

**Case IH 8920  
SmarTrax™  
Installation Manual**

*P/N 016-0190-064 Rev A 04/16*

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CASE IH 8920

## SMARTRAX STEERING INSTALLATION

## MOUNTING HYDRAULIC BRACKET AND VALVE



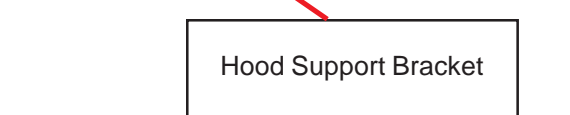
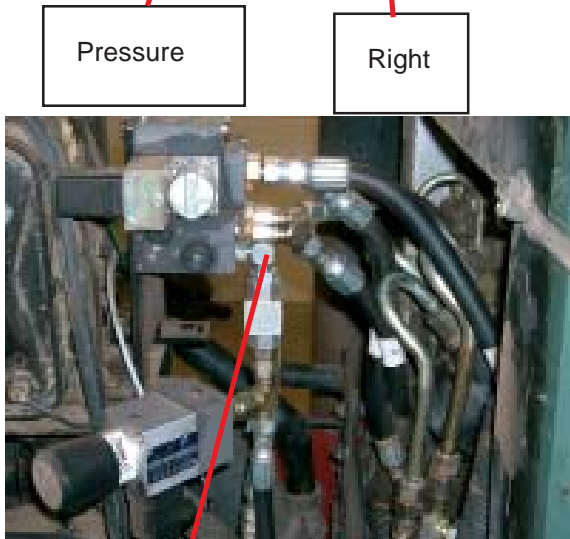
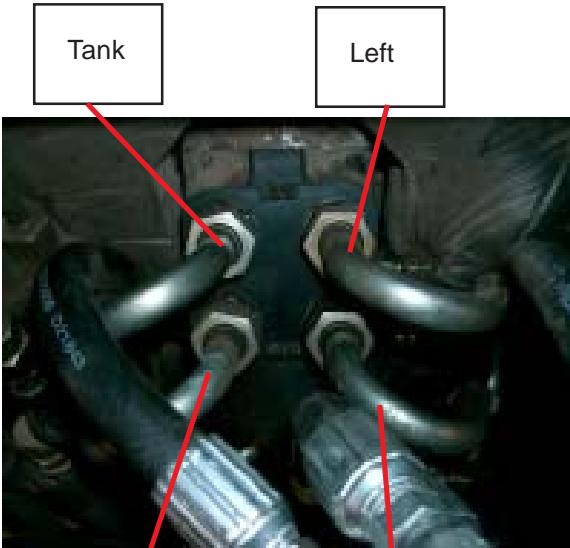
- ◆ Universal bracket mounts under hood, behind coolant reservoir.
- ◆ Two rear mounting bolts for coolant reservoir are removed.
- ◆ “T” shaped mounting bracket is aligned with reservoir mounting holes. Original bolts are re-installed and tightened.



NOTE: It may be necessary to slightly enlarge holes on “T” bracket to allow for holes to better line up with factory mounting holes.

- ◆ Hydraulic valve is then attached to rear side of “T” bracket using provided mounting bolts.

