

SHOP MANUAL

BINDER

GRADERS

FILE
E

SECTION
4 R2

7/74

GALION MANUFACTURING COMPANY, Galion, Ohio 44833, U.S.A.
DIVISION OF DRESSER INDUSTRIES, INC.

HYDRAULIC MOTOR

FOR SIDE SHIFT AND CIRCLE REVERSE

APPLICABLE TO THE FOLLOWING GALION MOTOR GRADERS:

MODEL

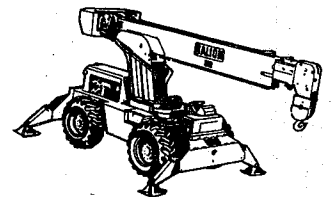
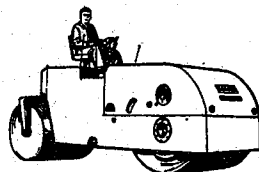
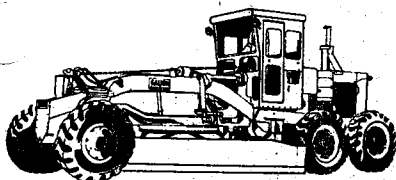
SERIAL NO.

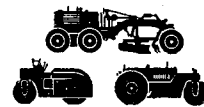
104
104A
104B
104HA
104HB
118A
118B

14400-07245
07245-07601
07601-08912
07245-07619
07619-08912
07245-07601
07601-08912, EXCEPT
8756, 8757, 8876 & 8877
02019-02155
02155-02358

160A
160B

R2





HYDRAULIC MOTOR

Used with grader circle reverse or side shift drive.

The hydraulic motor is a simple piston-bevel plate device.

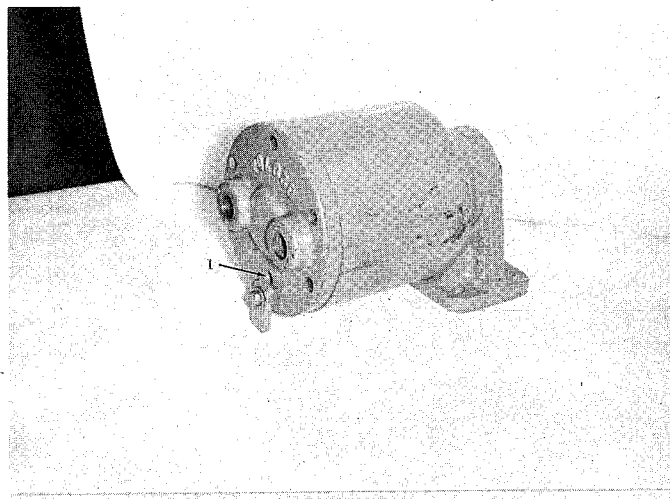
Unlike the Galion hydraulic pump, the Galion hydraulic motor is completely serviceable.

Remove hydraulic motor from motor grader.

Disassembly: 1

Illustrated is the Galion hydraulic motor with bracket mounting for side shift drive.

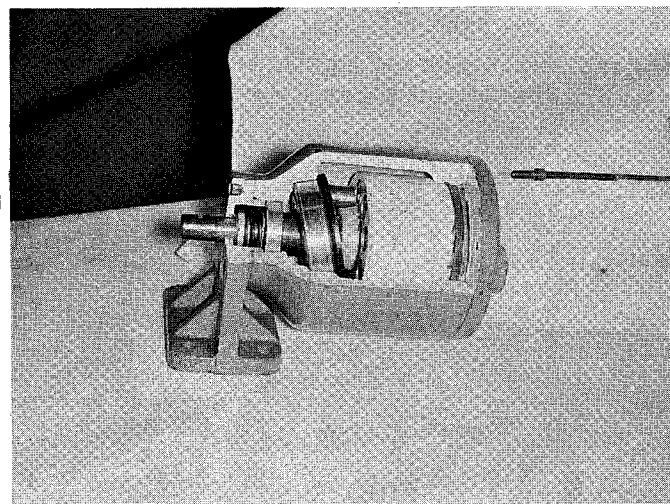
The motor is also used with a flange mounting for circle reverse drive.

