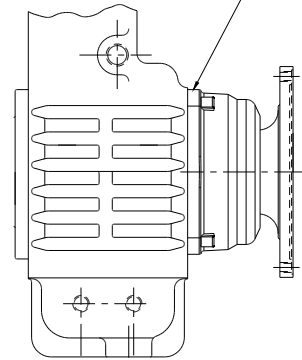




SHIM INSTALLATION PROCEDURE

- STEP 1: ENSURE PARKING BRAKE IS ON. DRAIN GEARBOX OIL.
- STEP 2: SHIFT GEARBOX TO "PUMP" POSITION IF NOT DONE SO ALREADY. DISCONNECT THE DRIVELINE SHAFT FROM THE PUMP GEARBOX TAIL SHAFT ASSEMBLY.
- STEP 3: REMOVE THE (4) 7/16" BOLTS (HALE p/n: 018-1812-25-0)
- STEP 4: REMOVE THE TAIL SHAFT ASSEMBLY FROM THE PUMP GEARBOX HOUSING. COMPLETELY REMOVE THE GASKET FROM THE REAR BEARING CAP. CLEAN THE SURFACE OF THE REAR BEARING CAP AND THE GEARBOX SURFACE.
- STEP 5: RE-INSTALL THE TAIL SHAFT ASSEMBLY TO THE GEARBOX HOUSING WITHOUT A GASKET OR SHIMS AND TORQUE THE (4) 7/16" BOLTS TO 30 FT/LBS IN THE PATTERN SHOWN IN FIGURE 1.
- STEP 6: USING A FEELER GAUGE MEASURE THE GAP BETWEEN THE BEARING CAP AND THE FACE OF THE GEARBOX HOUSING. THE GAP SHOULD BE TAKEN BETWEEN TWO BOLTS ON MULTIPLE SIDES OF THE BEARING CAP. NOTE THE LARGEST READING YOU RECORD.
- STEP 7: REMOVE THE TAIL SHAFT AND CLEAN THE THREADS IN THE GEARBOX HOUSING AND THE REAR BEARING CAP TO REMOVE ANY LOCTITE RESIDUE. CLEAN THE GEARBOX HOUSING THREADS WITH THE PRIMER PROVIDED.
- STEP 8: SEE THE CHART IN FIGURE 2 TO DETERMINE THE CORRECT SHIM STACK TO BE USED, BASED ON THE MEASUREMENT YOU RECORDED IN STEP 6.
- STEP 9: INSTALL THE TAIL SHAFT ASSEMBLY WITH THE NEW GASKET AND SHIMS. GREASE THE NEW GASKET SUPPLIED BY HALE PRODUCTS THEN POSITION THE GASKET AND SHIM STACK USING (2) BOLTS TO ALIGN COMPONENTS TO THE REAR BEARING HOUSING. BE CAREFUL NOT TO GET GREASE ON THE BOLT THREADS AS IT MAY INTERFERE WITH THE THREAD ADHESIVE AFTER INSTALLATION.
- STEP 10: INSTALL TAIL SHAFT ASSEMBLY TO GEARBOX HOUSING. APPLY LOCTITE TO THE THREADS OF THE NEW 7/16" BOLTS AND TORQUE TO 30 FT/LBS. IN THE PATTERN SHOWN IN FIGURE 1. REPEAT THE PATTERN UNTIL THE BOLTS ARE TORQUED TO 65 FT/LBS.
- STEP 11: USE GEARBOX OIL TO FLUSH OUT RESIDUAL PRIMER FROM STEP 7. REPLACE THE MAGNETIC DRAIN PLUG IN THE BOTTOM OF THE GEARBOX.
- STEP 12: REFILL GEARBOX WITH GEAR OIL TO OIL LEVEL PLUG ON THE GEARBOX HOUSING USING APPROXIMATELY (4) QUARTS OF SAE EP-90, 80W-90 API GL-5 OR 75W-80 SYNTHETIC OIL AND REPLACE THE FILL PLUG.
- STEP 13: REINSTALL OR RECONNECT ALL DRIVELINE COMPONENTS PER DEM SPECIFICATIONS.



