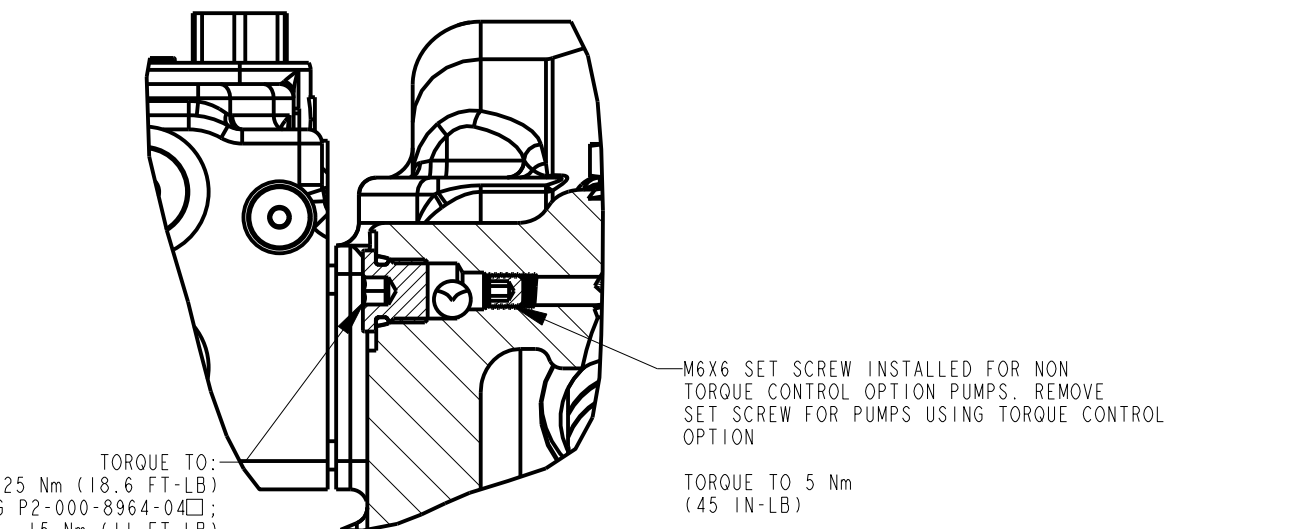
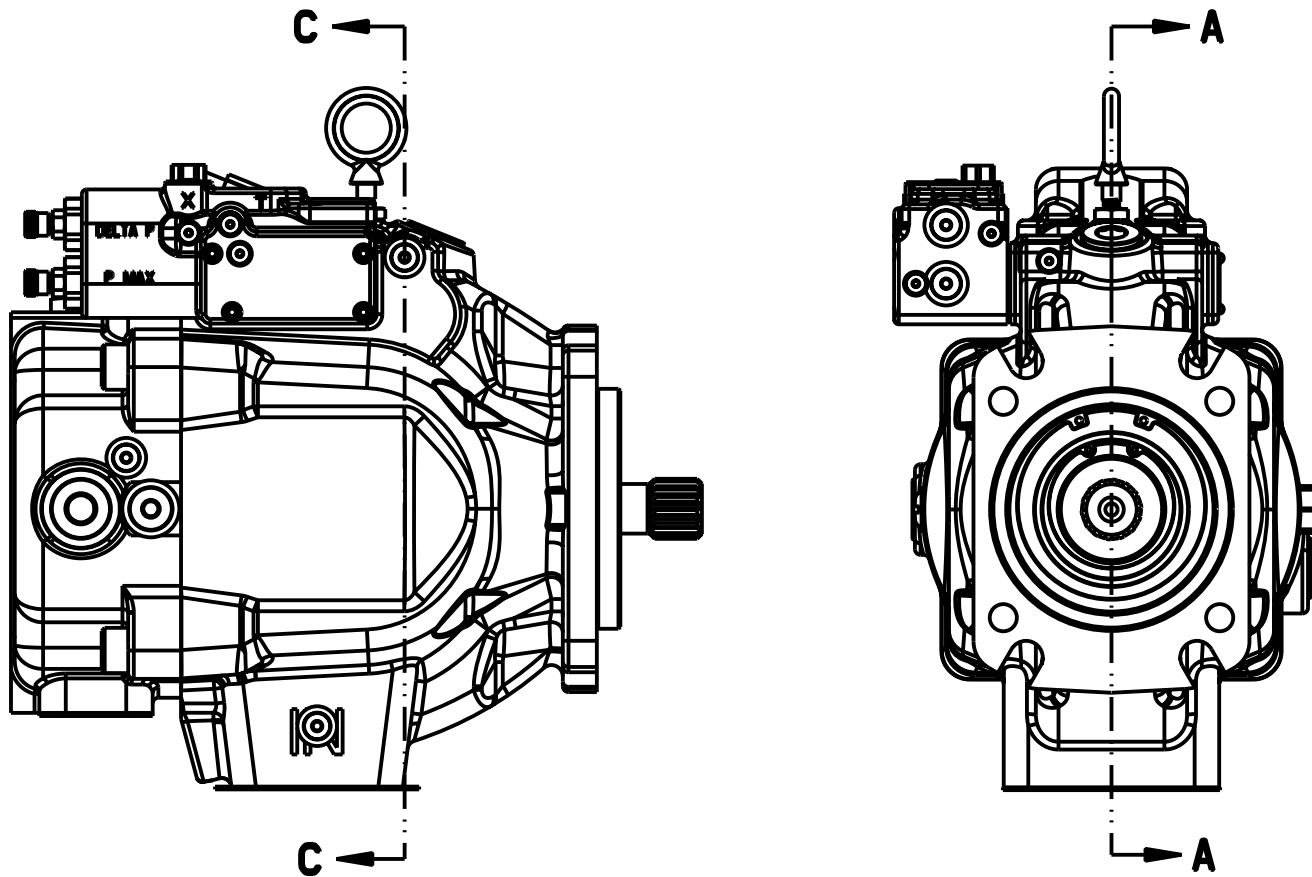


