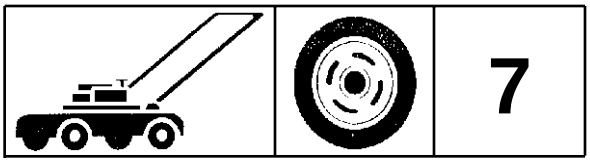
Husqvarna



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1200 K-61

TRANSMISSION SERVICE MANUAL

(EXTERNAL COMPONENTS / SEALS)

1.1997

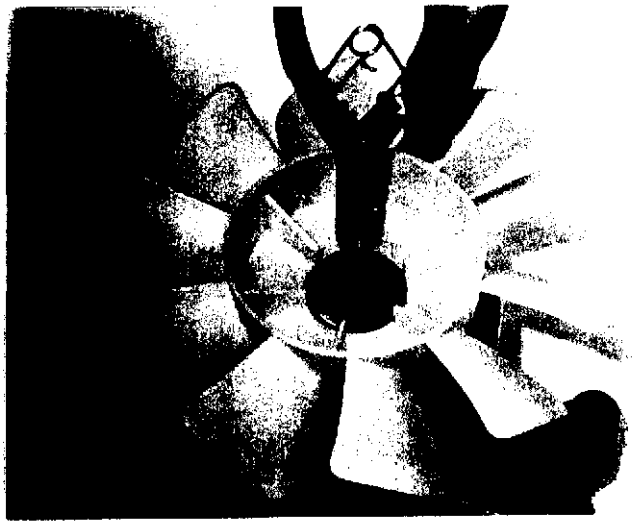
Work Shop Manual

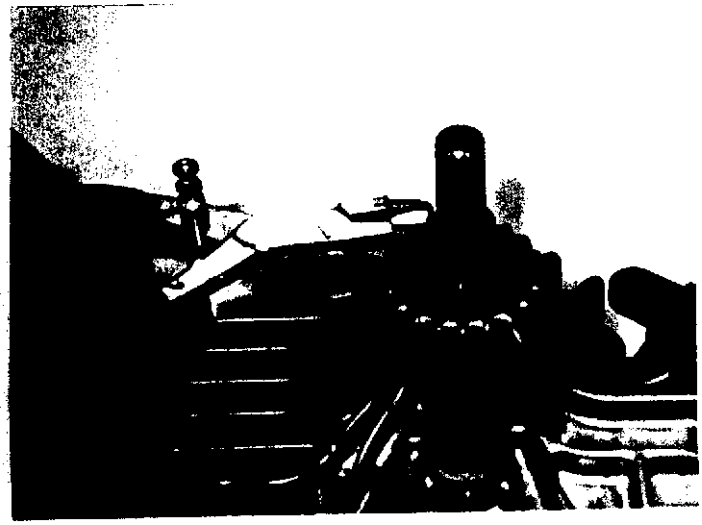
MW 07-14-97

INPUT SHAFT SEAL REPLACEMENT

Tools/Supplies Needed

a) Snap ring pliers (small)
b) Flat blade screwdriver (~ 5 mm width)
c) Small hammer
d) 1/4" x 6" drive extension (used as a punch for driving seal in place)
e) Pulley/wheel puller (possibly needed)
f) Electrical tape
g) Penetrating oil (possibly needed)
h) Lubricating grease
i) 10w30 motor oil





Transmission/Pulley/Fan Removal

a) Remove transmission from Rider per Husqvarna procedures.
b) Remove snap ring from fan on input shaft. (See illustration).

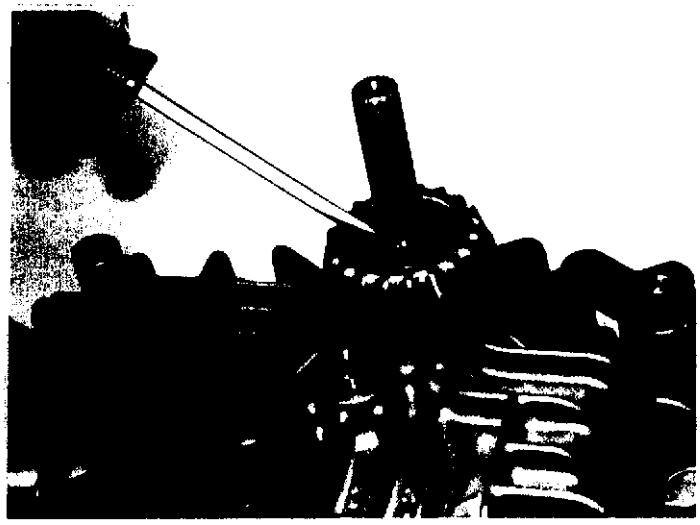
Note: Be careful not to deform snap ring during removal by spreading it too much. Snap ring replacement is recommended if possible.

c) Remove washer and fan from input shaft.
d) Remove pulley from input shaft.

