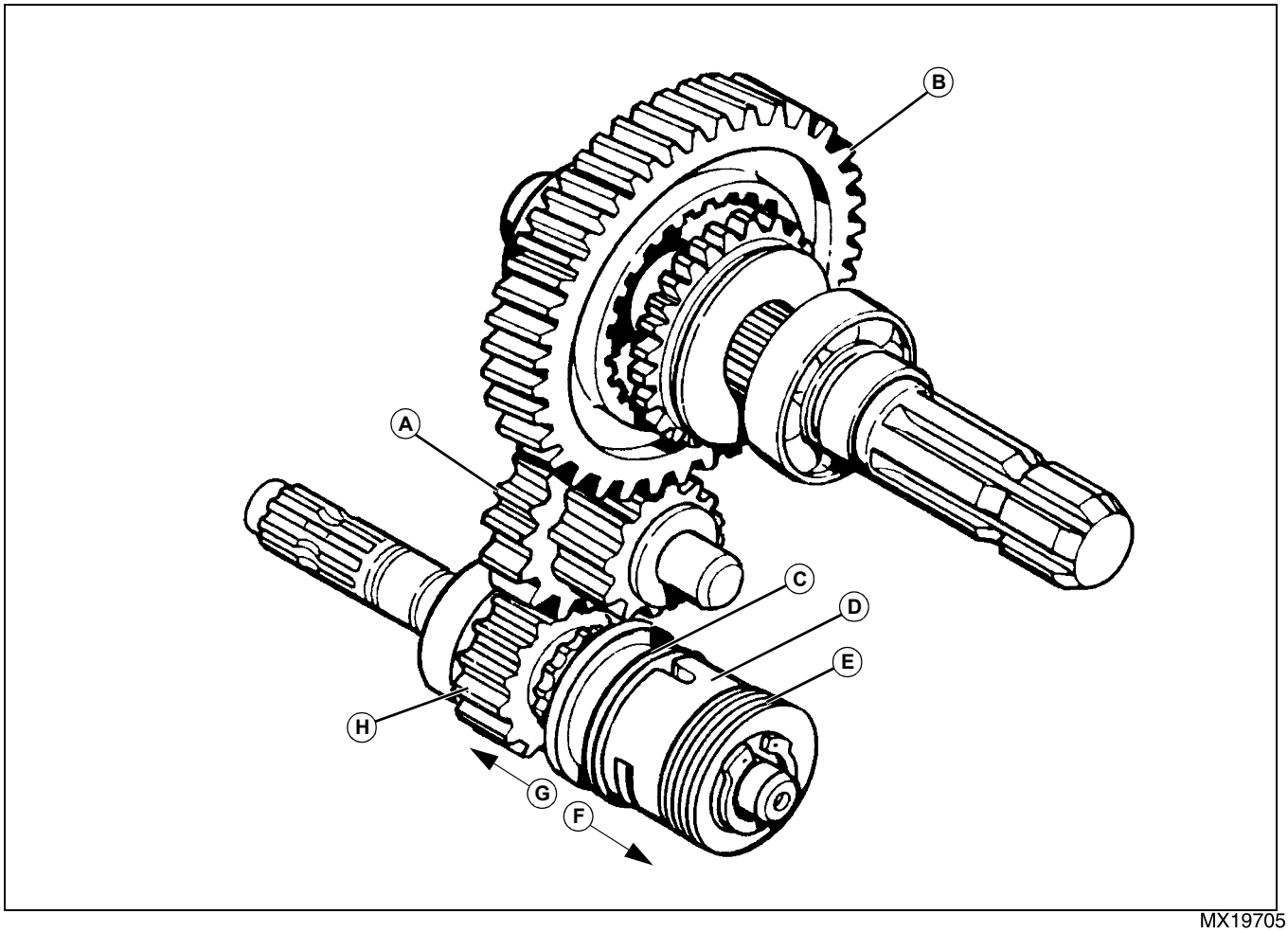
Mid PTO Operation



MX19705

A - Idler Shaft
B - Rear PTO Gear
C - Engagement Collar
D - Brake Actuator
E - Brake Pack
F - Clutch Disengaged (Brake Applied)
G - Clutch Engaged
H - Mid PTO Shaft Gear

