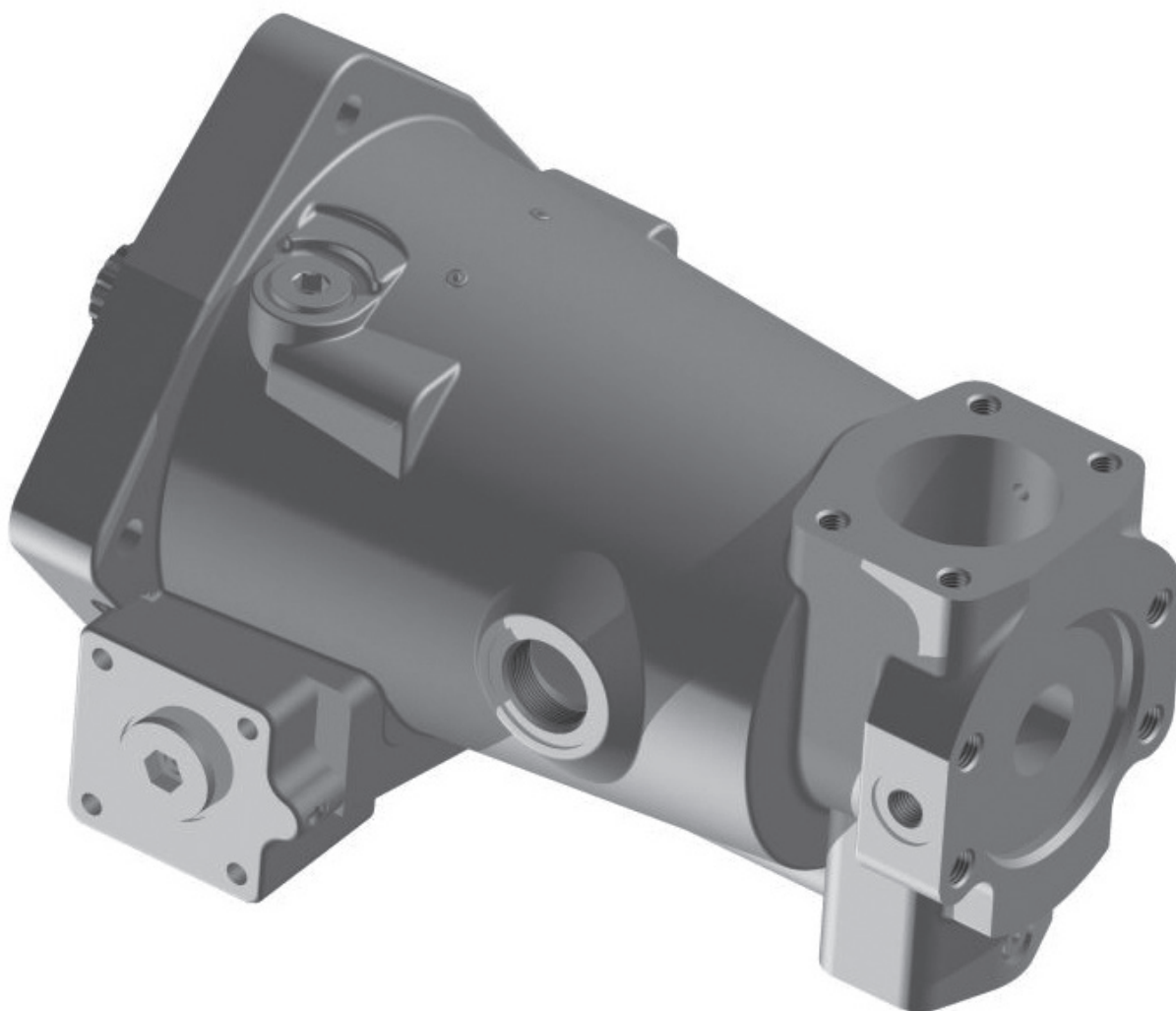




Premier Series Spare Parts Manual

High Pressure Open Circuit Pumps

HY28-2700-03/PRE/US

Effective: February 2016



ENGINEERING YOUR SUCCESS.

