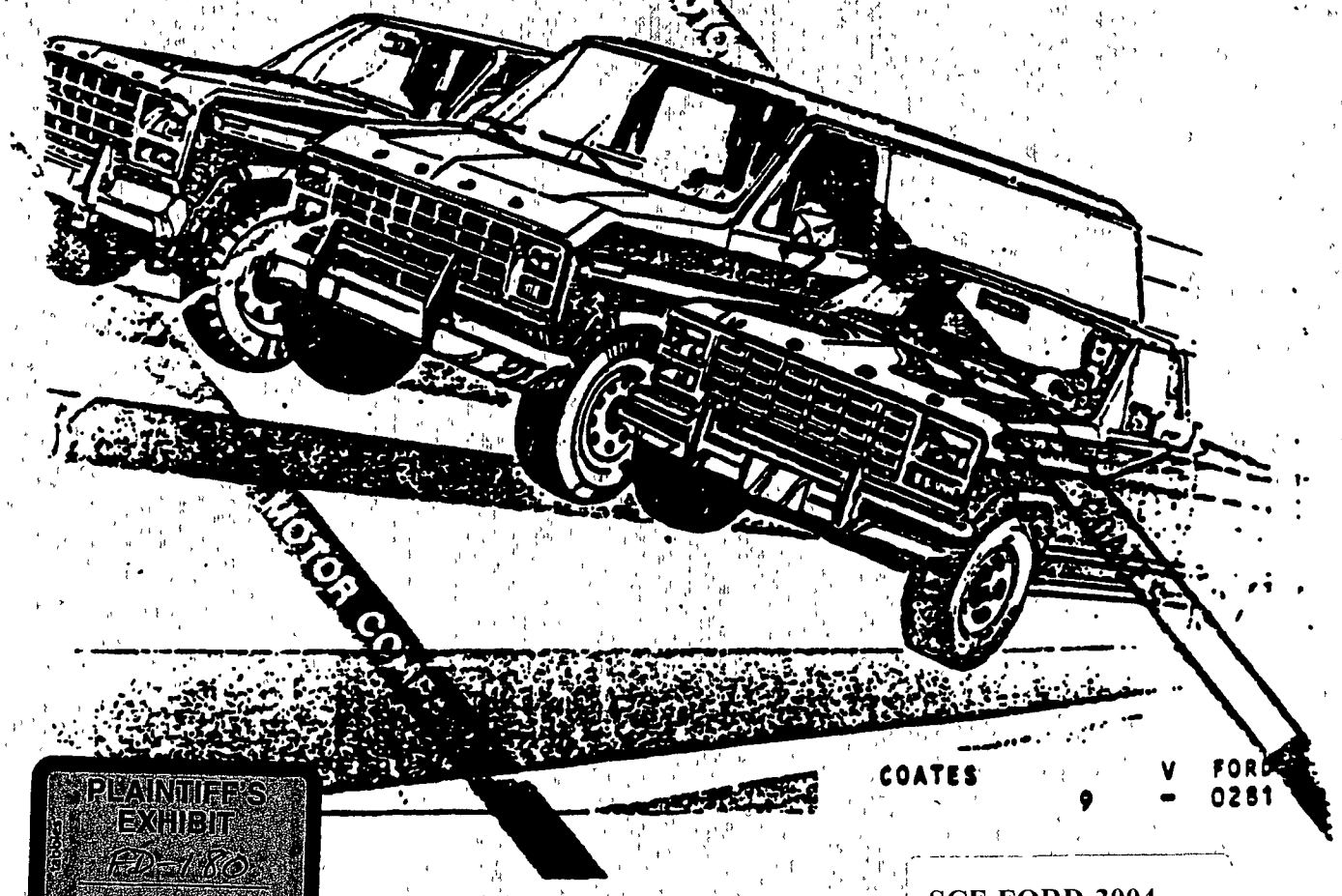
COATES

1981 Light Truck SHOP MANUAL

BODY CHASSIS ELECTRICAL

BRONCO, ECONOLINE (E-100 Through E-350)
AND F-100 Through F-350

WORLD'S BEST SELLING TRUCK LINE



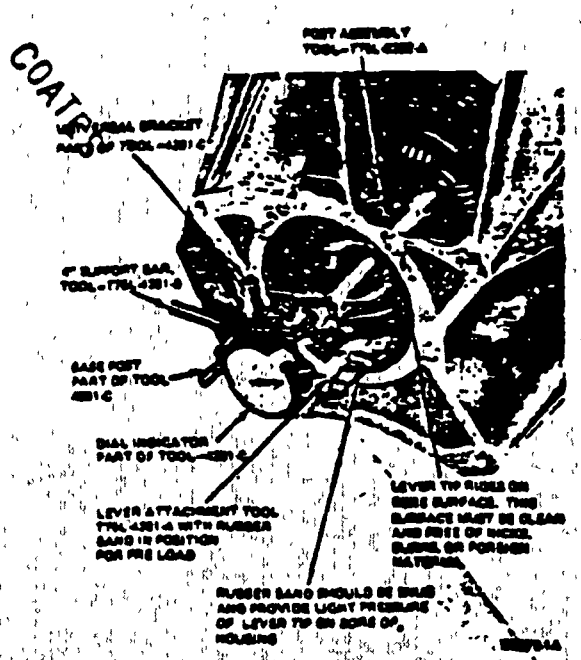


FIG. 4 Installing Dial Indicator For Bore Runout Check

12. If the maximum variation measurements obtained in Step 8 and 11 show that face runout exceeds 0.254mm (0.010 inch) and/or bore runout exceeds 0.381mm (0.015 inch), refer to "Correction" below.