Note: A pulley puller and/or penetrating oil may be needed as an aid to remove pulley.

e) Remove snap ring from lower groove on input shaft.

Note: Replace if damaged, deformed or worn.



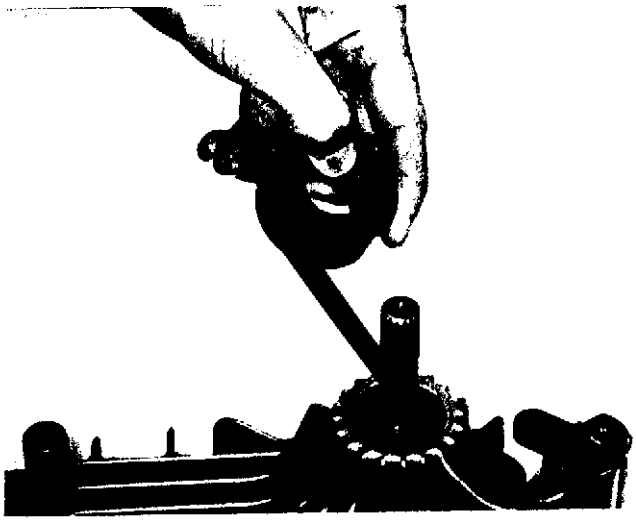
Seal Removal

f) Clean all debris and rust from input shaft and housing in area of oil seal.

IMPORTANT!!!

Seal area must be clean! Contamination of oil could result in shorter life of the transmission's hydrostatic components.

g) Insert screwdriver tip between ID of inner seal lip and input shaft and pry seal from housing with a twisting motion. Then remove seal from input shaft.

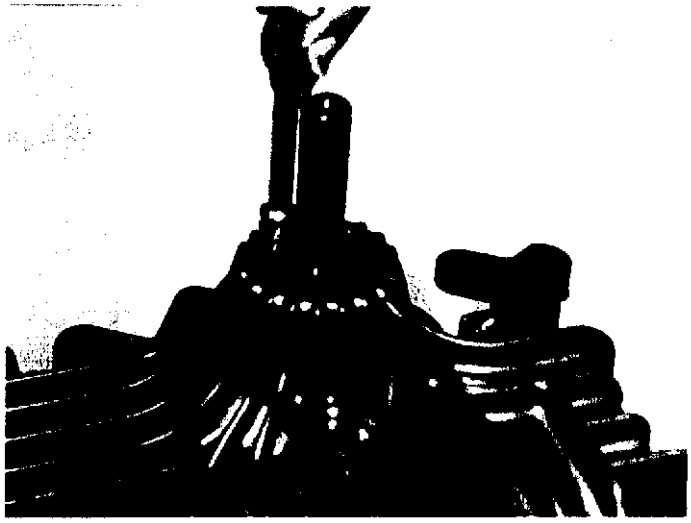


Seal & Shaft Preparation

h) Wrap input shaft with electrical tape to protect seal lip from damage by sharp edges of snap ring grooves and splines.

Note: Wrap tape by starting from bottom of input shaft and then spiraling the wrap upward until splines and grooves are covered. (See illustration)

i) Apply grease to inner lip of new oil seal and surface of input shaft (including taped area) so seal will slide easily.