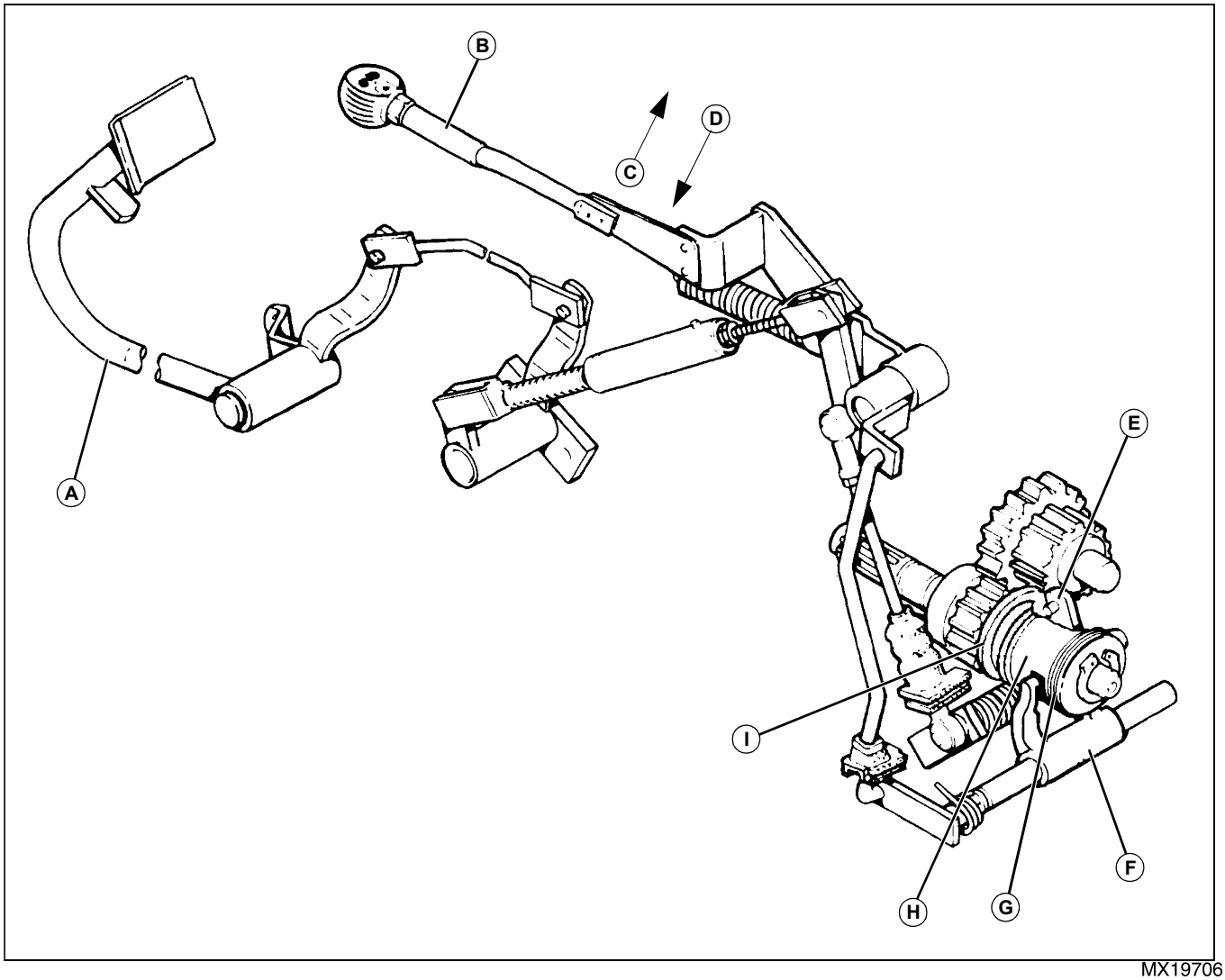
The mid PTO idler shaft is in constant mesh with the rear PTO gear and mid PTO shaft gear.

The mid PTO shaft also contains an engagement collar and brake pack.

Moving the collar forward engages the mid PTO shaft gear to the shaft. Moving the collar rearward disengages the gear.

Moving the brake block rearward compresses the brake washers against the brake disks, which are splined to the mid PTO shaft. Applying the brake causes the shaft to stop turning.

Mid PTO Linkage Operation



MX19706

A - Traction Clutch
B - PTO Lever
C - Engaged Position
D - Disengaged Position
E - Clutch Arm
F - Brake Fork
G - Brake Pack
H - Brake Block
I - Engagement Collar

Lever Disengaged:

When the PTO lever is in the disengaged position (D), the clutch arm connected to the engagement collar moves the collar back to disengage the gear from the shaft.

It also applies force against the brake block to apply the brake.

Lever Engaged:

Moving the PTO lever to the engaged position (C) causes the engagement collar to move forward and engage the gear to the shaft.

This also releases the pressure on the brake block so that the brake is released before the PTO is engaged.