Design Series – C, D

P05/P080 Compensator Controlled Sectional Views2

Compensator Controlled Spare Parts4

Servo Controlled Sectional Views..... 10

Servo Controlled Spare Parts..... 12

P07/P110 Compensator Controlled Sectional Views 16

Compensator Controlled Spare Parts 18

Servo Controlled Sectional Views..... 24

Servo Controlled Spare Parts..... 26

P09/P140 Compensator Controlled Sectional Views 30

Compensator Controlled Spare Parts 32

Servo Controlled Sectional Views..... 38

Servo Controlled Spare Parts..... 40

P12/P200 Compensator Controlled Sectional Views 44

Compensator Controlled Spare Parts 46

Servo Controlled Sectional Views..... 52

Servo Controlled Spare Parts..... 54

P16/P260 Compensator Controlled Sectional Views 58

Compensator Controlled Spare Parts 60

Servo Controlled Sectional Views..... 66

Servo Controlled Spare Parts..... 68

Model Number Sheet..... 72

Content Index..... 73

Offer of Sale..... 74

- Notes:
1. All documentation represented in this bulletin is for standard production models only, (as follows):
- 1.1. P05/P080 = Design Level “C” Model Pump
 - 1.2. P07/P110 = Design Level “C” Model Pump
 - 1.3. P09/P140 = Design Level “D” Model Pump
 - 1.4. P12/P200 = Design Level “D” Model Pump
 - 1.5. P16/P260 = Design Level “D” Model Pump



WARNING - USER RESPONSIBILITY

FAILURE OR IMPROPER SELECTION OR IMPROPER USE OF THE PRODUCTS DESCRIBED HEREIN OR RELATED ITEMS CAN CAUSE DEATH, PERSONAL INJURY AND PROPERTY DAMAGE.

This document and other information from Parker-Hannifin Corporation, its subsidiaries and authorized distributors provide product or system options for further investigation by users having technical expertise. The user, through its own analysis and testing, is solely responsible for making the final selection of the system and components and assuring that all performance, endurance, maintenance, safety and warning requirements of the application are met. The user must analyze all aspects of the application, follow applicable industry standards, and follow the information concerning the product in the current product catalog and in any other materials provided from Parker or its subsidiaries or authorized distributors. To the extent that Parker or its subsidiaries or authorized distributors provide component or system options based upon data or specifications provided by the user, the user is responsible for determining that such data and specifications are suitable and sufficient for all applications and reasonably foreseeable uses of the components or systems.

OFFER OF SALE

The items described in this document are hereby offered for sale by Parker-Hannifin Corporation, its subsidiaries or its authorized distributor. This offer and its acceptance are governed by the provisions stated in the detailed “Offer of Sale” elsewhere in this document.

The items described in this document and other documents and descriptions provided by Parker Hannifin Corporation, its subsidiaries and its authorized distributors ("Seller") are hereby offered for sale at prices to be established by Seller. This offer and its acceptance by any customer ("Buyer") shall be governed by all of the following Terms and Conditions. Buyer's order for any item described in its document, when communicated to Seller verbally, or in writing, shall constitute acceptance of this offer. All goods, services or work described will be referred to as "Products".