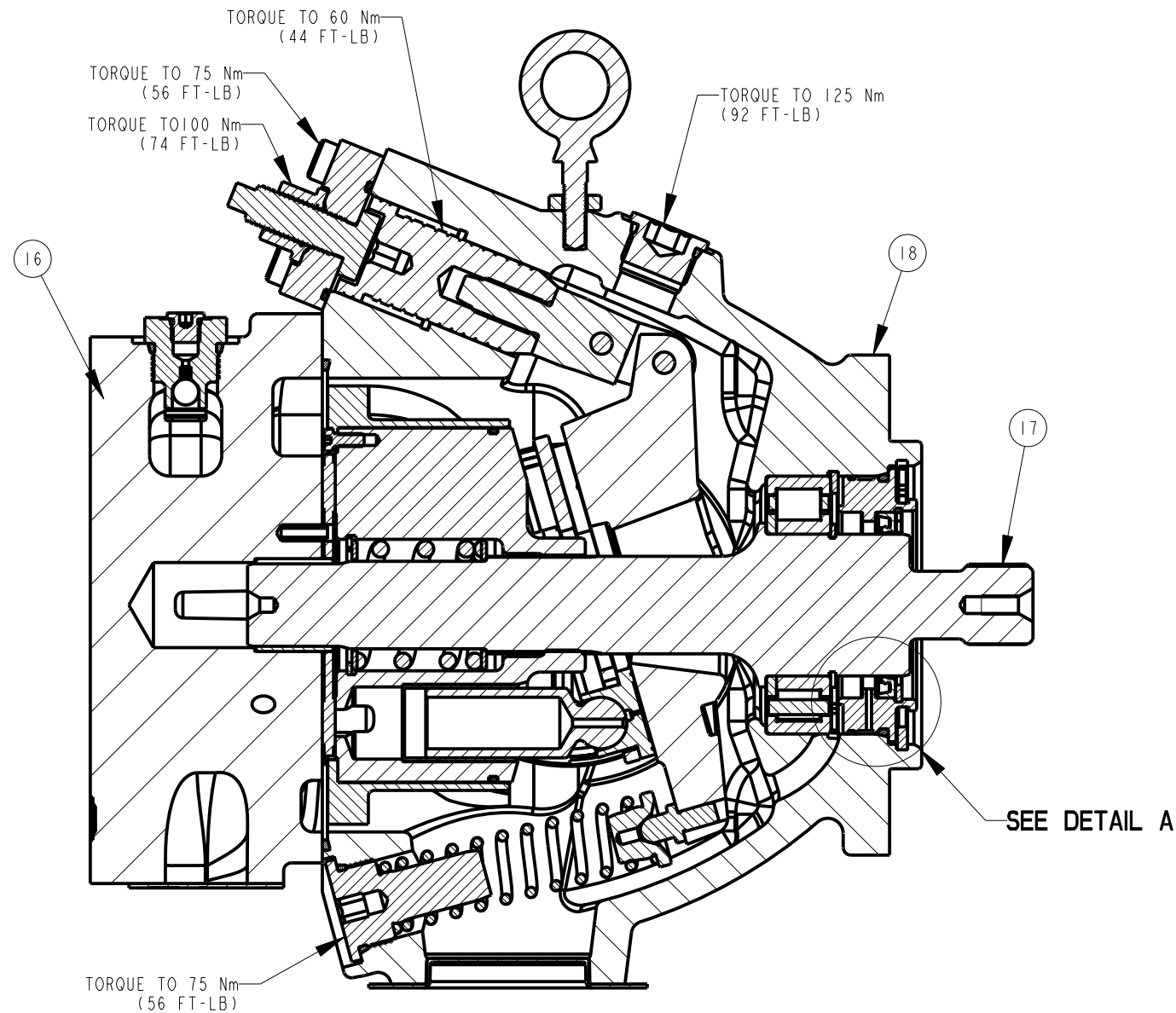
TITLE	SERVICE PARTS P3105 DESIGN SERIES 16	DRAWING NUMBER	P2-105-0414	REVISION	NONE	STATUS	PR	SHEET 1 OF 8
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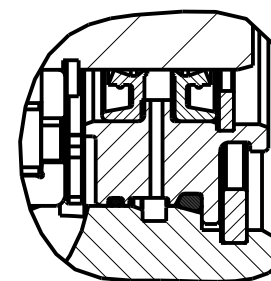
SECTION C-C

- NOTES:
- PUMP SHOWN IS A RIGHT HAND (CW) ROTATION PUMP. LEFT HAND (CCW) ROTATION PUMPS HAVE OUTLET GAUGE PORT REVERSED.
 - D & E OPTION SHOWN

DRAWN BY	L. NAGEL	DATE	14FEB13	CHANGED BY	-	DATE	-	ECN NUMBER	709912
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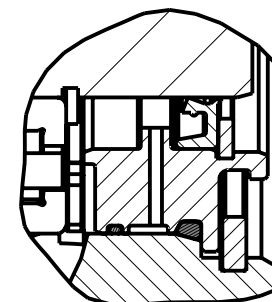


SECTION A-A



DETAIL A

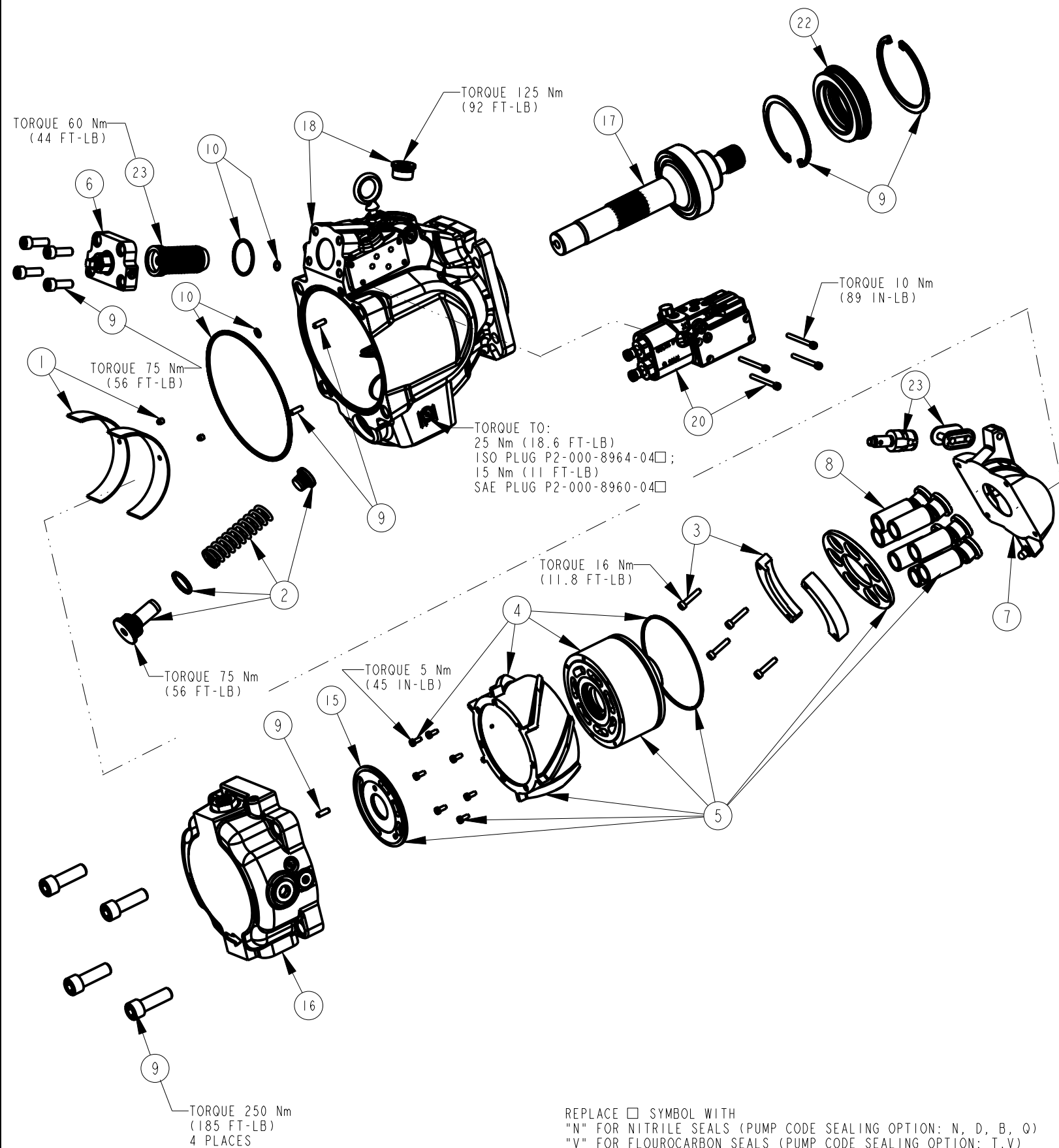
DUAL SHAFT SEAL ASSEMBLY (D/T/Q OPTION)
P2-105-0210-02□