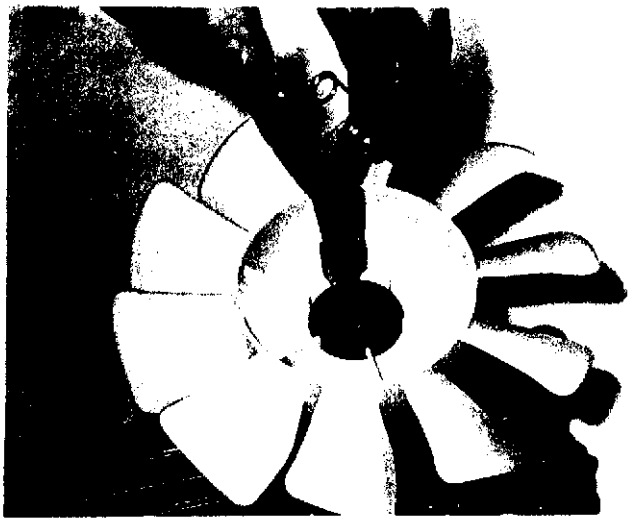
Seal Installation

j) Install oil seal onto input shaft with flat side of seal facing upward. Slide seal downward carefully to the case bore.

k) By using the large end of the 1/4" extension (6"), carefully tap the seal into the case bore until it is flush with the top edge of the case completely around the seal. (See illustration)

IMPORTANT!!!

Move extension in a circular motion around circumference of oil seal while taping lightly against it; in order to keep seal square with input shaft.



Pulley/Fan Installation

l) Remove tape from input shaft.

m) Install snap ring (new ring recommended) onto lower groove of input shaft.

n) Install pulley onto input shaft (with hex hub facing upward) and push it downward until it contacts snap ring.

o) Align molded hex of fan assembly over the pulley hex hub.

p) Secure fan to pulley hub with washer and snap ring. (new ring recommended)

Note: If snap ring fits loosely on input shaft, snap ring must be replaced.

q) Reinstall transmission into Rider per Husqvarna's procedures and check to confirm oil leak is gone.

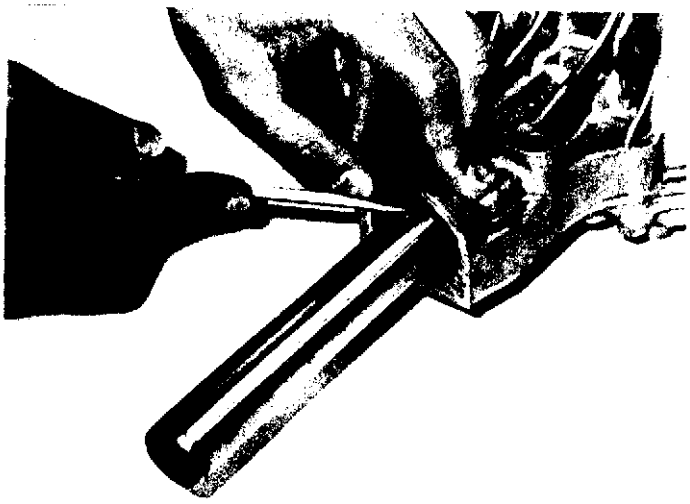
r) Add SAE 10w30 motor oil into expansion reservoir to recommended level.

AXLE SEAL REPLACEMENT

Tools/Supplies Needed

a) Snap ring pliers (Small)
b) Flat blade screwdriver (~5 mm width)
c) Small hammer
d) 1/4" x 6" drive extension (used as a punch for driving seal in place)
e) Lubricating grease
f) 10w30 motor oil

Wheel and Seal Removal

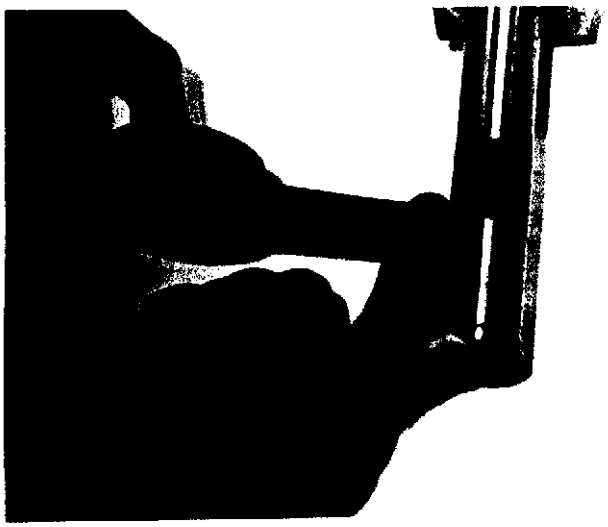


a) Remove wheel and hardware per Husqvarna's procedures.
b) Clean all dirt, debris, etc. from axle shaft.

