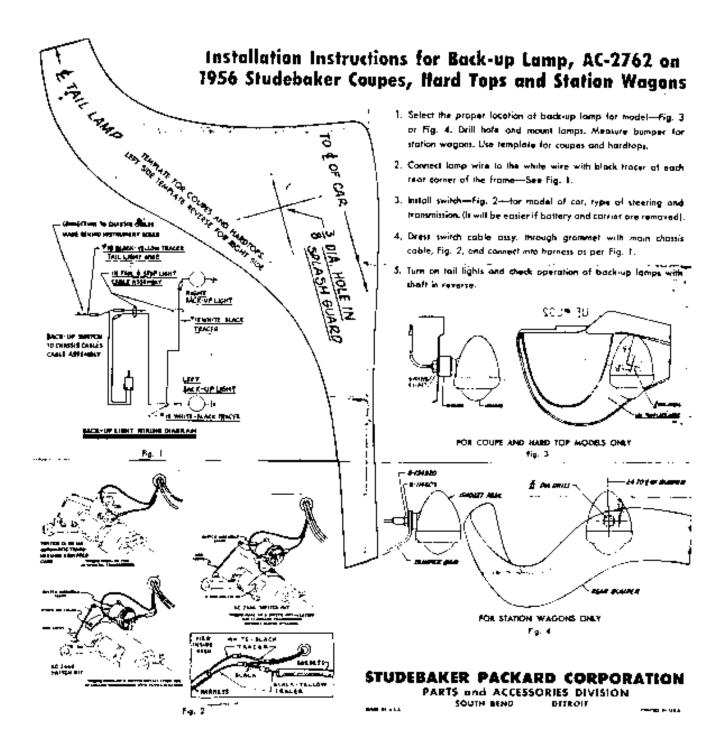
I did a "quickie" paint job on the 1964 Cruiser but I was very careful in preparation of the surface prior to applying finish coat paint. I washed the entire car using Windex initially. This was followed by washing with a strong detergent. Extra care was used in areas next to body trim and weather strip rubber. A tooth brush was used to make sure that dirt wax and or grease was removed at the body next to any moulding which was on the car. I then used the product Prepsol which is a solvent to clean the entire surface area to ensure that all wax and grease was removed prior to any sanding operations. I then spot-sanded out any rust areas down to clean metal. After spot finishing these areas the entire car was wet sanded to remove surface gloss of the factory paint and to reduce thickness of the old paint. A sealer primer was then applied followed by sanding. The sealer primer eliminates paint bleed-through of the old paint color to the new paint color. A single coat of acrylic lacquer was applied only after ensuring that the surface was free of scratches and did not exhibit regions where the paint surface was not even. A single application of finish color thinned 3 to 1 with laquer thinner was utilized to flow out the first coat of finish coat. This paint job still looks good after 4 years of service.

Use of Anti-seise Compound - Whenever I do mechanical work which requires removal of cylinder heads, intake or exhaust manifolds or header pipes of the exhaust system I utilize an anti-seize compound on the bolts and nuts utilized to reassemble the parts. Use of a liberal coating of anti-seize essentially eliminates any rust in the area between the bolt thread and nut thread. This allows easy removal if needed in the future.

> Claude O. Sevon 10720 S. E. 290th st. Auburn, WA 98002 Phone (206) 735-3127

FOR SALE ITEM

SPEEDSTER TYPE WIRE WHEEL COVERS (AC-2425) - 1 SET OF 4 Excellent used stainless steelwire sections with newly reproduced center hubcaps. Cost is \$ 500.00.



SUMMARY

KEN SCHMIDT HAS CONVERTED HIS ULTRAMATIC TO THE CHRYSLER 727 TORQUEFLITE TRANSMISSION BY MODIFYING THE KIT OFFERED BY PACKARDS INTERNATIONAL MOTOR CAR CLUB.

BILL GLASS OFFERS A T-SHIRT WITH A 1956 GOLDEN HAWK ON THE FRONT OF IT FOR \$9.95 PLUS \$1.50 POSTAGE (address is 18 Lorenz Dr. Valhalla, N.Y. 10595 Tel. 914-946-2280)

DENNIS LARKINS NEEDS INFORMATION ON THE EARLY MODEL PAINT SCHEME. (Address is 2491 Sawmill Rd. Apt 1604 Santa Fe, N.M. 87505).

FRANK AMBROGIO HAS REPRODUCTION OIL FILTER DECALS AVAILABLE FOR \$3.00 + SMALL SASE. SEE ISSUE #002.

1956 Studebaker Golden Hawk Owners Club 1025 Nodding Pines Way Casselberry, Florida 32707