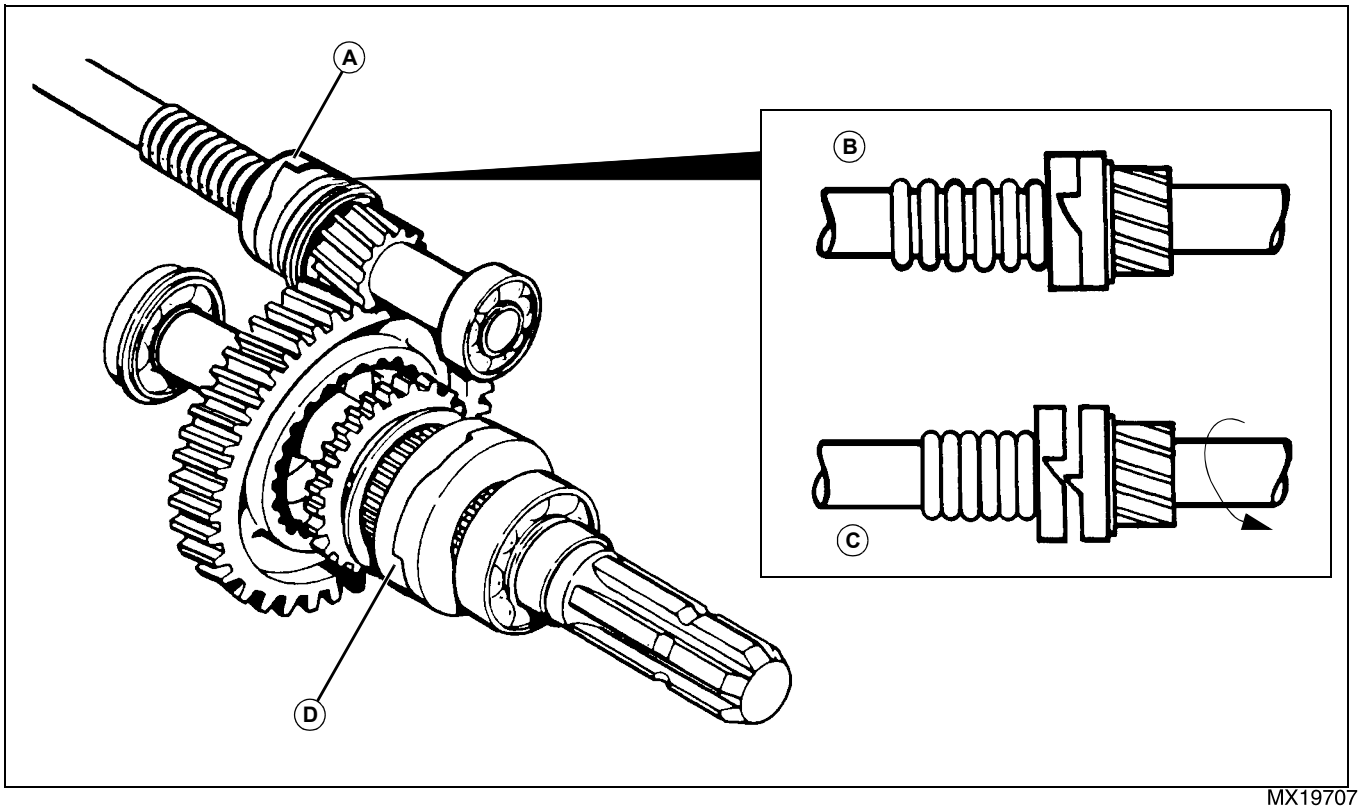
Clutch Depressed - PTO Engaged:

If the traction clutch (A) is disengaged, the power to the mid PTO is stopped from the engine.

The linkage connected to the clutch pedal will also rotate the fork connected to the brake block in the mid PTO.

The results will be that the mid PTO brake is applied to stop the mid PTO shaft rotation after the power to the PTO has been stopped.

Overrunning Clutches



MX19707

A - Overrunning Clutch
B - Matched Speed
C - Overspeed
D - Overrunning Clutch

Overrunning clutches are used on machines with single stage traction clutch. They are located between the PTO driveshaft and PTO output shafts.

They protect the transmission and engine by permitting the PTO shaft to overspeed without transmitting power back through the transmission and engine. This could occur during traction clutch disengagement or sudden acceleration, particularly when operating a heavy PTO driven attachment.

Clutch (A) protects the power train when the rear or mid PTO is engaged.