IMPORTANT!!!
Do not allow dirt to enter transmission as dirt will reduce life of transmission.

c) Insert screwdriver tip between I.D. of inner lip and O.D. of axle shaft and pry seal away from case with a twisting motion. (see illustration)

Seal Preparation

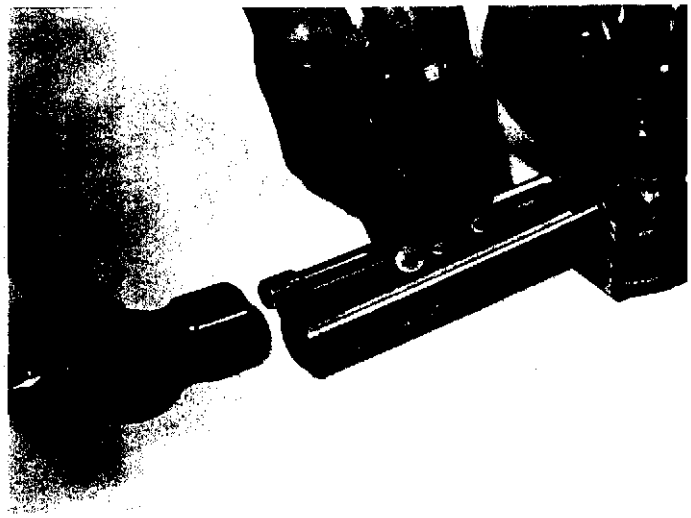


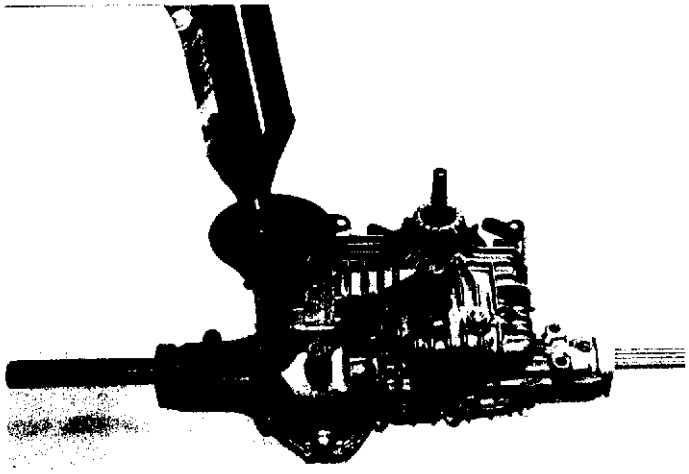
d) Wrap axle shaft with electrical tape along full length of keyway to protect seal lip from damage by sharp edges of snap ring grooves and keyway.

Note: Wrap tape by starting inboard of the keyway and then spiraling the wrap outward, with some tension on tape, until entire keyway and grooves are covered. (See illustration)

e) Apply grease to inner lip of new oil seal and surface of axle shaft (including taped area) so seal will slide easily without damaging seal lip.

Seal Installation





f) Carefully slide new seal over taped axle shaft with metal spring on seal facing inward. Gently move the seal up to the bore of the case.

Note: Check to assure that metal spring reinforcement is on side of seal facing inward before fully installing seal into case bore.

g) Using the male end of the 1/4" socket wrench drive extension (6") and a small hammer, gently tap the seal into the bore of case. (See illustration)

Note: Seal is fully installed when it bottoms against the inner surface of case bore.

IMPORTANT!!!

1) Be sure to drive seal into case by the steel outer seal casing only!
2) Move extension in a circular motion around circumference of oil seal while taping lightly against it; in order to keep seal square with axle shaft.

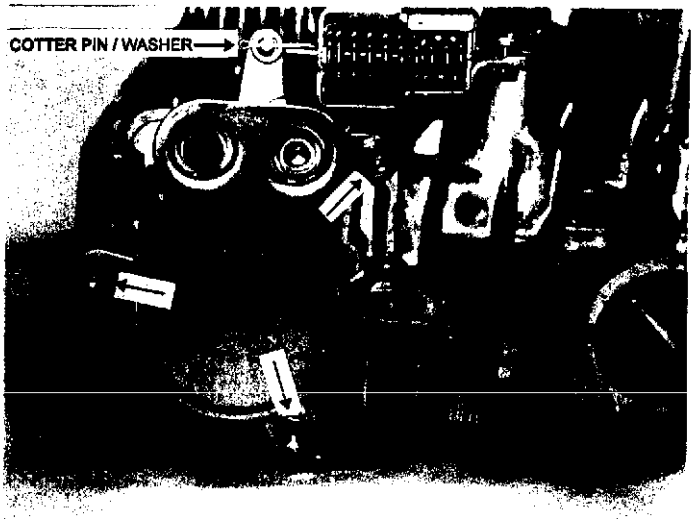
h) Remove tape from axle shaft.
i) Install wheel and hardware per Husqvarna's procedure.
j) Add SAE 10w30 motor oil into expansion reservoir to recommended level.
k) Test Rider to confirm oil leak is gone.

