

Document Number:

HD911-INST

Description:

**INSTRUCTION SHEET, DUC TO
PR/SPR, W/O LIFT**

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Rev	Date	ECN	Description	RC	DWN
-	4/5/11	-	INITIAL RELEASE	-	AC
A	6/2/12	11758	CHANGED BOM, CHANGED PHOTOS	5	AC
B	5/21/15	12741	CHANGED FIGURES 4 & 5	5	TT
C	11/07/19	14248	ADDED HD380 CONFIG, CHANGE TO POWER POINT	5	TW
D	3/16/21	14517	ADDED HD357 TO BOM AND ADDED -2 CONFIGURATION	6	GMG

BILL OF MATERIAL						
-2	-1	BASIC	ITEM	DESCRIPTION	PART NO	NOTE
0	2	2	1-	CLAMP, CABLE, NYLON, .375 ID	121003	
0	2	2	2	SCREW, PAN, 10-32 X 3/8 SST	103031	
0	2	2	3	WASHER,FLAT,#10 SST	100140	
0	0	2	4	CABLE,Y-CBL,HD12>PR/SPR,32"L,DUC	HD308	
0	1	1	5	BRACKET, MOUNTING, SPLITTER CABLE, HD CAMERA	HD047	Reference
0	2	2	6	SCREW, STD CAP, HEX, SKT, .25-20 X .312, 18-8, SST	HW2353	Reference
0	1	1	7	SCREW, STD CAP, HEX, SKT, 10-32 X .750, 18-8, SST	100121	Reference
0	2	2	8	CAP,F/RECEPT,DUAL KEYWAY,(F/EC430)	EC431	
0	2	0	9	ADAPTER,HD12>CATVS,STRAIGHT,32"	HD342	
1	1	1	10	INST SHT,DUC TO PR/SPR,W/O LIFT	HD911-INST	
1	0	0	11	ADAPTER,DUC,PR,5 PIN,M12	HD357	

Camera Cable Configuration Matrix				
Camera	HD300	HD300-1	HD300-2	HD380
Cable	HD308	HD308	HD342	HD342/HD357

Description: This document details the installation of the camera connection cables for the DUC cameras on the Pipe Ranger or Steerable Pipe Ranger, without a lift. There are several versions of the DUC camera. The HD300 and the HD300-1 versions use the right angle connector cable HD308. The HD300-2 and HD380 versions utilize the straight connector cable HD342. HD357 used on legacy 12 pin systems and it is only compatible with the HD380 camera. This document is divided into three sections: the section for the HD300 and HD300-1 cameras which use the right angle connector adapter cable HD308, the section for the HD300-2 and HD380 cameras which use the straight connector adapter cable HD342, and the section for the HD380 camera when used in 12 pin legacy systems.

Note: The HD380 camera requires the PipeRanger clamshell.

HD300 & HD300-1 Cable Installation Instructions



STEP 1 –

- HD300 AND HD300-1 ONLY. IF NECESSARY, INSTALL THE HD308 CABLE TO THE BRACKET (HD047) WITH THE 10-32 SCREW (100121) NOTE: BOSS ON SPLITTER MUST FIT INTO THE HOLE ON BRACKET. SEE FIG 1.



STEP 2

- HD300 AND HD300-1 ONLY. IF NECESSARY, INSTALL BRACKET (HD047) WITH SCREWS (HW2353) TO THE CAMERA, NOTE: IT MAY BE NECESSARY TO FIRST REMOVE SET SCREWS INSTALLED IN THIS LOCATION. SEE FIGURES 2 AND 3.