Before re-assembly of the transmission to the flywheel housing, the front mounting face of the transmission should be inspected and cleaned. Any nicks, burrs, paint or foreign material must be removed to be sure of alignment between the components. Transmission Welsh plugs should also be checked for proper installation. If the dowels on the flywheel or rear face of the engine are missing or damaged, refer to dowel removal and installation in this Part for instructions.

DOWEL REPLACEMENT PROCEDURE

Use a drift pin on through holes and vice grip pliers or a similar tool on blind holes to remove dowels.

NOTE: Dowels should be pulled or driven from their seat using care not to damage the surface area around the dowel.

All solid type dowels can be installed by driving them into place using a brass or plastic mallet.

NOTE: Care should be exercised to drive the dowel squarely into place until fully seated and not to damage the surrounding surface area.

CORRECTION

Since any change in face alignment will change bore alignment, it may be possible to correct bore alignment by changing the face alignment. Face alignment can be changed by shimming between the flywheel housing and engine. Fig. 5 shows the type of shim which can be fabricated.

The shim required is one half the maximum (minus) indicator reading, and should be located at the point of maximum (minus) indicator reading.

If both the bore and face alignment are out of limits, shim between the flywheel housing and engine to bring the face alignment within limits. Check the bore alignment.

If the bore alignment is out of limits and face alignment is within limits, shim the flywheel housing to the limit of face misalignment and check the bore alignment. If it is not within limits, replace the housing.

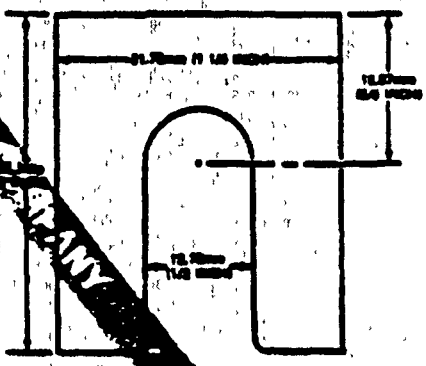


FIG. 5 Fabricated Flywheel Housing Shim

CLEANING AND INSPECTION

CLUTCH RELEASE BEARING

Wipe all oil and dirt off the release bearing. The bearing is prelubricated and should not be cleaned with solvent. On all F-100, F-350, E-100, E-350 and Bronco Series vehicles, the clutch release bearing and hub are serviced as a single unit. Do not disassemble them for inspection or replacement.

Inspect the release bearing as follows:

1. Hold the bearings, hub and back plate and rotate the outer race while applying a compressive pressure. If the bearing rotation is rough, replace the bearing.
2. Inspect/remove any surface scoring or burrs that may impair the sliding motion of the release bearing on the transmission input shaft retainer. Any scoring or burrs should be polished out with a fine grade emery paper.
3. Inspect retention of release bearing spring clips and clutch release lever for a snug fit. Replace the bearing only if both spring clips do not provide a snug fit.

or to re-installation, lubricate for release bearing
ition with lithium base grease C1AZ-19590-B
M1C75-[illegible] equivalent, at the following points:
ll annular groove of release bearing.
hin coat on inside diameter of release bearing.
elease bearing retention clips and fingers of clutch
elease lever.
ulcrum point of clutch release lever (except E-
eries).

ure situations for release bearing operation
ow little clutch pedal free play may allow contact
clutch fingers on bearing and thus resulting in
continuous running bearing.
"Riding the clutch pedal" has the same effect as
bove.
Misalignment of clutch release lever.-
Misalignment between engine and the transmission.
his condition will exhibit symptoms as transmission
umping out of gear, driveshaft vibration, excessive
pin time resulting in gear clash, and clutch chatter
n start-up.

SSURE PLATE AND COVER

e coil spring design pressure plate assembly does
eed to be lubricated. The Belleville design pressure
assembly does not require lubrication.

spect the surface of the pressure plate for burn
s, scores, flatness or ridges (Fig. 6). If the pressure
is badly heat-checked or deeply scored, replace
pressure plate and cover assembly. Clean the
ure plate and flywheel surfaces with a suitable
nercial alcohol base solvent to be sure that surfaces
ree from any oil film. Do not use cleaners with
etroleum base, and do not immerse the
sure plate in the solvent.

a substantial difference in finger wear exists,
heavily worn finger is binding. Replace the
sure plate.

CLUTCH DISC

Inspect the clutch disc facings for oil or grease. Eliminate the source of any oil or grease before replacing the disc. An excessive amount of grease on the bearing hub will find its way to the disc facings. Too much lubricant in the transmission or a plugged transmission vent will force the transmission lubricant out the input shaft and onto the disc facings. Leaking rear engine seals or loose or unsealed flywheel attaching bolts will allow engine oil to flow onto the disc facings.

Inspect the clutch disc for worn or loose facings (Fig. 6). Check the disc for warpage and for loose rivets at the hubs. Check for broken springs. Springs loose enough to rattle will not cause noise when the vehicle is operating.

Replace the disc if any of these conditions are present. When installing a new disc, be careful upon handling as not to drop it or contaminate it with oil or grease.

PILOT BEARING ASSEMBLY

Refer to Fig. 7.

Check the fit of the clutch pilot bearing in the bore of the crankshaft. The bearing is pressed into the crankshaft and should not be loose.

Check the pilot bearing (needle type) assembly for mis-alignment and press fit condition in the crankshaft. Visibly inspect the bearing surfaces (needle rollers and transmission input shaft) for scoring, worn or broken rollers, inadequate grease and discoloration due to heating. Check the condition of the bearing's seal. There should be no visible grease leakage on the bearing retaining in the crankshaft.