1. **Terms and Conditions.** Seller's willingness to offer Products, or accept an order for Products, to or from Buyer is subject to these Terms and Conditions or any newer version of the terms and conditions found on-line at www.parker.com/saleterms/. Seller objects to any contrary or additional terms or conditions of Buyer's order or any other document issued by Buyer.
2. **Price Adjustments; Payments.** Prices stated on Seller's quote or other documentation offered by Seller are valid for 30 days, and do not include any sales, use, or other taxes unless specifically stated. Unless otherwise specified by Seller, all prices are F.C.A. Seller's facility (INCOTERMS 2010). Payment is subject to credit approval and is due 30 days from the date of invoice or such other term as required by Seller's Credit Department, after which Buyer shall pay interest on any unpaid invoices at the rate of 1.5% per month or the maximum allowable rate under applicable law.
3. **Delivery Dates; Title and Risk; Shipment.** All delivery dates are approximate and Seller shall not be responsible for any damages resulting from any delay. Regardless of the manner of shipment, title to any products and risk of loss or damage shall pass to Buyer upon placement of the products with the shipment carrier at Seller's facility. Unless otherwise stated, Seller may exercise its judgment in choosing the carrier and means of delivery. No deferment of shipment at Buyers' request beyond the respective dates indicated will be made except on terms that will indemnify, defend and hold Seller harmless against all loss and additional expense. Buyer shall be responsible for any additional shipping charges incurred by Seller due to Buyer's acts or omissions.
4. **Warranty.** Seller warrants that the Products sold hereunder shall be free from defects in material or workmanship for a period of eighteen months from the date of shipment from the Company. The prices charged for Seller's products are based upon the exclusive limited warranty stated above, and upon the following disclaimer: **DISCLAIMER OF WARRANTY: THIS WARRANTY COMPRISES THE SOLE AND ENTIRE WARRANTY PERTAINING TO PRODUCTS PROVIDED HEREUNDER. SELLER DISCLAIMS ALL OTHER WARRANTIES, EXPRESS AND IMPLIED, INCLUDING DESIGN, MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.**
5. **Claims; Commencement of Actions.** Buyer shall promptly inspect all Products upon delivery. No claims for shortages will be allowed unless reported to the Seller within 10 days of delivery. No other claims against Seller will be allowed unless asserted in writing within 30 days after delivery. Buyer shall notify Seller of any alleged breach of warranty within 30 days after the date the defect is or should have been discovered by Buyer. Any action based upon breach of this agreement or upon any other claim arising out of this sale (other than an action by Seller for an amount due on any invoice) must be commenced within 12 months from the date of the breach without regard to the date breach is discovered.
6. **LIMITATION OF LIABILITY.** UPON NOTIFICATION, SELLER WILL, AT ITS OPTION, REPAIR OR REPLACE A DEFECTIVE PRODUCT, OR REFUND THE PURCHASE PRICE. **IN NO EVENT SHALL SELLER BE LIABLE TO BUYER FOR ANY SPECIAL, INDIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF, OR AS THE RESULT OF, THE SALE, DELIVERY, NON-DELIVERY, SERVICING, USE OR LOSS OF USE OF THE PRODUCTS OR ANY PART THEREOF, OR FOR ANY CHARGES OR EXPENSES OF ANY NATURE INCURRED WITHOUT SELLER'S WRITTEN CONSENT, EVEN IF SELLER HAS BEEN NEGLIGENT, WHETHER IN CONTRACT, TORT OR OTHER LEGAL THEORY. IN NO EVENT SHALL SELLER'S LIABILITY UNDER ANY CLAIM MADE BY BUYER EXCEED THE PURCHASE PRICE OF THE PRODUCTS.**
7. **User Responsibility.** The user, through its own analysis and testing, is solely responsible for making the final selection of the system and Product and assuring that all performance, endurance, maintenance, safety and warning requirements of the application are met. The user must analyze all aspects of the application and follow applicable industry standards and Product information. If Seller provides Product or system options, the user is responsible for determining that such data and specifications are suitable and sufficient for all applications and reasonably foreseeable uses of the Products or systems.
8. **Loss to Buyer's Property.** Any designs, tools, patterns, materials, drawings, confidential information or equipment furnished by Buyer or any other items which become Buyer's property, will be considered obsolete and may be destroyed by Seller after two consecutive years have elapsed without Buyer ordering the items manufactured using such property. Seller shall not be responsible for any loss or damage to such property while it is in Seller's possession or control.
9. **Special Tooling.** A tooling charge may be imposed for any special tooling, including without limitation, dies, fixtures, molds and patterns, acquired to manufacture Products. Such special tooling shall be and remain Seller's property notwithstanding payment of any charges by Buyer. In no event will Buyer acquire any interest in apparatus belonging to Seller which is utilized in the manufacture of the Products, even if such apparatus has been specially converted or adapted for such manufacture and notwithstanding any charges paid by Buyer. Unless otherwise agreed, Seller shall have the right to alter, discard or otherwise dispose of any special tooling or other property in its sole discretion at any time.
10. **Buyer's Obligation; Rights of Seller.** To secure payment of all sums due or otherwise, Seller shall retain a security interest in the goods delivered and this agreement shall be deemed a Security Agreement under the Uniform Commercial Code. Buyer authorizes Seller as its attorney to execute and file on Buyer's behalf all documents Seller deems necessary to perfect its security interest.
11. **Improper use and Indemnity.** Buyer shall indemnify, defend, and hold Seller harmless from any claim, liability, damages, lawsuits, and costs (including