HD300 & HD300-1 Cable Installation Instructions

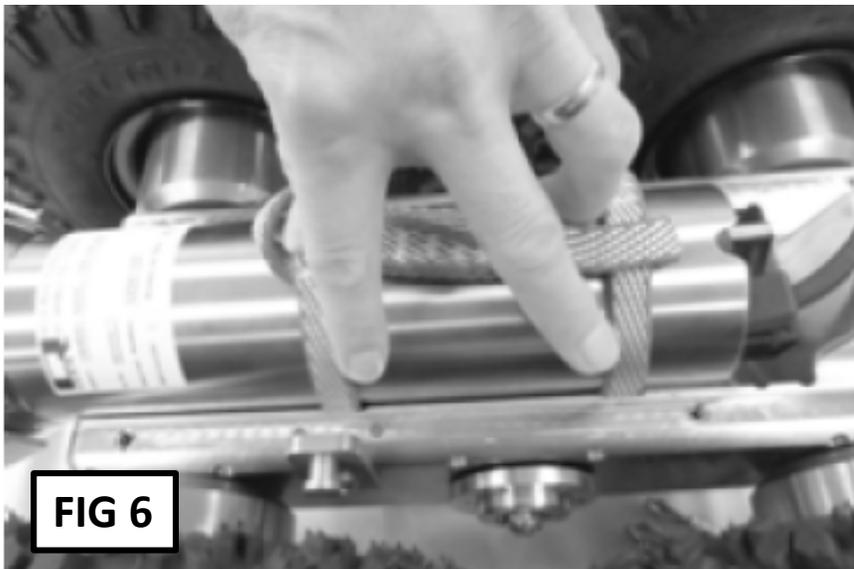
STEP 3

- IF NECESSARY, ROUTE HD308 CABLE AS SHOWN AND CONNECT IT TO THE CAMERA. SEE FIG 4.

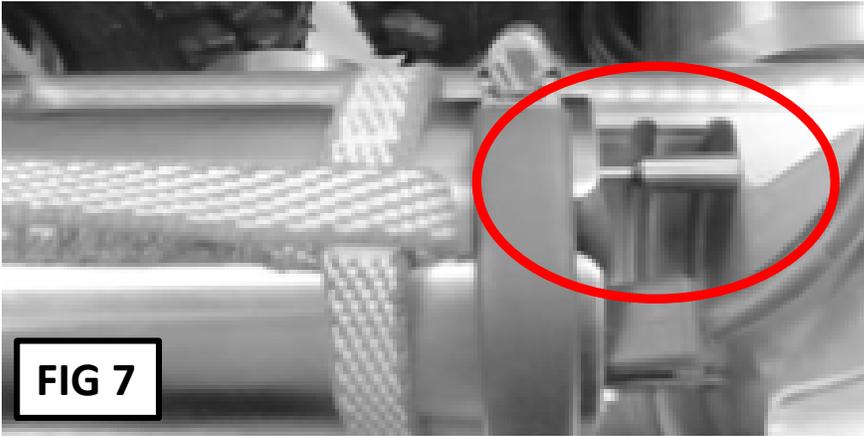


STEP 4

- SLIDE THE LIFTING LOOP, WT114, OVER THE HD308 CABLE AND ONTO THE CAMERA. SEE FIG 5.

