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Wheel Horse Service Bulletins 1961 - 1990: **#106** Issued: December 1968  
**Hydraulic Unit HY-6, 8-4111 - Diagnosis and Repair Procedures**

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NOTE: Seal & Snap Ring Kit Described Below is Used to Service 6621 & 8363 Hydraulic Valves. Remove Detent Used on 8363 Before Removing Spool.

This bulletin covers diagnosis and repair procedures for the two types of troubles which can develop in the hydraulic lift system - internal and external leakage.

#### Internal Leakage:

The hydraulic lift can be expected to hold an attachment in the raised position for approximately 20 minutes. If an attachment settles too quickly, excessive internal leakage in either the hydraulic lift cylinder or the control valve is indicated. To determine which unit is at fault make the following test.

1. Raise the attachment with the hydraulic lift and observe which hose is under pressure.
2. Pinch this hose shut with a C-clamp or vise grip pliers taking care to protect the hose from sharp edges on the clamp or pliers.
3. If the attachment still settles in less than 20 minutes the lift cylinder must be replaced. If it now holds well, the control valve must be replaced.

#### External Leakage:

If the hydraulic lift cylinder or the hoses leak oil to the outside, they must be replaced. On the other hand, external leakage at the control valve can be repaired with Part No. 7788 seal and ring kit. Do not replace the valve.

Whenever leakage at the control valve is evident, always check to be sure the hoses are connected to the valve in accordance with instructions in Service Bulletin No. 90 dated January 1968. If the hoses are properly connected and leakage persists, install a No. 7788 kit in the control valve as follows:

1. Remove the control valve from the hood stand and position it to permit work on the end Opposite the actuator lever.
2. Push in on the spool valve with the actuator lever and remove the snap ring from the other end of the spool.

Note: If the snap ring pliers cannot be opened far enough in the small bore of the valve body, grind material from the jaws until they are able to spread the ring enough to release it.

Waldes Truarc pliers No. 2200 and replaceable tip types such as K-D Manufacturing Company's No. 446 work quite well.

3. Remove the acutator lever and pull the spool valve out of the - valve body. Caution: Use extreme care to avoid damage to the sealing surface and edges of the spool valve lands.

4. Remove the rubber seals from the spool valve and replace them with new No. 7878 seals coated with type "A" automatic transmission fluid. Be careful not to damage the sealing lips during installation and be sure the seals are installed with the lips facing each other.

5. Using a slight twisting motion to move the valve past points of resistance, insert the spool into the bore of the valve body.

6. Push the spool against spring pressure until the No. 936108 snap ring can be installed in the groove on the other end of the spool.

Note: The inner circumference of the snap ring is beveled on one side and square on the other. Install the ring with the square (sharp) edge out. Use care not to over-spread the ring or it will not hold in the groove.

7. Reinstall the actuator lever and mount the valve on the hood stand.