## INSTALLING PRESSURE, TANK, AND STEERING HOSES



- ♦ Access to steering orbital is located on front side of cab firewall as shown in figure.
- ♦ It may be convenient to remove hood support bracket for easier access to steering lines as shown in figure below.
- ♦ -6 JIC male fitting is removed from port labeled "LS" on Raven valve. Provided 90° elbow is installed in valve as shown in second figure. It may be necessary to remove adjacent fitting for installation. This part will be used later in installation.
- ♦ Tank hose is disconnected at the bottom of the steel tank port extension line. The provided -10 run tee is then connected to the steel tank line, and tank hose is reconnected to tee. -10(F) to -8(M) ORFS adapter is installed to open port of tee.
- ♦ The Raven tank line is installed by attaching one end to the previously installed tee and the other end to the "T" port on Raven valve using a supplied 45° fitting if desired.
- ♦ The pressure hose is disconnected at the bottom of the steel pressure port extension line. The provided -8 run tee is connected to the steel pressure line, and then the original pressure hose is connected to the tee.
- ♦ The Raven pressure hose is installed by connecting one end to the previously installed tee in the pressure line, and the other to the "P" port on Raven valve again using a supplied 45° fitting if desired.
- ♦ Next, both the left and right steer hoses are disconnected at the bottom of the steel lines from right and left steer ports. The provided -8 ORFS run tees are connected to the steel lines, then the hoses are connected to the tees on their corresponding lines.
- ♦ The Raven right and left steer hoses are installed by attaching one end to corresponding tees on steer orbital and the other to Raven valve. Port "A" on Raven valve is connected to left steer, Port "B" is connected to right steer.

## INSTALLING LOAD SENSE - PRIORITY AND STEER HOSES



Pressure Switch

Shuttle Check Valve



LS-PV Hose



Load Sense Hose

- ◆ The shuttle check valve is installed onto 90° elbow on the “LS” port of Raven valve.  
NOTE: It will be necessary to remove the pre-installed -6 JIC (F) fitting from the end port of the shuttle. This will allow for shuttle to directly attach to the 90° elbow as shown in figure.
- ◆ Original load sense hose is disconnected from side of steering orbital as shown in lower figure.
- ◆ The hose labeled “LS-PV” is then connected to the previously disconnected load sense hose and the other end is attached to port on side of shuttle as shown in second figure.
- ◆ The pressure switch is then installed by attaching the pre-installed tee on pressure switch to lower port on shuttle as shown in the top figure.
- ◆ Raven hose labeled “LS-Steer” is installed by connecting one end to previously disconnected load sense port on steering orbital and the other to the open port on pressure switch tee.

## MOUNTING STEERING POSITION SENSOR (S.P.S.)



- ◆ The SPS is mounted to the left steering cylinder of machine.
- ◆ One end is attached to the base end of steering cylinder using the supplied hose clamps.
- ◆ The other end of the SPS is attached to the steering cylinder by fabricating a bracket similar to the one shown to extend the SPS mounting point past the end of the steering cylinder.
- ◆ **IMPORTANT! On initial start-up, be sure to check SPS stroke by turning the wheels slowly. Do not over compress or over extend the sensor.**
- ◆ Access to hole into cab for wiring is located at front right corner of cab. May be necessary to remove black corner panel in corner of cab for easier access.

## START-UP PROCEDURES

- ◆ **Check S.P.S. stroke length to be sure it is not over compressed or over extended.**
- ◆ Set valve timing for a left to right and right to left time of 11 to 12 seconds. Use controller to pulse valve full left and full right.
- ◆ Turn steering wheel left & right to purge hydraulic system of air.
- ◆ Adjust pressure switch to most responsive setting. For more information on this, refer to Universal Kit manual.







**RAVEN**

# **RAVEN INDUSTRIES**

## **Limited Warranty**

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### ***What Does this Warranty Cover?***

This warranty covers all defects in workmanship or materials in your Raven Applied Technology Product under normal use, maintenance, and service.

### ***How Long is the Coverage Period?***

Raven Applied Technology Division products are covered by this warranty for 12 months after the date of purchase. This warranty coverage applies only to the original owner and is non-transferrable.

### ***How Can I Get Service?***

Bring the defective part and proof of purchase to your Raven Dealer. If your Dealer agrees with the warranty claim, the Dealer will send the part and proof of purchase to their distributor or to Raven Industries for final approval.

### ***What Will Raven Industries Do?***

Upon confirmation of the warranty claim, Raven Industries will, at our discretion, repair or replace the defective part and pay for return freight.

### ***What is not Covered by this Warranty?***

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