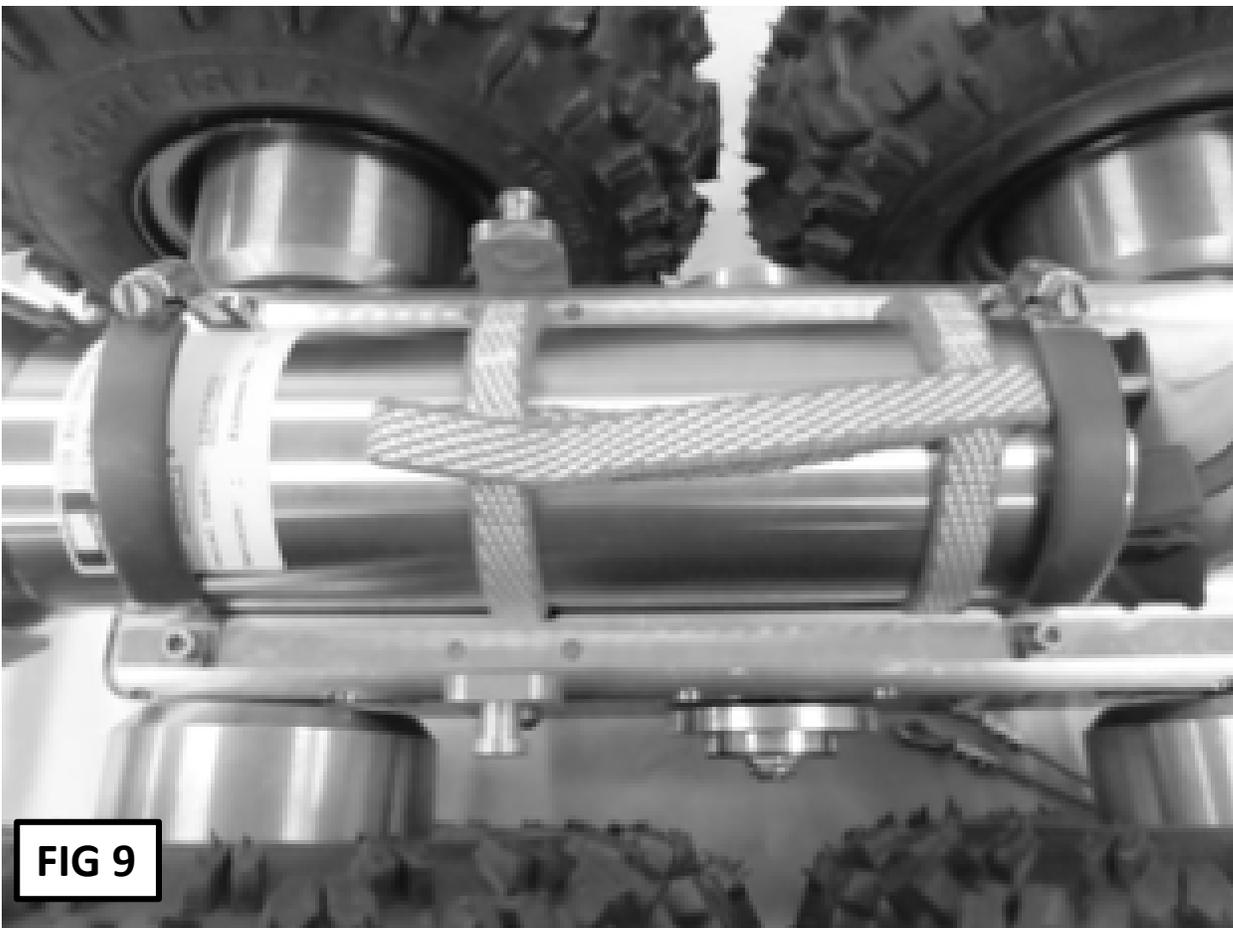


HD300 & HD300-1 Cable Installation Instructions



STEP 5

- SLIDE THE CAMERA REARWARD UNTIL THE STOP BAR CONTACTS THE TRANSPORTER BODY, FIG 7.
- ROTATE THE CAMERA IF NECESSARY TO POSITION THE CUTOUT ON THE REAR HOUSING VERTICALLY FIG 7.
- INSTALL AND TIGHTEN THE TWO CAMERA CLAMPS (WT091). SEE FIGURES 7, 8, AND 9.
- Alternatively the “Clamshell Cover (WS113 Brass or WS113-1 Aluminum)” for the SPR can be used instead of the clamps.



HD300 & HD300-1 Cable Installation Instructions

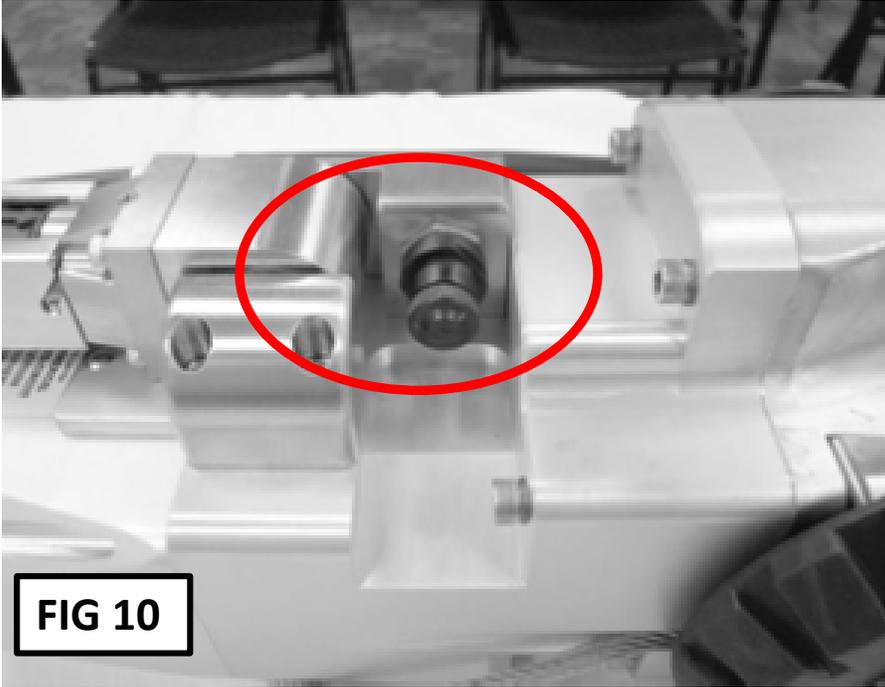


FIG 10

STEP 6

- INSTALL THE CONNECTOR CAP, EC431, ONTO THE 5-PIN CONNECTOR, SEE FIG 10.