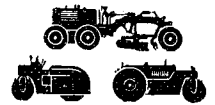


2

Remove socket capscrews from piston control end cap.

To better illustrate, a motor with a cut-away housing has been photographed.



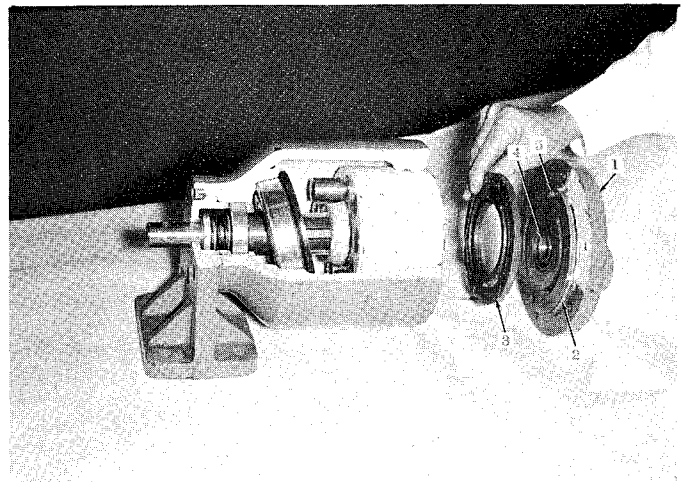


HYDRAULIC MOTOR

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Remove piston control end cap (1), "O" ring (2), friction plate (3), bearing (4) will remain in end cap.

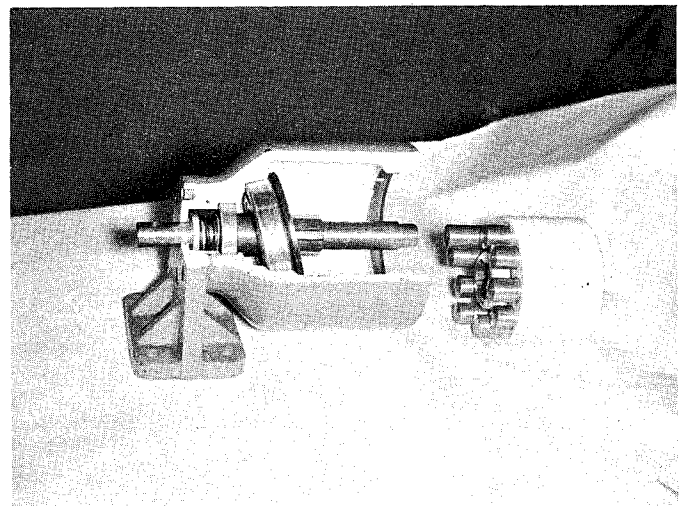
If bearing remains on drive shaft, pull bearing at this time.



4

Remove rotor and pistons.

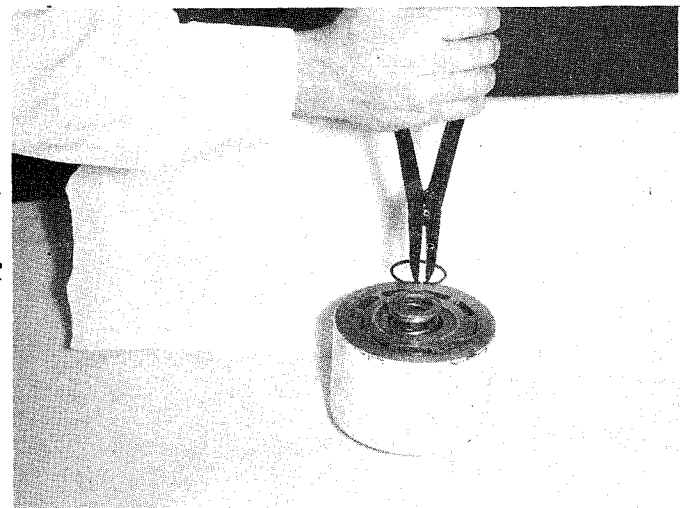
Pistons may now be removed from rotor.