BRAKE COMPONENT REMOVAL AND REPLACEMENT

Tools/Supplies Needed

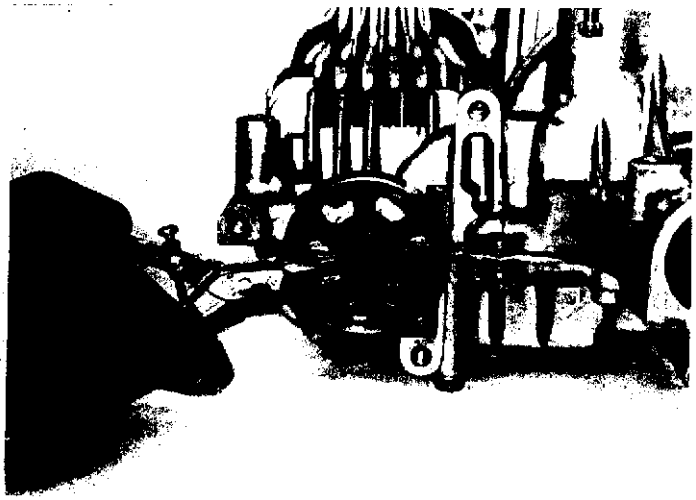
a) Pliers
b) 12 mm socket & wrench
c) Snap ring pliers (small)
d) Pulley/wheel puller (possibly needed)
e) Penetrating oil (possibly needed)

Band Brake Removal



a) Chock wheels so that Rider cannot roll.
b) Release parking brake.
c) Remove cotter pin and washer from brake spring rod. (See illustration)
d) Remove (3) mounting bolts/washers (arrows) from transmission and remove band brake assy. (See illustration)

Drum Removal

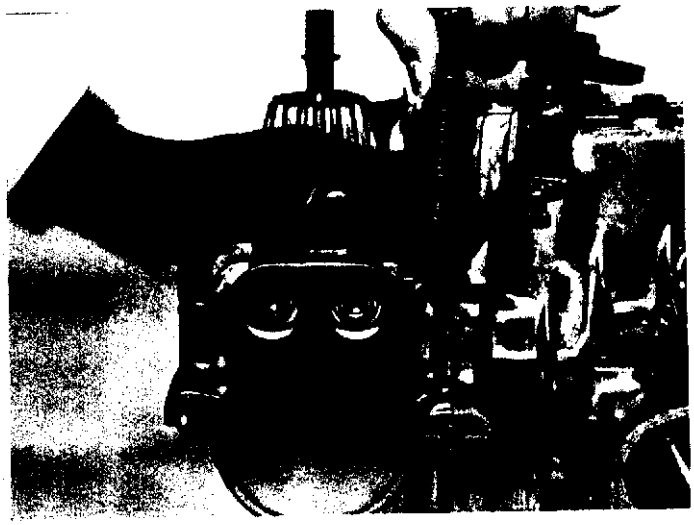


Note: Drum removal is seldom necessary. However, if needed, please follow instructions below:

e) Remove snap ring and drum from shaft. (See illustration)

Note: A wheel puller and/or penetrating oil may be necessary to aid in removing drum.

Drum/Band Assembly Instructions

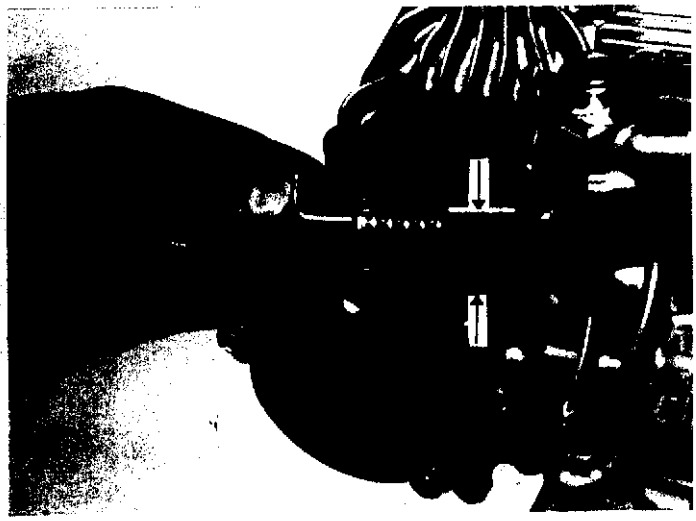


f) Install brake drum and new snap ring onto shaft.