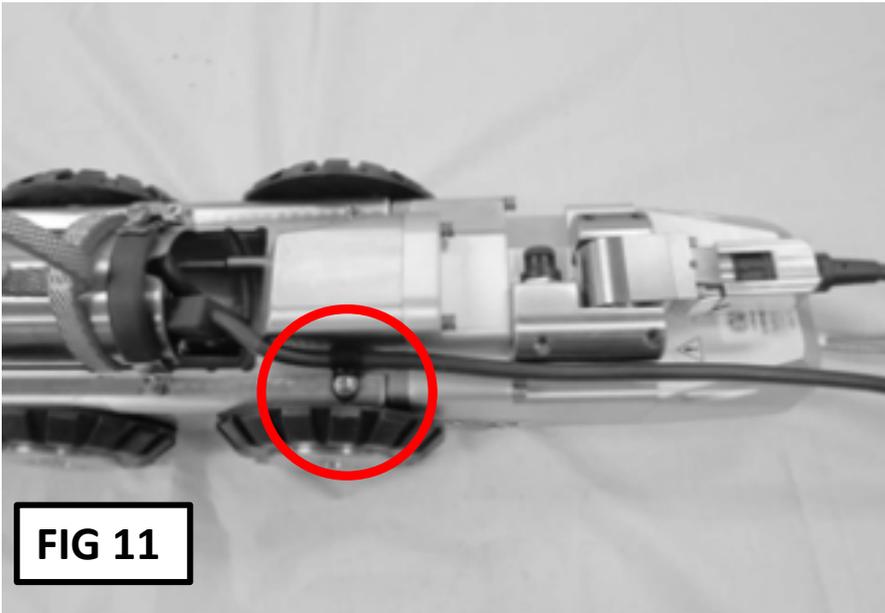


FIG 11

STEP 7

- SECURE THE CABLE TO THE TRANSPORTER BODY USING THE CABLE CLAMP (121003), SCREW (103031) AND WASHER (100140). SEE FIG 11.

HD300-2 & HD380 Cable Installation Instructions



STEP 1

- **NOTE – The Clamshell Camera Retainer must be used with the HD380 because the stop bar is longer to accommodate the straight connector. This pushes the camera forward and the rear hose clamp does not engage the camera.**
- Attach Cable HD342 to the camera being careful to line up the connector properly so as not to damage the pins.
- Place the camera into the transporter cradle as shown.

HD300-2 & HD380 Cable Installation Instructions



STEP 2

- Push the cable forward and loop it as shown in preparation to attach it to the mounting bracket.

HD300-2 & HD380 Cable Installation Instructions



STEP 3

- Align the Strain Relief Block with the mounting bracket and with the rubber locating feature as shown.

HD300-2 & HD380 Cable Installation Instructions



STEP 4

- Align the mounting screw (100121) to the threaded hole in the bracket and tighten. It may be necessary to rotate the rubber strain relief block while pushing on the screw in order to “feel” the screw fall into the mounting hole. Note the proper angle of the mounting block in the photos.



- NOTE – Do not over tighten the mounting screw. The screw should be snug and bottomed out in it’s pocket but not deforming the mounting block or burying itself into the rubber.

HD300-2 & HD380 Cable Installation Instructions



STEP 5

NOTE: The Clamshell Camera Retainer must be used with the HD380 because the stop bar is longer to accommodate the straight connector.

- Align the camera by sliding it back until the stop bar engages with the back of the pocket then rotate into position and secure in place by attaching the clamshell.

HD300-2 & HD380 Cable Installation Instructions



STEP 6

- If necessary, remove the set screw from the threaded hole shown to prepare for attaching a cable clamp.
- Install the cable clamp (121003) washer (100140) and screw (103031) as shown to retain the cable.
- Attach the 12 pin portion of the cable to the transporter, not shown, and retain as is typically done.