DETAIL A

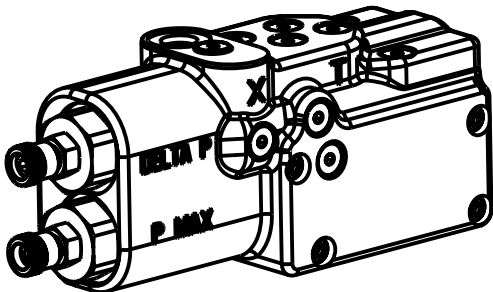
SINGLE SHAFT SEAL ASSEMBLY (N/V/T OPTION)
P2-105-0210-01□

REPLACE □ SYMBOL WITH
"N" FOR NITRILE SEALS (PUMP CODE SEALING OPTION: N, D, B, Q)
"V" FOR FLOUROCARBON SEALS (PUMP CODE SEALING OPTION: T, V)



COMPENSATOR KIT ITEM 20

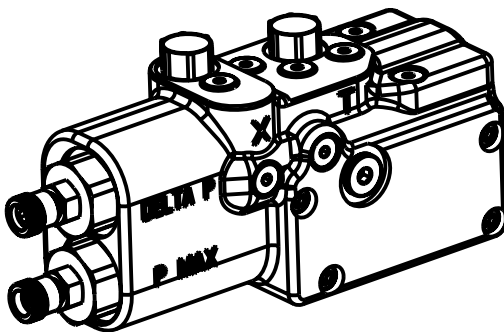
P2-075-0806-XX SPOOL OPTIONS - ITEM 20 (MODIFACATION D&E)



D&E	PA	A	20	P2-075-0806-07□	I	COMPENSATOR ASSY
		B	20	P2-075-0806-08□	I	COMPENSATOR ASSY
	PB	A	20	P2-075-0806-09□	I	COMPENSATOR ASSY
		B	20	P2-075-0806-10□	I	COMPENSATOR ASSY
	RA	A	20	P2-075-0806-05□	I	COMPENSATOR ASSY
		B	20	P2-075-0806-06□	I	COMPENSATOR ASSY
	LA	A	20	P2-075-0806-01□	I	COMPENSATOR ASSY
		B	20	P2-075-0806-02□	I	COMPENSATOR ASSY
	LB	A	20	P2-075-0806-03□	I	COMPENSATOR ASSY
		B	20	P2-075-0806-04□	I	COMPENSATOR ASSY
	TA	A	20	P2-075-0806-11□	I	COMPENSATOR ASSY
	TC	B	20	P2-075-0806-12□	I	COMPENSATOR ASSY
	TB	A	20	P2-075-0806-13□	I	COMPENSATOR ASSY
	TD	B	20	P2-075-0806-14□	I	COMPENSATOR ASSY

WHEN ORDERING SPARE PART COMPENSATOR
PLEASE SPECIFY MAX. PRESSURE AS WELL AS
DELTA P PRESSURE IN YOUR ORDER

P2-145-0807-XX SPOOL OPTIONS - ITEM 20 (MODIFICATION U&P)



NOT D&E	PA	A	20	P2-145-0807-07□	I	COMPENSATOR ASSY
		B	20	P2-145-0807-08□	I	COMPENSATOR ASSY
	PB	A	20	P2-145-0807-09□	I	COMPENSATOR ASSY
		B	20	P2-145-0807-10□	I	COMPENSATOR ASSY
	RA	A	20	P2-145-0807-05□	I	COMPENSATOR ASSY
		B	20	P2-145-0807-06□	I	COMPENSATOR ASSY
	LA	A	20	P2-145-0807-01□	I	COMPENSATOR ASSY
		B	20	P2-145-0807-02□	I	COMPENSATOR ASSY
	LB	A	20	P2-145-0807-03□	I	COMPENSATOR ASSY
		B	20	P2-145-0807-04□	I	COMPENSATOR ASSY
	TA	A	20	P2-145-0807-11□	I	COMPENSATOR ASSY
	TC	B	20	P2-145-0807-12□	I	COMPENSATOR ASSY
	TB	A	20	P2-145-0807-13□	I	COMPENSATOR ASSY
	TD	B	20	P2-145-0807-14□	I	COMPENSATOR ASSY