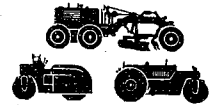


5

To keep rotor seated against friction plate, a spring is held in compression by the drive shaft.

To remove spring and plate, remove snapping.

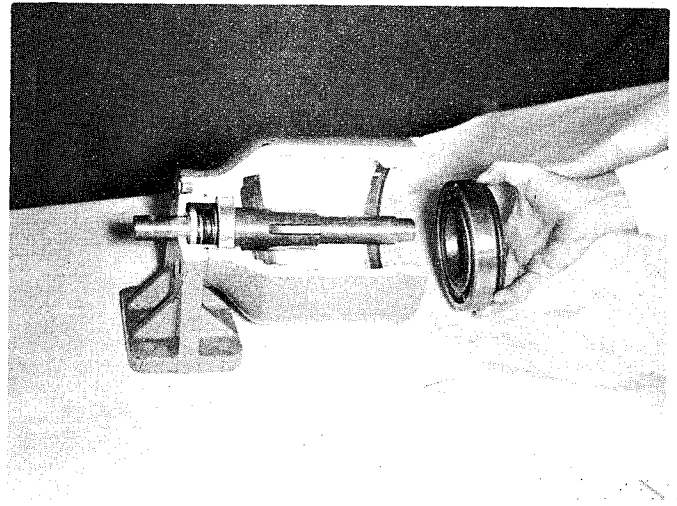




HYDRAULIC MOTOR

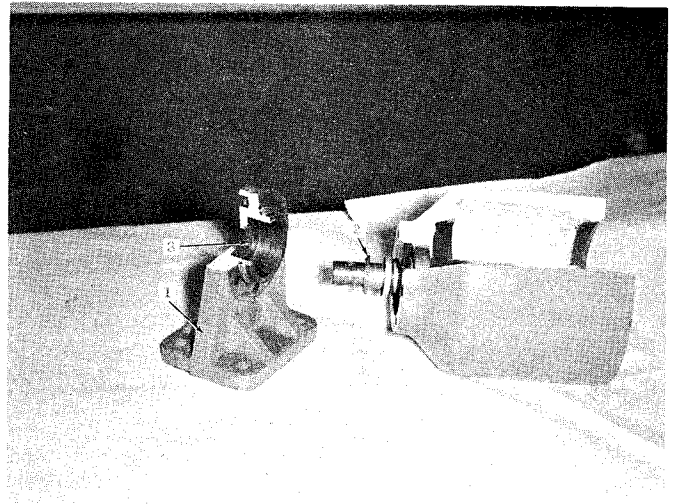
6

Remove bevel plate and bearing assembly.



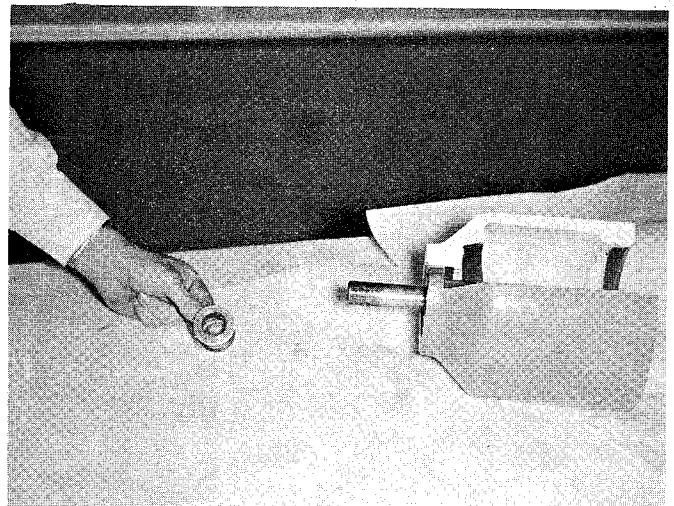
7

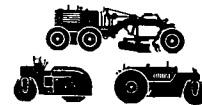
Remove bracket (1) or flange (not shown) from seal end of housing.