g) Install brake band assembly on transmission and start three (3) mounting bolts/washers by hand.

h) Push brake band lever toward rear of transmission to make band tighten around drum. While keeping band snug around drum with lever, tighten the 3 bolts/washers to 2.77 kg-m (20 ft. lbs.) torque. (See illustration)

Brake Spring Assy. Installation

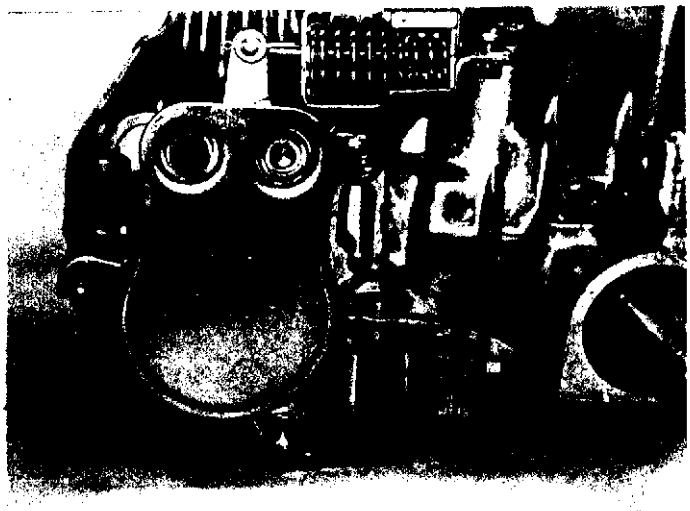


i) Install brake spring assembly onto the "gold" brake arm by aligning the slots in the brake spring assembly with the tabs on the brake arm stud.

IMPORTANT!!!

Install brake spring assembly so that the spring retainer tabs (arrows) on the assembly are pointing away from the transmission. (See illustration)

Brake Spring Assy. Installation



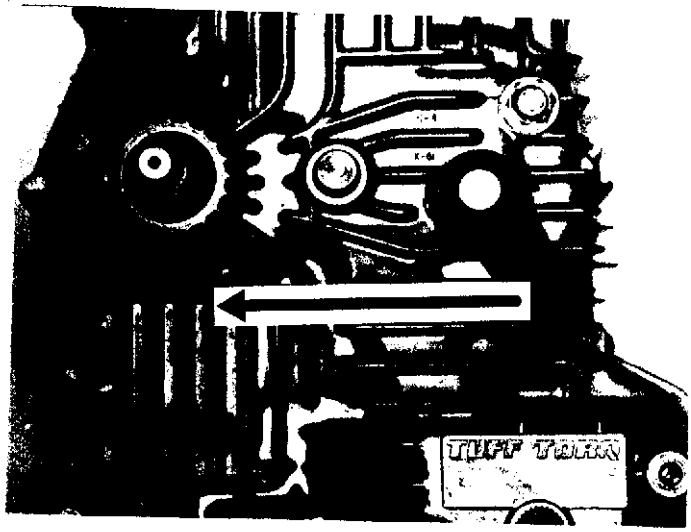
j) Hook adjustment rod of the brake spring assembly into hole of the band lever.

IMPORTANT!!!

Install rod into lever so that the washer and cotter pin will be on the outboard side of the band lever. (See illustration)