WHEN ORDERING SPARE PART COMPENSATOR
PLEASE SPECIFY MAX. PRESSURE AS WELL AS
DELTA P PRESSURE IN YOUR ORDER

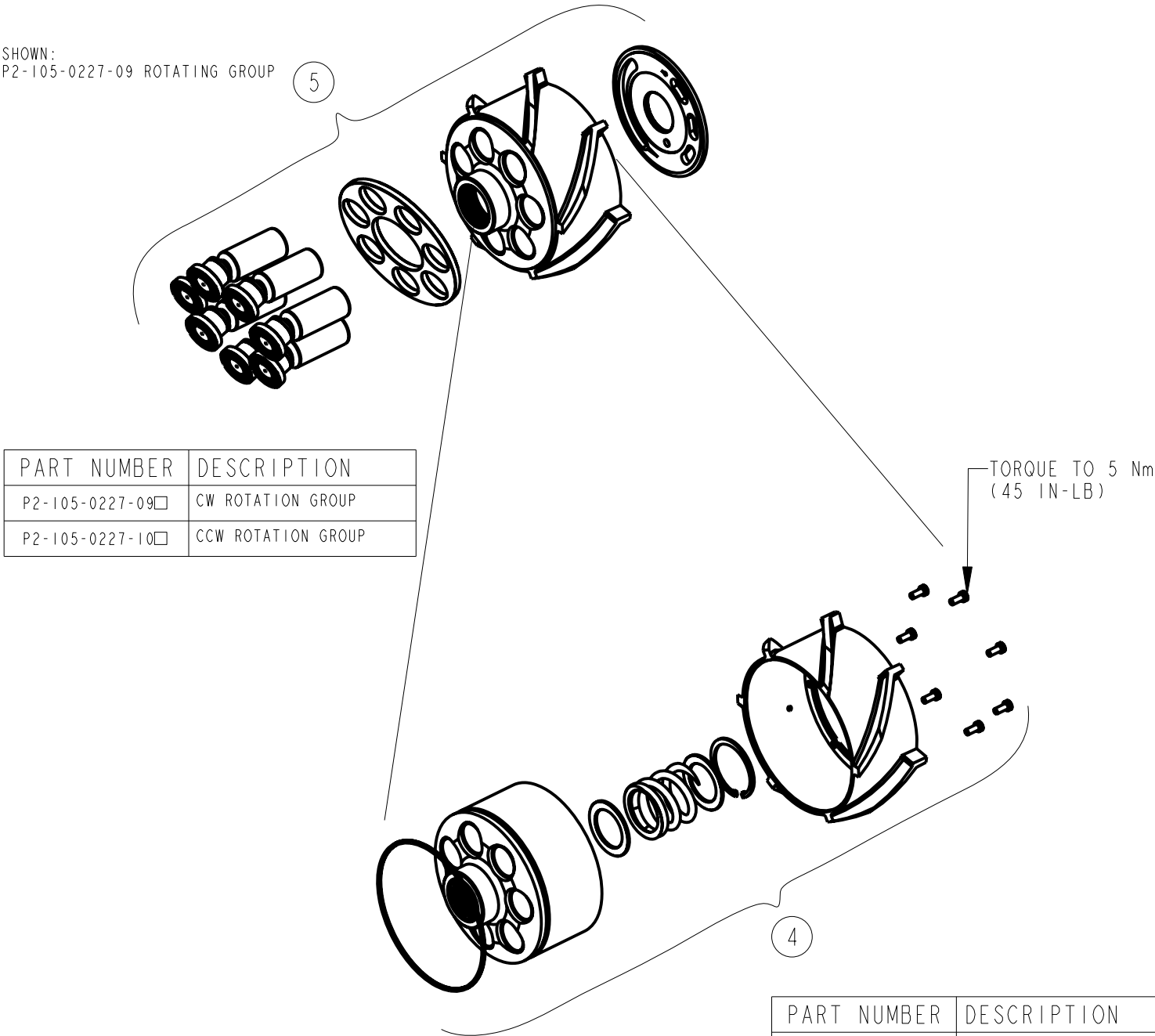
REPLACE □ SYMBOL WITH
"N" FOR NITRILE SEALS (PUMP CODE SEALING OPTION: N, D, B, Q)
"V" FOR FLOUROCARBON SEALS (PUMP CODE SEALING OPTION: T,V)



ROTATING GROUP
ITEM 5

BARREL KIT
ITEM 4

SHOWN:
P2-105-0227-09 ROTATING GROUP

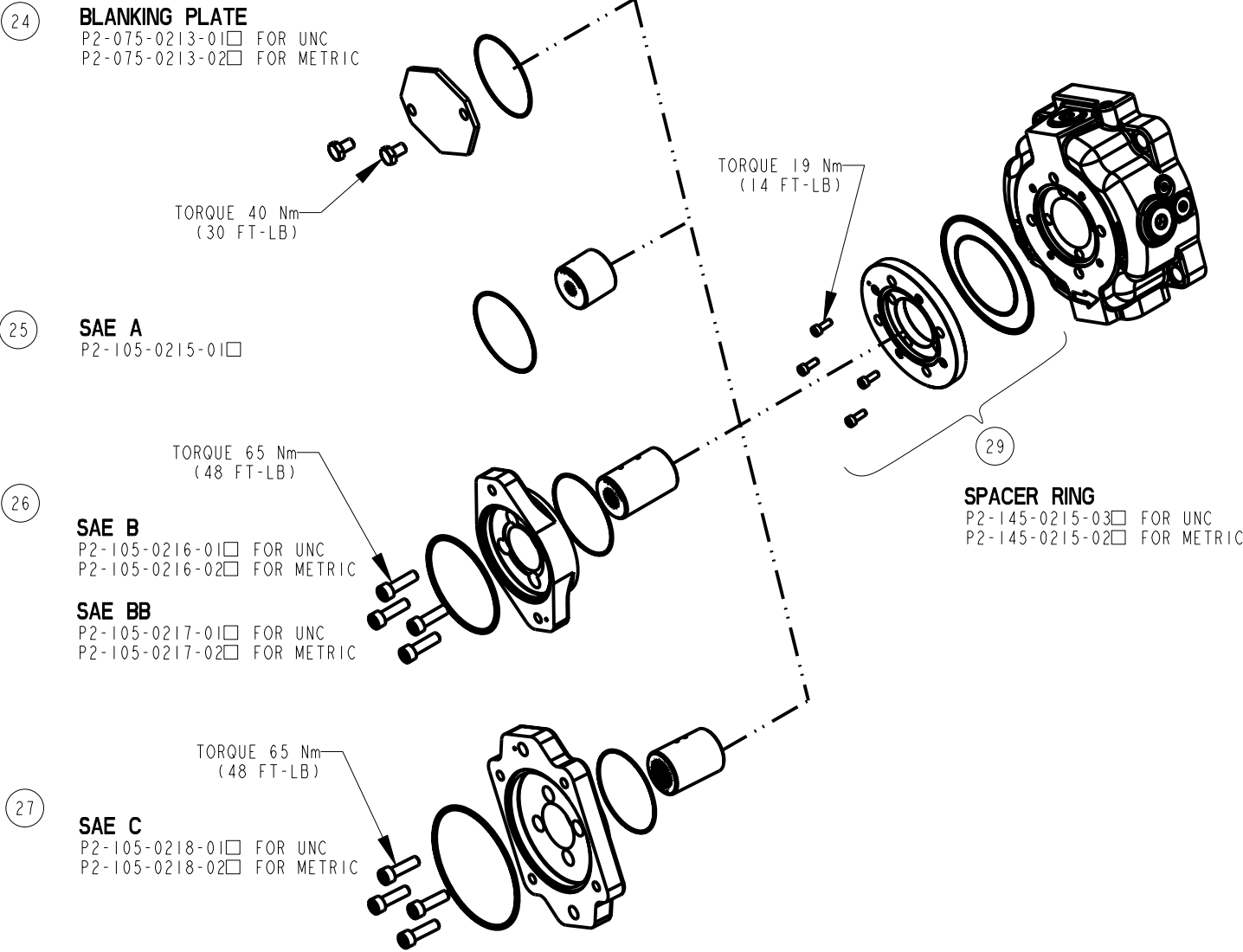


PART NUMBER	DESCRIPTION
P2-105-0227-09	CW ROTATION GROUP
P2-105-0227-10	CCW ROTATION GROUP

PART NUMBER	DESCRIPTION
P2-105-0222-10	CW BARREL KIT
P2-105-0222-11	CCW BARREL KIT

REPLACE ☐ SYMBOL WITH
"N" FOR NITRILE SEALS (PUMP CODE SEALING OPTION: N, D, B, Q)
"V" FOR FLOUROCARBON SEALS (PUMP CODE SEALING OPTION: T,V)