8

Remove drive shaft oil seal.





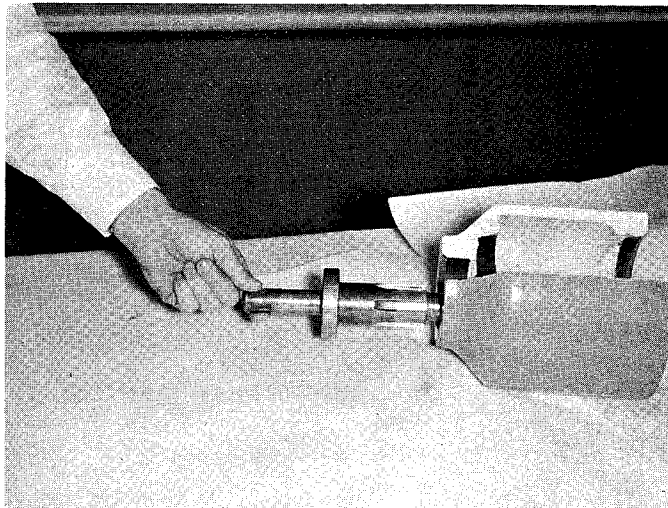
HYDRAULIC MOTOR

9

Remove drive shaft and bearing from housing.

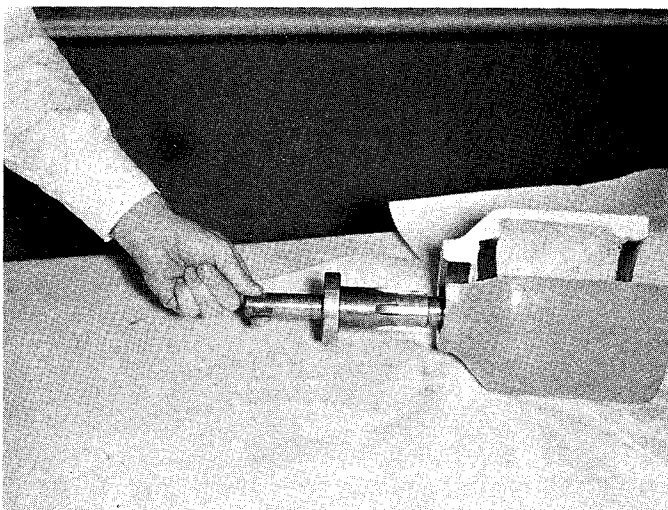
Inspect all components.

Replace all worn items prior to rebuilding.



Assembly: 10

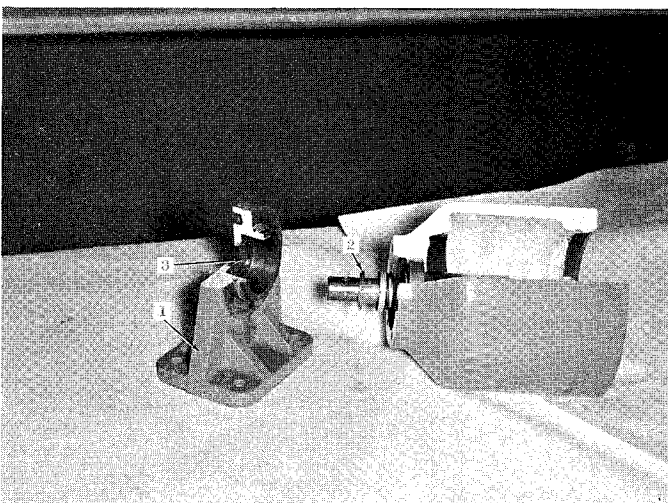
Install bearing on drive shaft and press into housing.

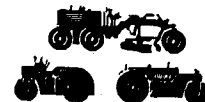


11

Install rotary seal--spring toward bearing.

Pilot insert (2) and pilot insert slot (3) in flange or bracket (1) must be lapped prior to assembly of bracket or flange to housing.