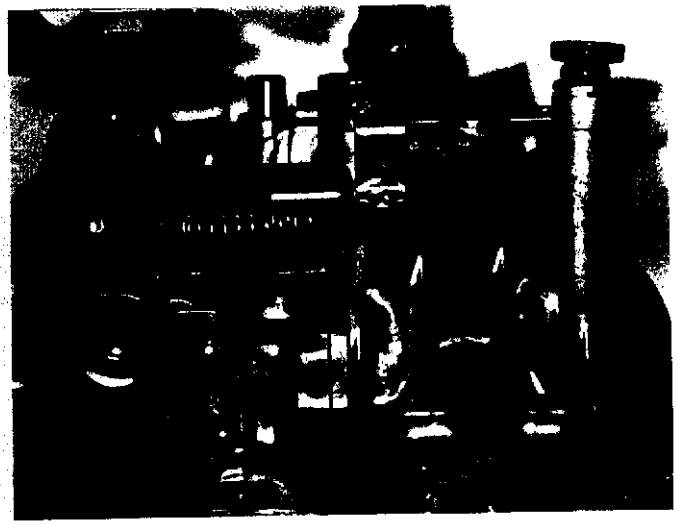
k) Check brake adjustment per BRAKE ADJUSTMENT PROCEDURES. (Page 8)

BRAKE ADJUSTMENT PROCEDURE



Preparation

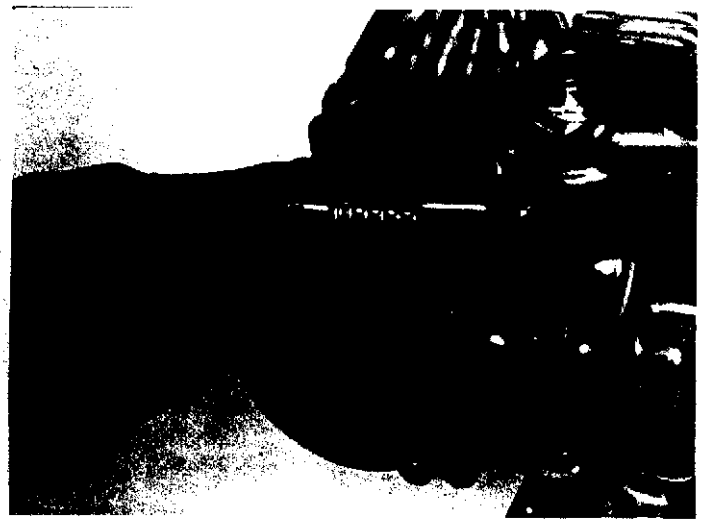
a) Lock Rider's parking brake and confirm that transmission brake arm (See illustration) is pulled fully forward. (Adjust Rider's parking brake linkage if necessary)



Checking Gap

b) With parking brake in full "ON" position, check gap between spring retainer bracket and spring. (See illustration)

Brake Spring Gap Spec. - 4 ~ 8 mm (5/32" to 5/16")



Adjusting Gap (If gap is not correct)

c) Disengage parking brake.
d) Remove cotter pin and washer from brake spring rod.
e) Rotate brake spring rod in or out of spring to adjust gap.
f) Hook brake rod into band lever and reinstall washer and cotter pin.

Note: Washer and cotter pin must be on outboard side of band lever.

g) Lock Rider's parking brake in full "ON" position.
h) Check gap again.
i) Repeat steps b) through h) until gap is correct.

BLEEDING AIR FROM HYDROSTATE OIL CIRCUIT

1. check oil level.

2. Start engine and operate at low idle.

3. Repeat opening and closing bypass valve while alternately depressing forward and reverse pedals.

4. When vehicle starts to move, increase engine speed.
5. When vehicle starts to move, increase engine speed to high idle.

6. Repeat quick starts and panic stops until transaxle gives full response.

7. Recheck and top-off oil level.

NOTE:

1) For immediate air bleeding, fill transmission with new oil through the connector hole of transaxle while rotating pump and motor shaft by hand via. the brake drum.

ADJUSTING NEUTRAL ON THE TRANSAXLE

1. Complete air bleeding on transaxle.
2. Place tractor's rear axle on jack stands with wheels off floor.
3. Remove necessary components from vehicle to access (brass colored) fulcrum on transaxle for adjustment.
4. Start engine and adjust throttle for high idle speed. (full throttle)
5. Turn fulcrum shaft clockwise until axle shafts rotate in reverse.
6. Mark the top of fulcrum.
7. Turn fulcrum shaft counterclockwise slowly until axle shafts stop rotating in reverse, and mark T/A case. [See Fig. 1]
8. Turn fulcrum shaft counterclockwise slowly until axle shafts rotate forward.
9. Turn fulcrum shaft clockwise slowly until axle shaft stops and mark T/A case. [See Fig. 1]
10. Rotate mark on fulcrum clockwise to a position one third (1/3) distance from forward stop point. [See Fig. 1]
11. Hold fulcrum shaft with M8 wrench, and tighten (M17) lock nut.
12. Confirm no rotation of axle shaft in neutral by slowly returning control lever to neutral from forward and reverse.