THRU DRIVE KIT



24 **BLANKING PLATE**
P2-075-0213-01 FOR UNC
P2-075-0213-02 FOR METRIC

25 **SAE A**
P2-105-0215-01

26 **SAE B**
P2-105-0216-01 FOR UNC
P2-105-0216-02 FOR METRIC

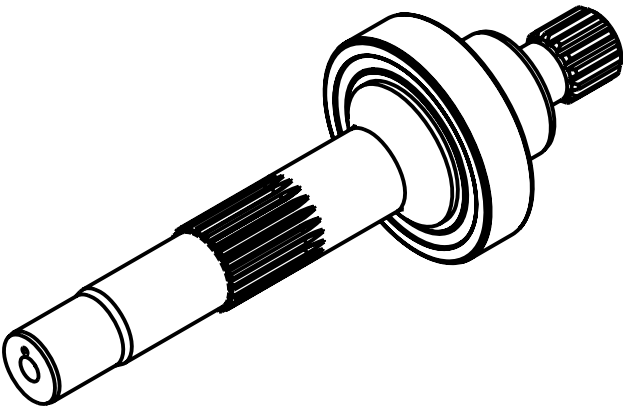
SAE BB
P2-105-0217-01 FOR UNC
P2-105-0217-02 FOR METRIC

27 **SAE C**
P2-105-0218-01 FOR UNC
P2-105-0218-02 FOR METRIC

29 **SPACER RING**
P2-145-0215-03 FOR UNC
P2-145-0215-02 FOR METRIC

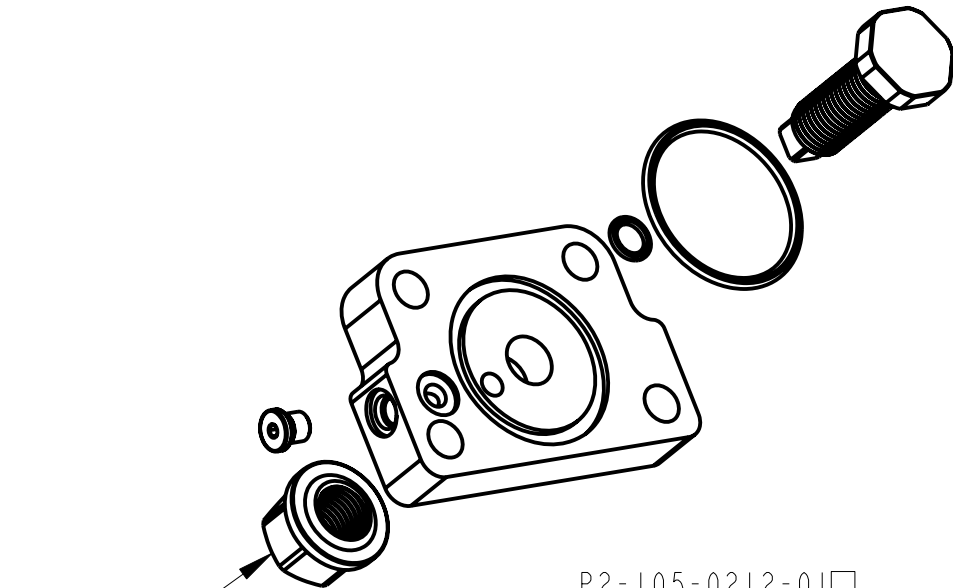
REPLACE ☐ SYMBOL WITH
"N" FOR NITRILE SEALS (PUMP CODE SEALING OPTION: N, D, B, Q)
"V" FOR FLOUROCARBON SEALS (PUMP CODE SEALING OPTION: T,V)

SHAFT ASSEMBLY KIT
ITEM 17



	OPTION	PART NUMBER		DESCRIPTION
C1	NOT SI	P2-105-0225-136	I	SHAFT ASSY - C SPLINE
	SI	P2-105-0225-135	I	SHAFT ASSY - C SPLINE
C2	NOT SI	P2-105-0225-138	I	SHAFT ASSY - CC SPLINE
	SI	P2-105-0225-137	I	SHAFT ASSY - CC SPLINE
C3	NOT SI	P2-105-0225-156	I	SHAFT ASSY - C SPLINE - NO U'CUT
	SI	P2-105-0225-155	I	SHAFT ASSY - C SPLINE - NO U'CUT
C5	NOT SI	P2-105-0225-146	I	SHAFT ASSY - C KEY
	SI	P2-105-0225-145	I	SHAFT ASSY - C KEY
C6	NOT SI	P2-105-0225-148	I	SHAFT ASSY - CC KEY
	SI	P2-105-0225-147	I	SHAFT ASSY - CC KEY
D1	NOT SI	P2-105-0225-140	I	SHAFT ASSY - D SPLINE
	SI	P2-105-0225-139	I	SHAFT ASSY - D SPLINE
D2	NOT SI	P2-105-0225-160	I	SHAFT ASSY - D SPLINE NO U'CUT
	SI	P2-105-0225-167	I	SHAFT ASSY - METRIC SPLINE W40x2x30
M4	NOT SI	P2-105-0225-171	I	SHAFT ASSY - METRIC SPLINE W40x2x30