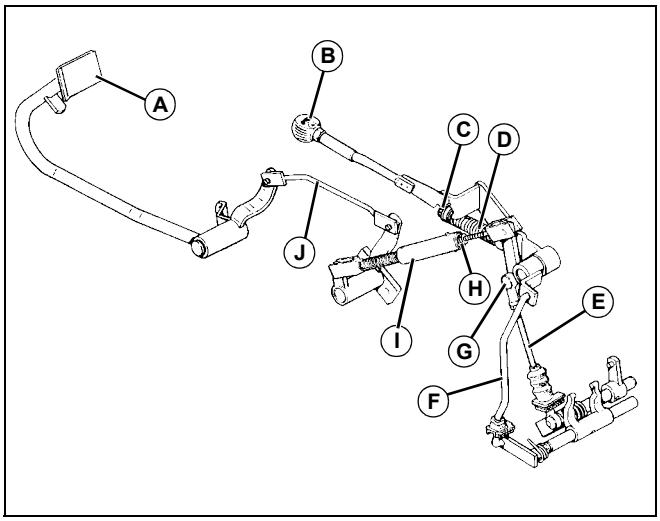
Clutch (D) protects the power train when only the rear PTO is engaged.

The rear half of the clutch (rear drum) is connected to the output shaft. The front half is connected to the input shaft. If over speeding occurs, the rear drum rides up the ramp on the front drum; this compressed the clutch spring and allows the rear drum to slip into the next cog on the front drum.

This ratcheting causes a noise that can be heard when the engine is decelerated.

Tests and Adjustments

Mid PTO Linkage Adjustment



MX19570

- **A - Clutch Pedal**
- **B - Mid PTO Lever**
- **C - Adjusting Nut**
- **D - Engagement Spring**
- **E - Clutch Rod**
- **F - Brake Link**
- **G - Ball Joint**
- **H - Adjusting Nut**
- **I - Spring Capsule**
- **J - Clutch Link**

Engagement Spring (D)

Use the adjusting nut (C) to adjust engagement spring (D) to a length of 59 mm (2-3/8 in.) with the lever (B) in the off position.

Clutch Rod (E)

Use ball joints (G) to adjust clutch rod (E). Clutch rod is the correct length if the control lever (B) does not contact the top of the slot when engaged or bottom of the slot when disengaged.

Spring Capsule (I)

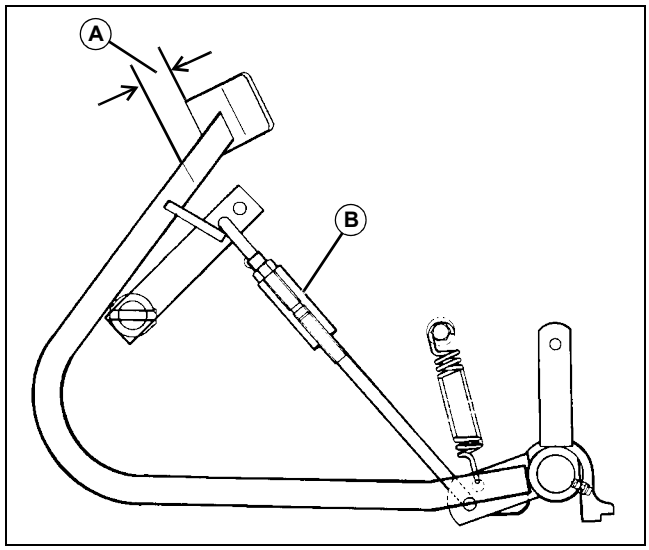
Use adjusting nut (H) to adjust spring capsule (I) to the length required to fit between clutch link (J) and brake link (F) when the control lever is engaged and clutch pedal (A) is engaged.

Clutch Pedal Free Play Adjustment

Reason:

To make sure that the traction clutch is fully engaged when the pedal is released and fully disengaged when the pedal is depressed.

Procedure:



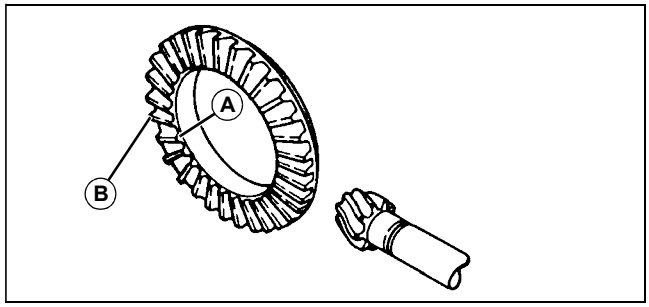
MX19571

1. Depress the clutch pedal by hand to feel how far the pedal travels before resistance is felt. The amount of travel should be 18 - 22 mm (3/4 - 7/8 in.) (A).
2. If free travel is too much or too little, adjust the turnbuckle (B) to correct it.

Differential Cone Point Adjustment

IMPORTANT: Avoid damage! Adjust cone point only if ring gear and differential driveshaft were replaced. If gear and shaft were not replaced, use same shim pack or same thickness of original shims removed.

NOTE: Apply paint to about ten or twelve teeth on ring gear.



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