HD300-2 & HD380 Cable Installation Instructions



STEP 7

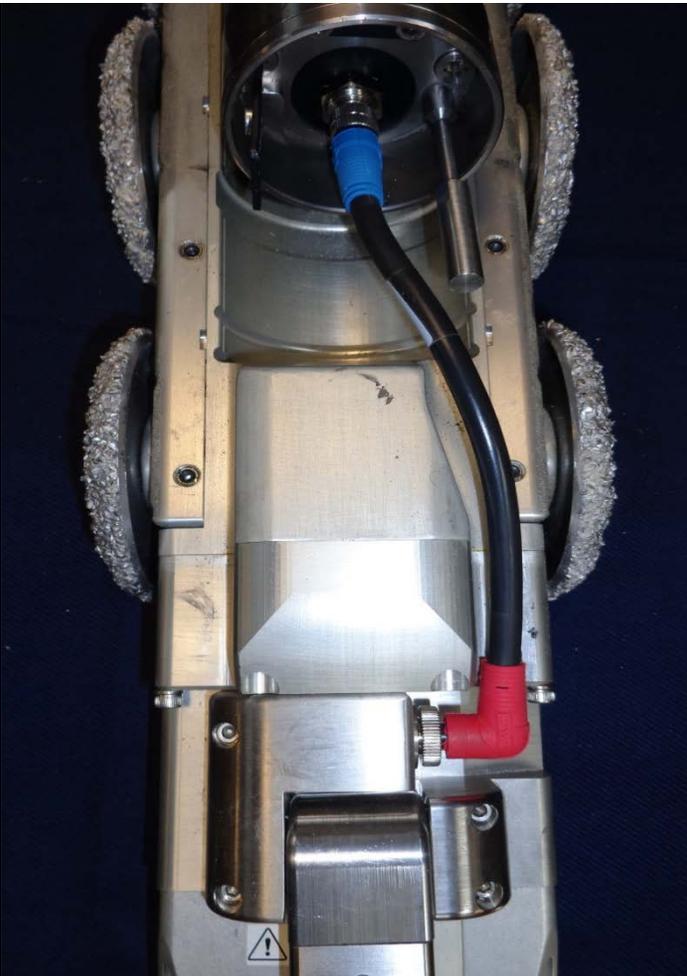
- INSTALL THE CONNECTOR CAP, EC431, ONTO THE 5-PIN CONNECTOR AS SHOWN.

HD380 12-Pin Legacy Cable Installation Instructions



STEP 1

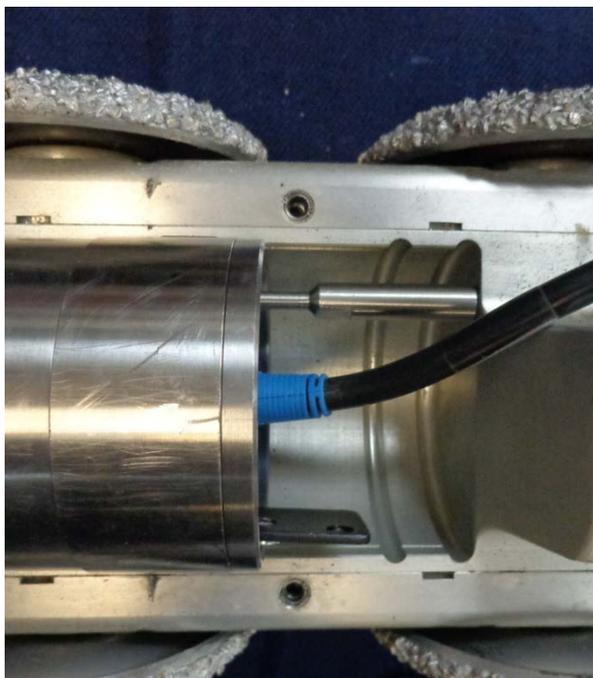
- Plug the blue end straight connector of the HD357 adapter to the HD380 camera. Verify it is fully seated.



STEP 2

- Plug the red end right angle connector of the HD357 adapter to the 5 pin connector on the Pipe Ranger. Verify it is fully seated.

HD380 12-Pin Legacy Cable Installation Instructions



STEP 3

- Place the camera all the way back and rotate until leveled with the transporter.



STEP 4

NOTE: The Clamshell Camera Retainer must be used with the HD380 because the stop bar is longer to accommodate the straight connector.

- Place the transporter clamshell and secure in place by tightening its four screws.

HD380 12-Pin Legacy Cable Installation Instructions

STEP 5

- The final set up should look like this.