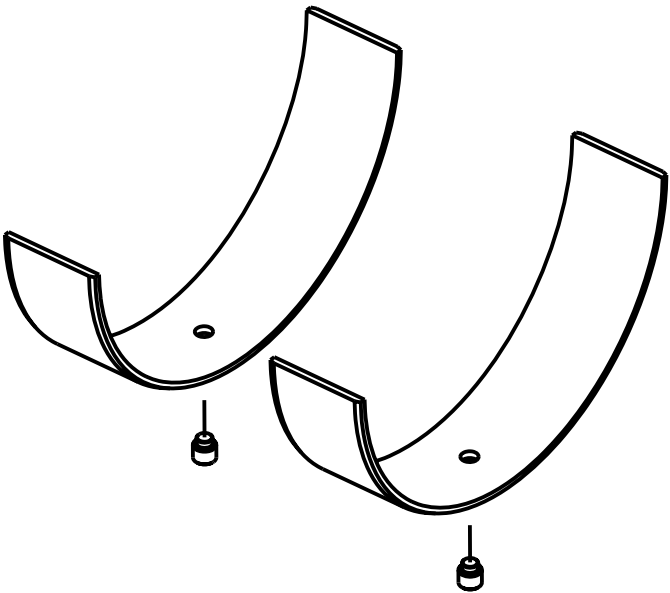
MAX. VOLUME ASSEMBLY
ITEM 6



P2-105-0212-01□

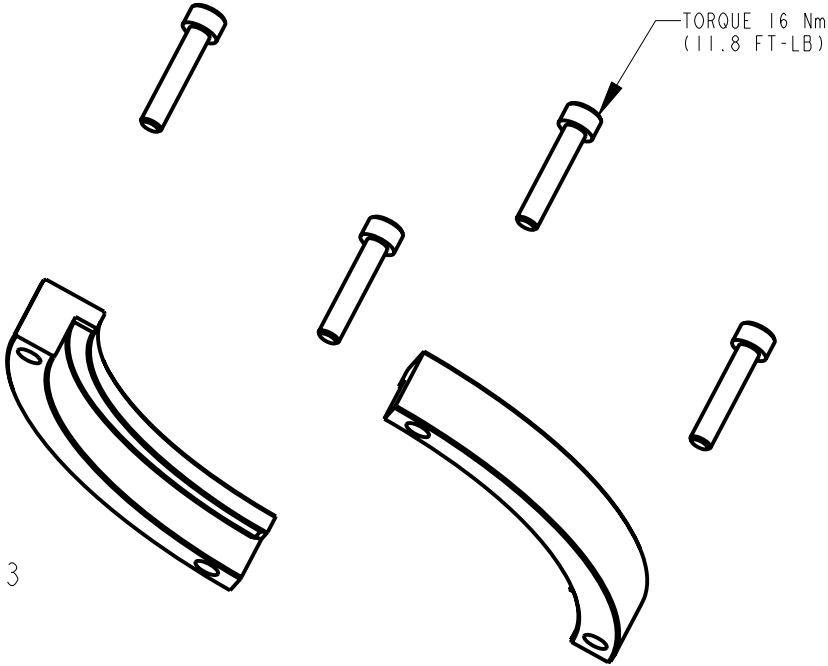
REPLACE □ SYMBOL WITH
"N" FOR NITRILE SEALS (PUMP CODE SEALING OPTION: N, D, B, Q)
"V" FOR FLOUROCARBON SEALS (PUMP CODE SEALING OPTION: T,V)

SADDLE BEARING KIT
ITEM 1



P2-105-0229-21

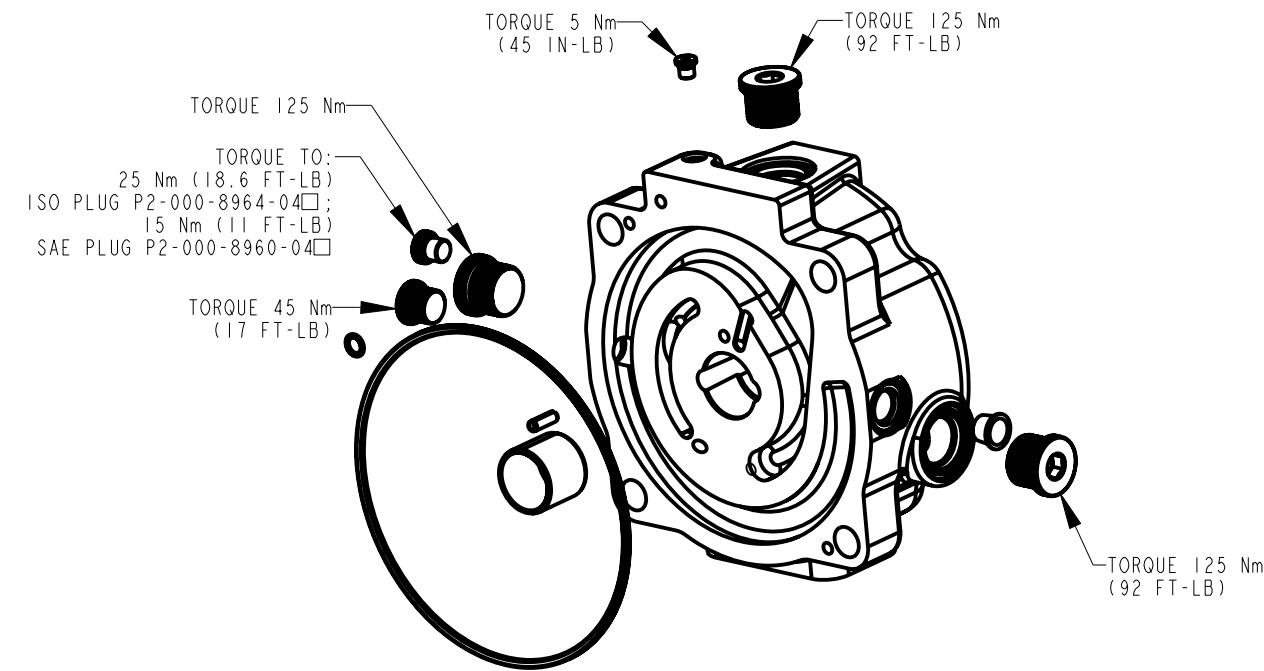
FIXED CLEARANCE HOLD DOWN KIT
ITEM 3



P2-105-0229-23

TITLE	DRAWING NUMBER	REVISION	STATUS	
SERVICE PARTS P3105 DESIGN SERIES 16	P2-105-0414	NONE	PR	SHEET 5 OF 8

COVER ASSEMBLY KIT
ITEM 16



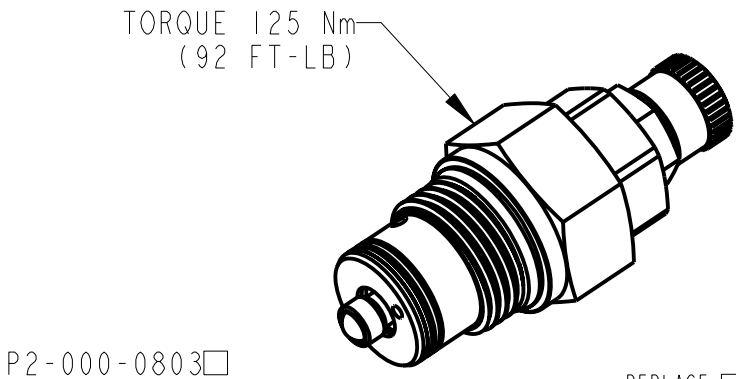
COVER ASSEMBLY	DESCRIPTION	CODE
P2-105-0226-09□	SIDE PORT, CCW, UNC	U & P
P2-105-0226-10□	SIDE PORT, CCW, UNC, THRU	U & P
P2-105-0226-11□	SIDE PORT, CCW, METRIC	U & P
P2-105-0226-12□	SIDE PORT, CCW, METRIC, THRU	U & P
P2-105-0226-37□	SIDE PORT, CCW, UNC, DRAINS	D & E
P2-105-0226-38□	SIDE PORT, CCW, UNC, THRU, DRAINS	D & E
P2-105-0226-39□	SIDE PORT, CCW, METRIC, DRAINS	D & E
P2-105-0226-40□	SIDE PORT, CCW, METRIC, THRU, DRAINS	D & E
P2-105-0226-13□	SIDE PORT, CW, UNC	U & P
P2-105-0226-14□	SIDE PORT, CW, UNC, THRU	U & P
P2-105-0226-15□	SIDE PORT, CW, METRIC	U & P
P2-105-0226-16□	SIDE PORT, CW, METRIC, THRU	U & P
P2-105-0226-41□	SIDE PORT, CW, UNC, DRAINS	D & E
P2-105-0226-42□	SIDE PORT, CW, UNC, THRU, DRAINS	D & E
P2-105-0226-43□	SIDE PORT, CW, METRIC, DRAINS	D & E
P2-105-0226-44□	SIDE PORT, CW, METRIC, THRU, DRAINS	D & E