NOTE: If axle shafts do not rotate in reverse, although fulcrum has made one complete rotation, adjust neutral as follows:

1. Turn fulcrum shaft counterclockwise until axle shafts rotate forward.
2. Turn fulcrum shaft clockwise slowly until axle shafts stop.
3. Mark fulcrum shaft and T/A case. [See Fig. 2]
4. Turn fulcrum shaft clockwise 8° from mark on T/A case [See Fig. 2]
5. Hold fulcrum shaft with M8 wrench and tighten (M17) lock nut.

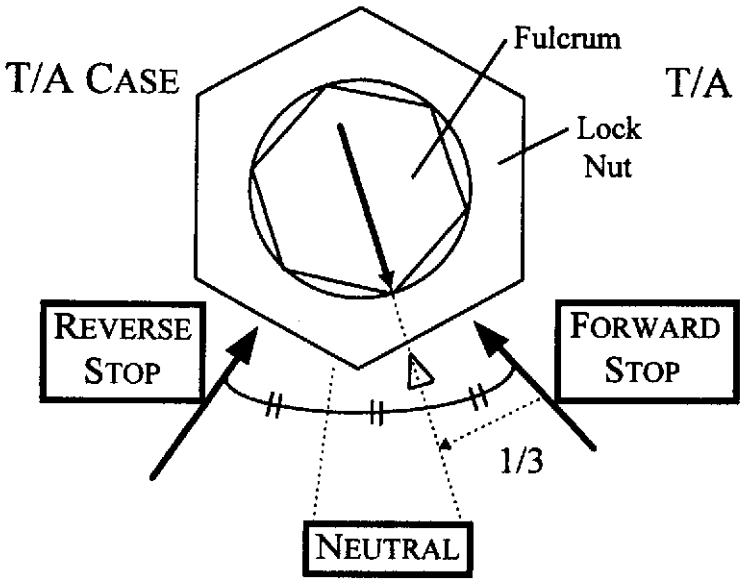


Fig #1 - Fulcrum and T/A case

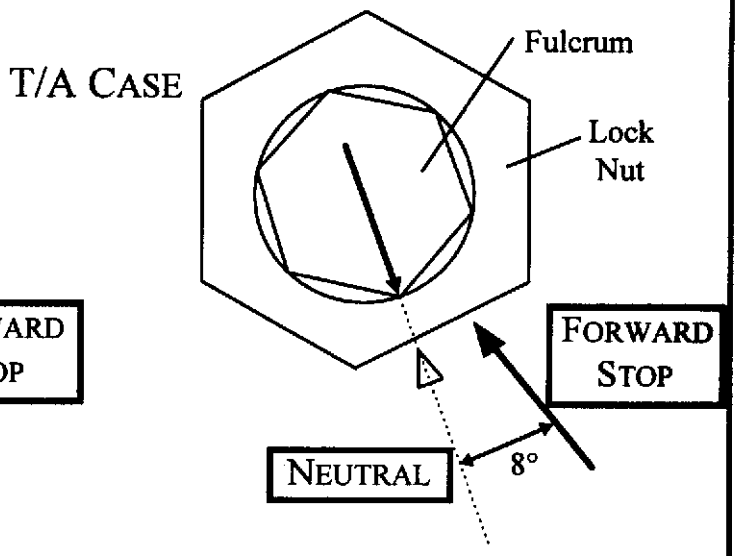


Fig #2 - Fulcrum and T/A case

MAINTENANCE

OIL CHANGE FREQUENCY

For consumer use in yard tractor and riding mower applications oil changing is not emphasized as most homeowners aren't equipped or in the habit of changing transmission oil. And for most consumers, the transaxle will outlast the life of the vehicle. But, it must be said that changing oil **will** extend the life of the transmission.

However, in commercial and heavy usage applications oil changing is recommended after the 1st 50 hours of operation and every 200 hrs., thereafter.

The filter should never require changing unless the transaxle is removed from the tractor or riding mower and opened for repairs.

OIL REQUIREMENT

Approximately 3.3 liters of SAE 10W30, Class CC or CD engine oil.

BRAKE ADJUSTMENT

The brake is only used as a parking brake; thus, wear should be minimal. However, if brake effectiveness is marginal, refer to Brake Adjustment Procedure. (Page 8)