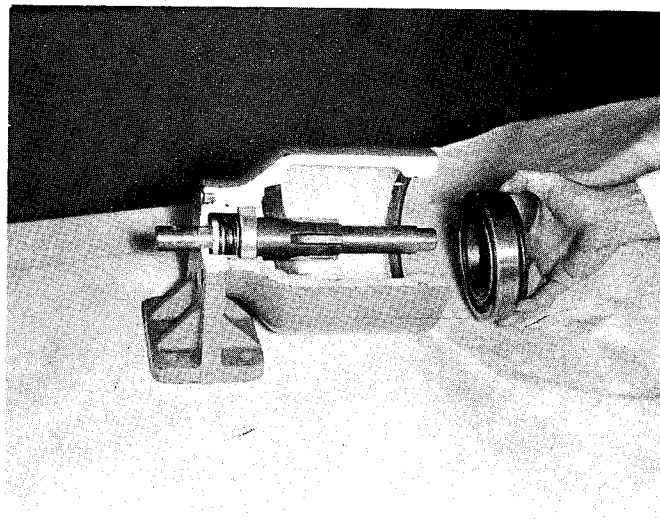
HYDRAULIC MOTOR

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Assembly bearing and bevel plate.

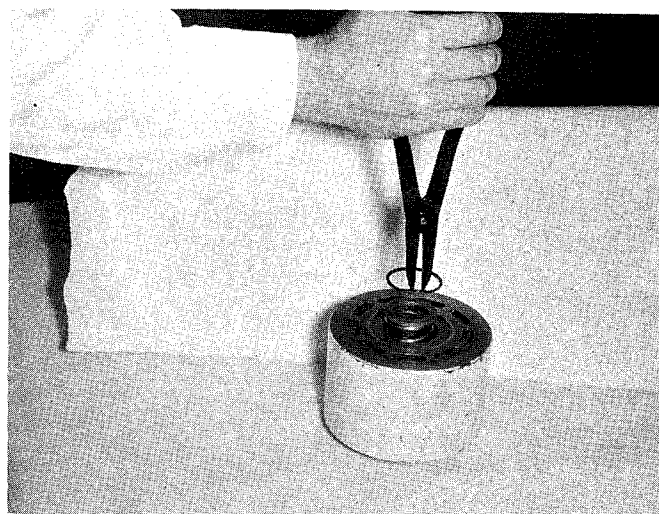
Bearing is a slip fit into housing.

It will not require pressure to assemble.



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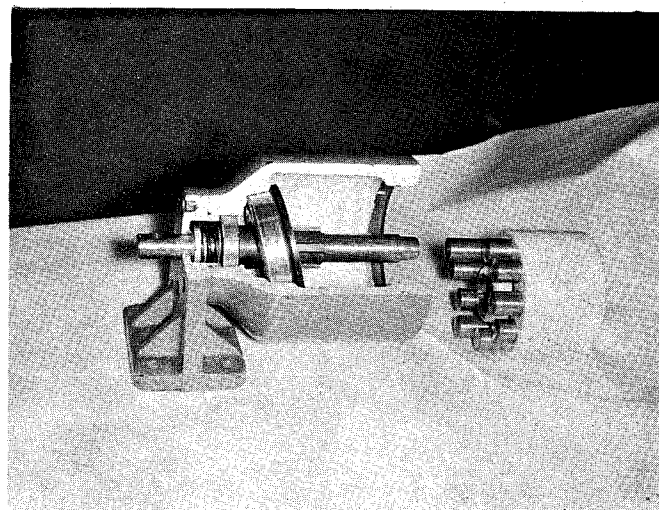
Install spring, washer, and retaining ring in rotor.

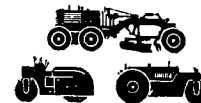


14

Install pistons in rotor and slip rotor over drive shaft in housing.

If pistons are undercut on one end, the undercut end goes toward the bevel plate when installed in the rotor.