NOTES:
REAR COVER SHOWN IS FROM A RIGHT HAND (CW) ROTATION PUMP WITH REAR COVER DRAIN (MODIFICATION D OR E).
LEFT HAND (CCW) ROTATION REAR COVERS HAVE OUTLET GAUGE PORT * REVERSED.
REPLACE □ SYMBOL WITH
"N" FOR NITRILE SEALS (PUMP CODE SEALING OPTION: N, D, B, Q)
"V" FOR FLOUROCARBON SEALS (PUMP CODE SEALING OPTION: T,V)



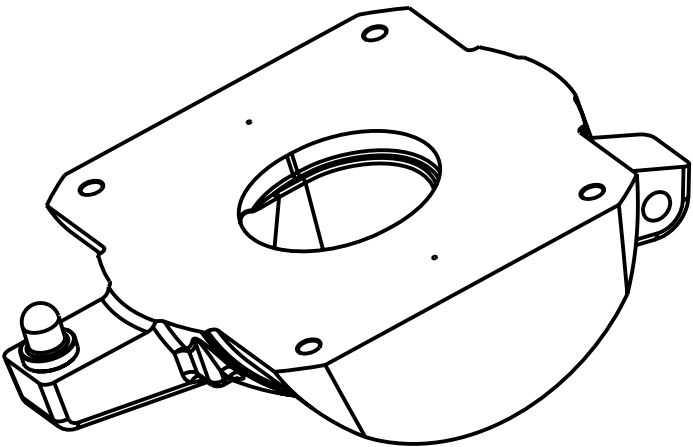
DRAWN BY	DATE	CHANGED BY	DATE	ECN NUMBER
L. NAGEL	14FEB13	-	-	709912

TORQUE CONTROL CARTRIDGE
ITEM 19



REPLACE □ SYMBOL WITH
"N" FOR NITRILE SEALS (PUMP CODE SEALING OPTION: N, D, B, Q)
"V" FOR FLOUROCARBON SEALS (PUMP CODE SEALING OPTION: T,V)

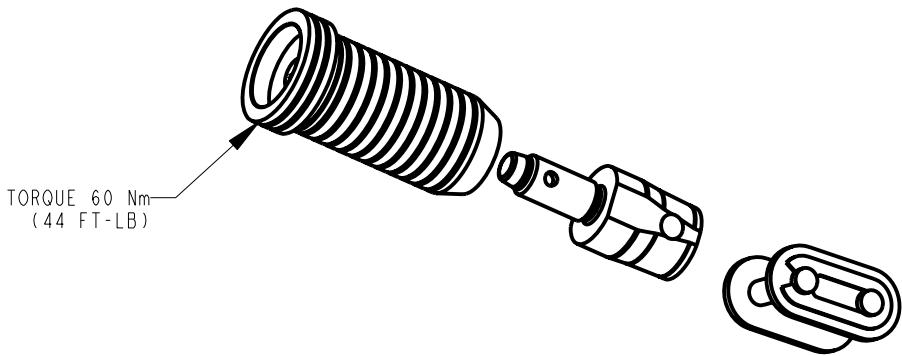
SWASH PLATE KIT
ITEM 7



P2-105-0221-04

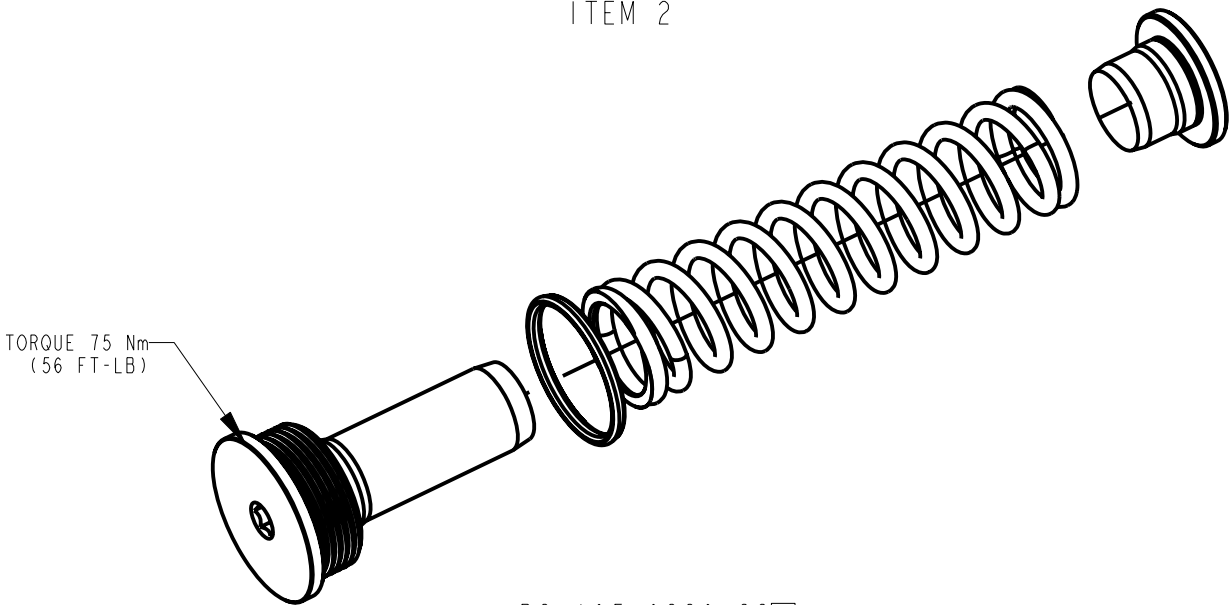


SERVO PISTON KIT
ITEM 23



PART NUMBER	DESCRIPTION	
P2-105-0229-19	SERVO PISTON KIT 40%	USE EXEPT WITH TC & TD OPTION
P2-105-0229-20	SERVO PISTON KIT 70%	USE WITH TC & TD OPTION