STEP 6

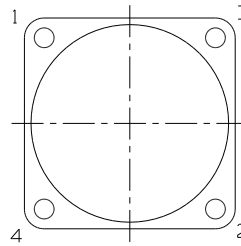
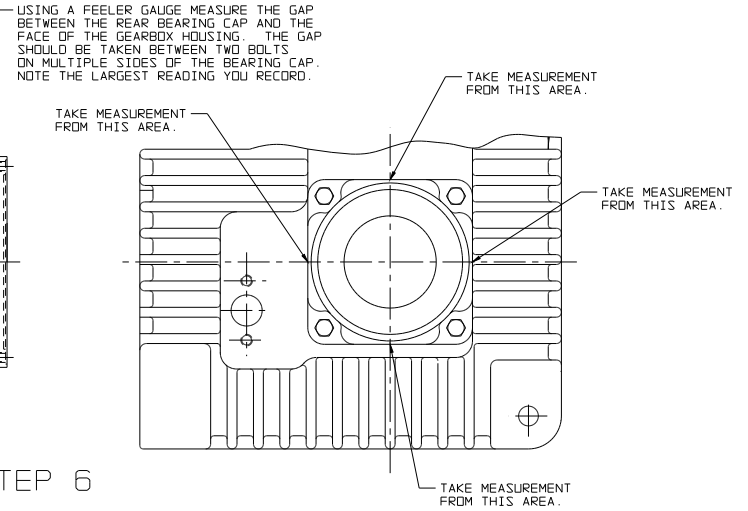
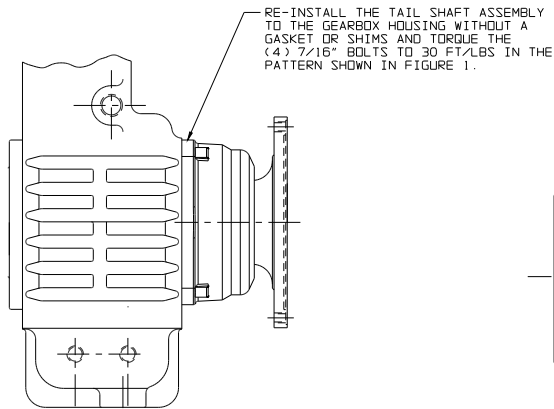


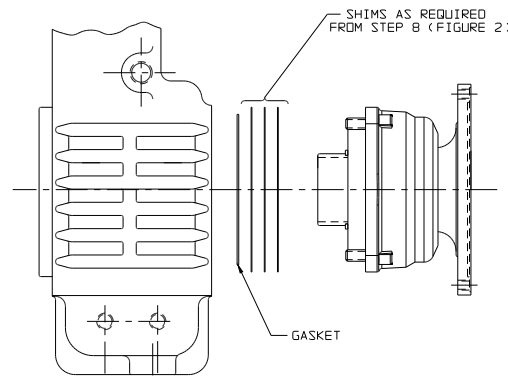
FIGURE 1

FEELER GAUGE READING	SHIMS TO BE USED
.020 TO .025	(3) CLEAR (.0075 THK. EA.)
.025 TO .030	(1) CLEAR (.0075 THK.) (1) YELLOW (.020 THK.)
.030 TO .035	(1) BLUE (.005 THK.) (1) CLEAR (.0075 THK.) (1) YELLOW (.020 THK.)
.035 TO .040	(2) BLUE (.005 THK.) (1) CLEAR (.0075 THK.) (1) YELLOW (.020 THK.)
.040 TO .045	(2) YELLOW (.020 THK. EA.)

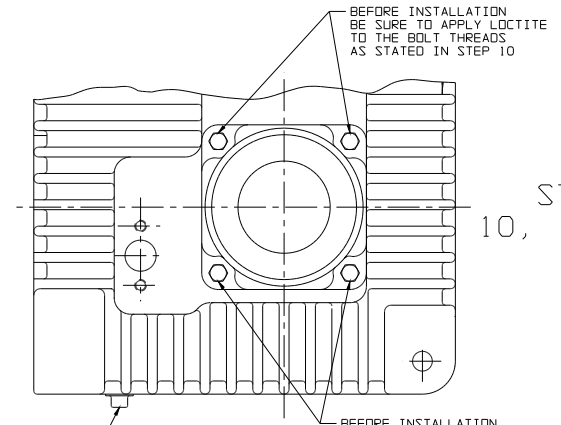
FIGURE 2



STEP 5



STEP 9



STEPS 10, 11 & 12

USE GEARBOX OIL TO FLUSH ANY RESIDUAL PRIMER FROM THE GEARBOX. REPLACE THE MAGNETIC DRAIN PLUG TO THE BOTTOM OF THE GEARBOX. TO REFILL GEARBOX CORRECTLY PLEASE SEE STEP 12.

BEFORE INSTALLATION BE SURE TO APPLY LOCTITE TO THE BOLT THREADS AS STATED IN STEP 10

THIS PRODUCT AND ITS COMPONENTS MAY BE PROTECTED BY ONE OR MORE OF THE FOLLOWING U.S. PATENTS AND OTHER PATENTS: 5,103,164; 5,139,343

PLATE 914AJ  
SHEET 2 OF 2

HALE TYPE "G" SERIES GEARBOX

ECO NO/REV	CHANGED FROM	BY	DATE	APVD
0548 H	ADDED SHIM INSTALLATION PROCEDURE	RR	4-10-07	MAL
1110 I1	REMOVED SPLINE SHAFT OPTIONS	CTG	02-17-12	JRP
1110 I2	WPS SHIPT CYLINDER ADDED	CTG	02-17-12	JRP
CPL3300 J	REVISED TO INCLUDE SHIM INSTALLATION PROCEDURE	JRP	10-21-14	JRP

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DRAWN: JRP  
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