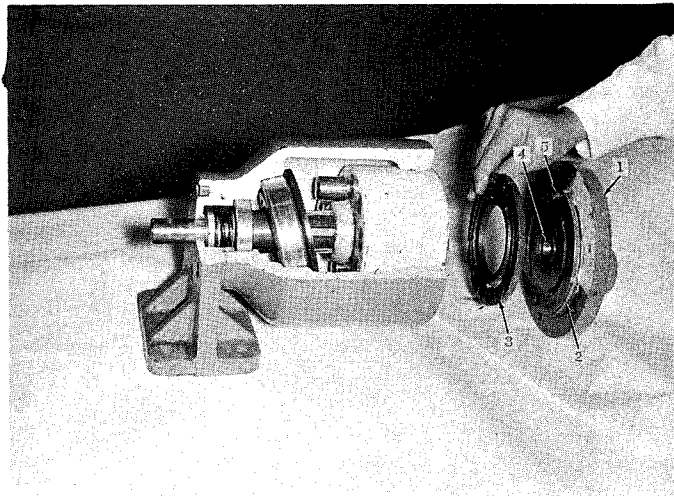
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Friction plate (3) is positioned on the end cap with a dowel pin (5).

Current production friction plates are made of brass.

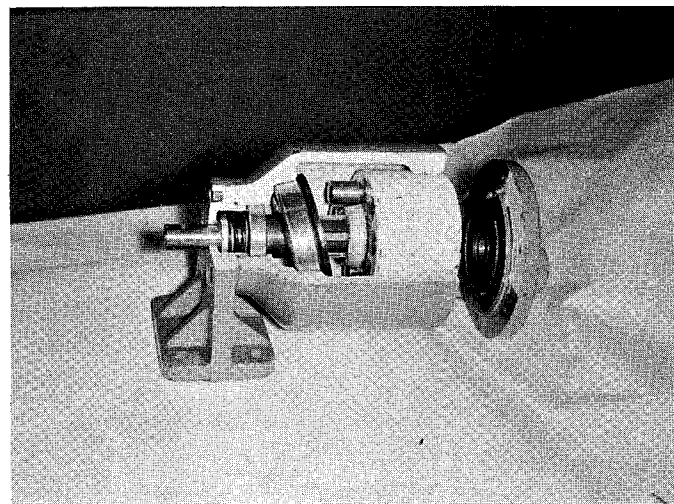
Earlier friction plates were made of cast iron.



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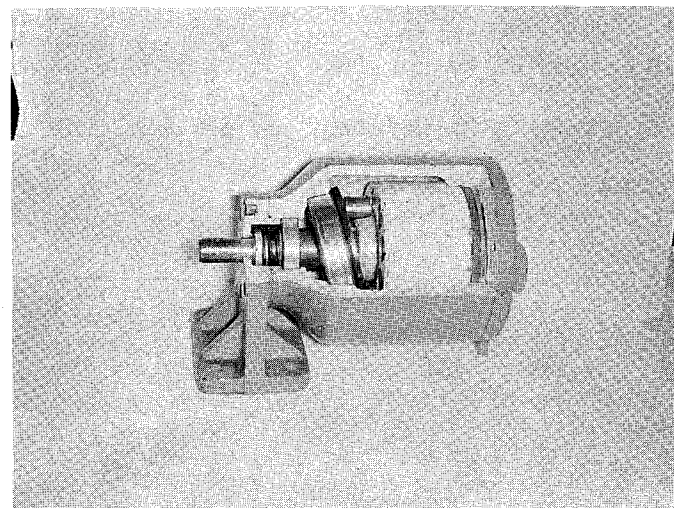
Assemble end cover, friction plate, and "O" ring to housing and install capscrews.

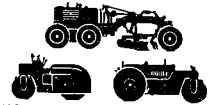
It will be necessary to compress rotor spring to install capscrews.



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Assembled motor ready for installation on unit.





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To check hydraulic motor after rebuild, install on grader and under heavy workload, drain line port (1) should not free flow more than one-half gallon per minute.

This leakage intended in the design of the motor to insure adequate lubrication of all components.