BIAS SPRING KIT
ITEM 2

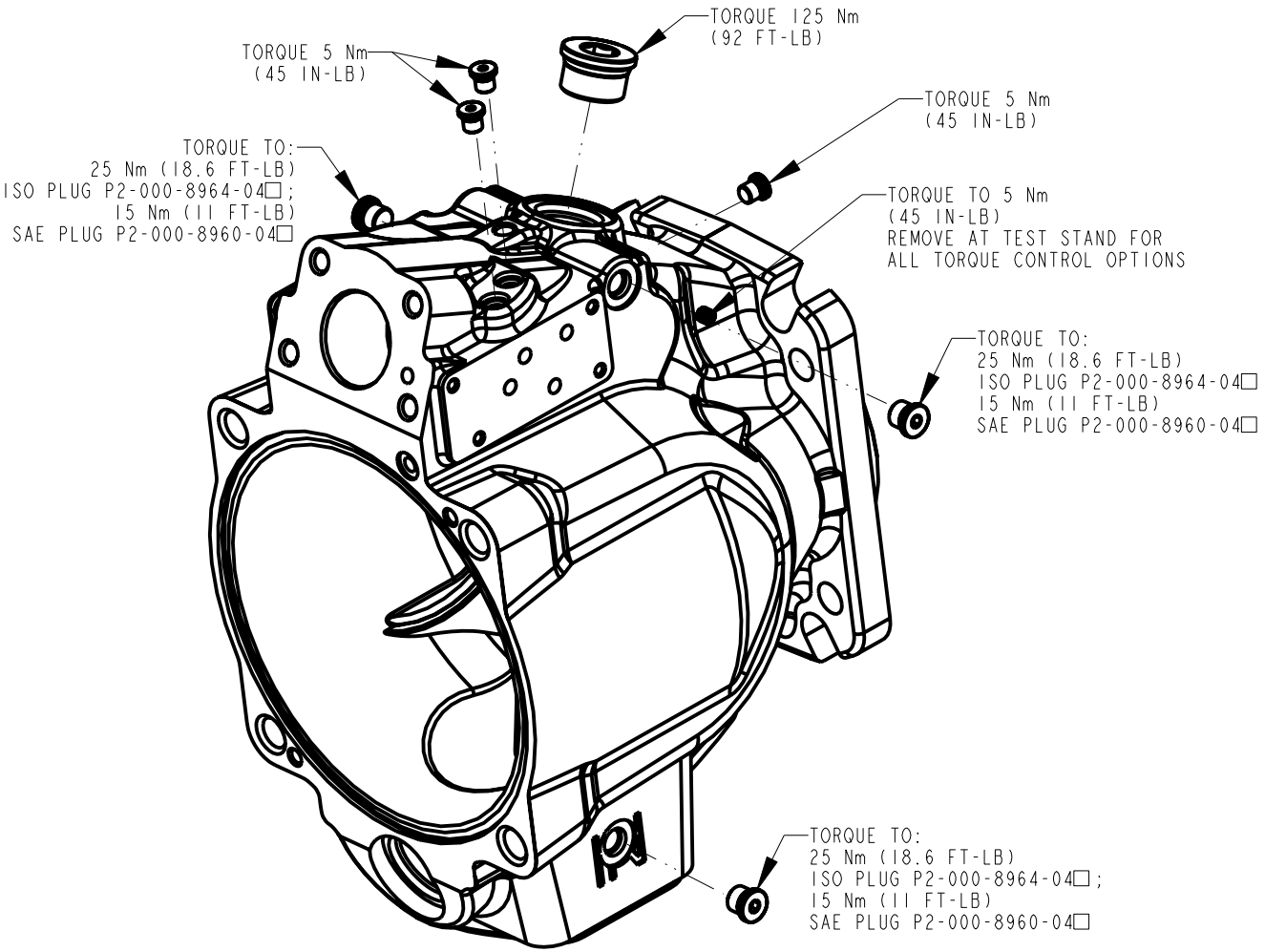


P2-105-0229-22□

REPLACE □ SYMBOL WITH
"N" FOR NITRILE SEALS (PUMP CODE SEALING OPTION: N, D, B, Q)
"V" FOR FLOUROCARBON SEALS (PUMP CODE SEALING OPTION: T,V)



HOUSING KIT
ITEM 18



SEAL OPTION	THRDS	PART NUMBER	DESCRIPTION
N/V/B	B	P2-105-0221-50□	MACHINING C-PILOT 1 SEAL METRIC HOUSING
D/T/Q	B	P2-105-0221-51□	MACHINING C-PILOT 2 SEAL METRIC HOUSING
N/V/B	A	P2-105-0221-54□	MACHINING C-PILOT 1 SEAL UNC HOUSING
D/T/Q	A	P2-105-0221-55□	MACHINING C-PILOT 2 SEAL UNC HOUSING

REPLACE □ SYMBOL WITH
"N" FOR NITRILE SEALS (PUMP CODE SEALING OPTION: N, D, B, Q)
"V" FOR FLOUROCARBON SEALS (PUMP CODE SEALING OPTION: T,V)



TITLE	DRAWING NUMBER	REVISION	STATUS	
SERVICE PARTS P3105 DESIGN SERIES 16	P2-105-0414	NONE	PR	SHEET 7 OF 8

ASSEMBLY, DIS-ASSEMBLY AND REPAIR NOTES

DISASSEMBLY STEPS FOR ENTIRE PUMP

- 1. REMOVE COVER SCREWS AND COVER
- 2. REMOVE MAX. VOLUME ASSY
- 3. REMOVE SERVO PISTON
- 4. REMOVE IMPELLER RING
- 5. REMOVE BIAS SPRING PLUG, SPRING AND RETAINER
- 6. REMOVE FIXED CLEARANCE HOLD DOWN SCREWS AND HOLD DOWN PARTS
- 7. REMOVE ROTATING GROUP (BARREL, SLIPPER RETAINER AND PISTONS)
- 8. REMOVE SHAFT SEAL CARRIER
- 9. REMOVE SHAFT
- 10. REMOVE SWASHPLATE ASSEMBLY

ASSEMBLY STEPS FOR ENTIRE PUMP

- 1. PUT IN SWASHPLATE ASSEMBLY
- 2. INSTALL SHAFT ASSEMBLY
- 3. INSTALL SHAFT SEAL CARRIER
- 4. PLACE ROTATING GROUP (BARREL, SLIPPER RETAINER AND PISTONS)
- 5. FIX THE IMPELLER RING
- 6. FIX HOLD DOWN PARTS AND SCREW IN FIXED CLEARANCE HOLD DOWN SCREWS
- 7. SCREW IN BIAS SPRING PLUG INCL. SPRING AND RETAINER
- 8. SCREW IN SERVO PISTON (NEW LINK PISTON REQUIRED!)
- 9. MOUNT MAX. VOLUME ASSY
- 10. FIX COVER AND SCREW IN COVER SCREWS

ATTENTION: * STEP 4 AND 5 REQUIRES SPECIAL TOOL FOR INSTALLATION THE HOLD DOWN PARTS
=> PLEASE ASK YOUR RESPONSIBLE TECHNICAL SUPPORT

SHAFT SEAL REPLACEMENT

- 1. REMOVE SEAL CARRIER ONLY
- 2. REMOVE OLD SEAL
- 3. INSPECT SHAFT
- 4. IF SHAFT IS WORN INSTALL NEW SEAL
IN INNER LOCATION FOR SINGLE SEAL
APPLICATIONS (SEE SHEET 1).
REPLACE SHAFT FOR DUAL SEAL APPLICATIONS



DRAWN BY	DATE	CHANGED BY	DATE	ECN NUMBER
L. NAGEL	14FEB13	-	-	709912

NOTES:



