

ENGINE

1964 TEMPEST

SYNCHRO-MESH TRANSMISSION COVERS

1964 Tempests built before October 7, 1963, with a 3 or 4 speed synchro-mesh transmission and console, or a 4 speed floor shift, used a screw at "A" Fig. 1 to attach the transmission shift control cover to the floor pan. See Fig. 7-11, 1964 Tempest Chassis Shop Manual. However, this rearmost screw is located directly over the propeller shaft and under certain conditions the shaft can hit the screw resulting in a damaged propeller shaft.

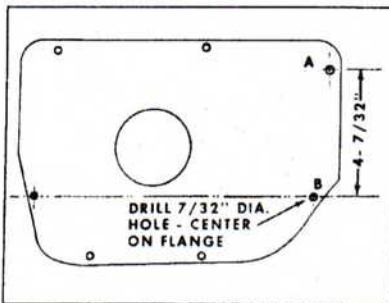


Fig. 1

Therefore, all subject cars should be inspected for this condition and reworked at the earliest opportunity.

1. Remove those parts necessary to perform steps 2, 3 and 4.

2. Remove screw at "A" and fill hole with body sealer.

3. Drill a 7/32" diameter hole on the center of the flange at "B" Fig. 1.

4. Install screw and sealer at "B".

Flat rate time for this operation is 0.3 hours, add 0.2 hours for console.

421 H. O. ENGINE

A throbbing sound on acceleration of a 421 HO engine is characteristic of the exhaust system incorporated in 1964 engines and *should not* be considered a bearing problem.

During 1963, 421 HO exhaust systems were produced with reverse flow mufflers. Beginning with 1964 production, straight through flow mufflers were incorporated to increase performance and this alteration increased the engine sound level. This characteristic should be considered normal and no correction attempted.

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VOLTAGE REGULATORS

Examination of a number of 1964 Tempest voltage regulators which have returned after warranty replacement indicates that in many instances the relay coil is burned out. In evaluating the AFA's returned with these units, *we are concerned that in some cases, no corrective work has been performed to prevent recurrence of the condition on a new regulator.*

Our investigation of this problem indicates that the probable cause is an open in the alternator output circuit which allows an extremely high alternator output.

To eliminate any possibility of a recurrence, all alternator connections, bulkhead connections, V-8 junction block and six-cylinder solenoid connections should be checked. A charging system check should also be performed. *The engine should not be operated (even momentarily) with the alternator out-put wire disconnected.*

Future AFA's on regulator replacement should include a statement giving full details of the problem and the corrective work performed.

Transmission Pan Bolts

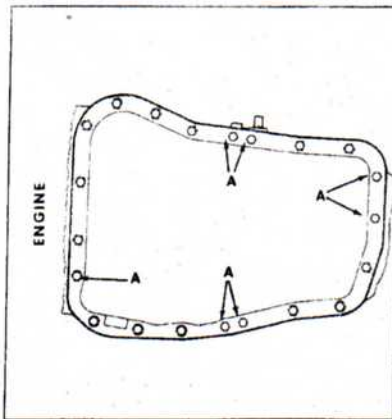


Fig. 2

An additional pan bolt with a copper washer has been added to the 375 Hydra-Matic transmission. Place the bolts with copper washers in locations "A" as shown in Fig. 2. This information supersedes that on page 7C-84, Figure 7C-139, 1963 Pontiac Chassis Shop Manual.

FLAT RATE TIME 1964 FITTED BLOCK

Early released 1964 fitted block assemblies did not include the two flywheel housing locating dowels necessary to maintain correct housing to cylinder block alignment. It is imperative that these two dowels be installed on each new cylinder block. If this operation is not performed, a serious transmission or engine malfunction will result.

NOTE: In 1964, dowels are a press fit in the block instead of in the flywheel housing.

If dowels cannot be removed from the old engine or they are damaged, new dowels can be ordered under part 3736406 (MF). When installing dowels, tap into position with a hammer, leaving half of the dowel length outside the block to ensure proper flywheel housing location. Current production of fitted block assemblies will have the dowels installed.

Following are the flat rate time allowances for replacement of a fitted block assembly.

Operation 6-17

Pontiac Models:

Super Hydra-Matic	12.8
Roto Hydra-Matic	12.5
Synchro-Mesh	12.5
Add for P/S	.2
Add for A/C	.4

Tempest Models:

8-Cyl. — Automatic	11.4
— Synchro-Mesh	12.1
6-Cyl. — Automatic	9.2
— Synchro-Mesh	9.6
Add for P/S	.2
Add for A/C	.4

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Rear Axle Assembly I. D.

Due to changes in manufacturing procedure, the method of identifying differential ratios by the color code on the axle shaft is no longer usable.

The color that appears on the axle shaft is for manufacturing purposes only and in no way indicates the differential ratio. The ratio can now be determined by a stamped number on the rear of the right hand axle housing. This supersedes the information printed on page 4-5 of the 1964 Tempest Shop Manual.