- attorney fees), whether for personal injury, property damage, patent, trademark or copyright infringement or any other claim, brought by or incurred by Buyer, Buyer's employees, or any other person, arising out of: (a) improper selection, improper application or other misuse of Products purchased by Buyer from Seller; (b) any act or omission, negligent or otherwise, of Buyer; (c) Seller's use of patterns, plans, drawings, or specifications furnished by Buyer to manufacture Product; or (d) Buyer's failure to comply with these terms and conditions. Seller shall not indemnify Buyer under any circumstance except as otherwise provided.
12. **Cancellations and Changes.** Orders shall not be subject to cancellation or change by Buyer for any reason, except with Seller's written consent and upon terms that will indemnify, defend and hold Seller harmless against all direct, incidental and consequential loss or damage. Seller may change product features, specifications, designs and availability with notice to Buyer.
 13. **Limitation on Assignment.** Buyer may not assign its rights or obligations under this agreement without the prior written consent of Seller.
 14. **Force Majeure.** Seller does not assume the risk and shall not be liable for delay or failure to perform any of Seller's obligations by reason of circumstances beyond the reasonable control of Seller (hereinafter "Events of Force Majeure"). Events of Force Majeure shall include without limitation: accidents, strikes or labor disputes, acts of any government or government agency, acts of nature, delays or failures in delivery from carriers or suppliers, shortages of materials, or any other cause beyond Seller's reasonable control.
 15. **Waiver and Severability.** Failure to enforce any provision of this agreement will not waive that provision nor will any such failure prejudice Seller's right to enforce that provision in the future. Invalidity of any provision of this agreement by legislation or other rule of law shall not invalidate any other provision herein. The remaining provisions of this agreement will remain in full force and effect.
 16. **Termination.** Seller may terminate this agreement for any reason and at any time by giving Buyer thirty (30) days written notice of termination. Seller may immediately terminate this agreement, in writing, if Buyer: (a) commits a breach of any provision of this agreement (b) appoints a trustee, receiver or custodian for all or any part of Buyer's property (c) files a petition for relief in bankruptcy on its own behalf, or by a third party (d) makes an assignment for the benefit of creditors, or (e) dissolves or liquidates all or a majority of its assets.
 17. **Governing Law.** This agreement and the sale and delivery of all Products hereunder shall be deemed to have taken place in and shall be governed and construed in accordance with the laws of the State of Ohio, as applicable to contracts executed and wholly performed therein and without regard to conflicts of laws principles. Buyer irrevocably agrees and consents to the exclusive jurisdiction and venue of the courts of Cuyahoga County, Ohio with respect to any dispute, controversy or claim arising out of or relating to this agreement.
 18. **Indemnity for Infringement of Intellectual Property Rights.** Seller shall have no liability for infringement of any patents, trademarks, copyrights, trade dress, trade secrets or similar rights except as provided in this Section. Seller will defend and indemnify Buyer against allegations of infringement of U.S. patents, U.S. trademarks, copyrights, trade dress and trade secrets ("Intellectual Property Rights"). Seller will defend at its expense and will pay the cost of any settlement or damages awarded in an action brought against Buyer based on an allegation that a Product sold pursuant to this Agreement infringes the Intellectual Property Rights of a third party. Seller's obligation to defend and indemnify Buyer is contingent on Buyer notifying Seller within ten (10) days after Buyer becomes aware of such allegations of infringement, and Seller having sole control over the defense of any allegations or actions including all negotiations for settlement or compromise. If a Product is subject to a claim that it infringes the Intellectual Property Rights of a third party, Seller may, at its sole expense and option, procure for Buyer the right to continue using the Product, replace or modify the Product so as to make it noninfringing, or offer to accept return of the Product and return the purchase price less a reasonable allowance for depreciation. Notwithstanding the foregoing, Seller shall have no liability for claims of infringement based on information provided by Buyer, or directed to Products delivered hereunder for which the designs are specified in whole or part by Buyer, or infringements resulting from the modification, combination or use in a system of any Product sold hereunder. The foregoing provisions of this Section shall constitute Seller's sole and exclusive liability and Buyer's sole and exclusive remedy for infringement of Intellectual Property Rights.
 19. **Entire Agreement.** This agreement contains the entire agreement between the Buyer and Seller and constitutes the final, complete and exclusive expression of the terms of sale. All prior or contemporaneous written or oral agreements or negotiations with respect to the subject matter are herein merged.
 20. **Compliance with Law, U. K. Bribery Act and U.S. Foreign Corrupt Practices Act.** Buyer agrees to comply with all applicable laws and regulations, including both those of the United Kingdom and the United States of America, and of the country or countries of the Territory in which Buyer may operate, including without limitation the U. K. Bribery Act, the U.S. Foreign Corrupt Practices Act ("FCPA") and the U.S. Anti-Kickback Act (the "Anti-Kickback Act"), and agrees to indemnify and hold harmless Seller from the consequences of any violation of such provisions by Buyer, its employees or agents. Buyer acknowledges that they are familiar with the provisions of the U. K. Bribery Act, the FCPA and the Anti-Kickback Act, and certifies that Buyer will adhere to the requirements thereof. In particular, Buyer represents and agrees that Buyer shall not make any payment or give anything of value, directly or indirectly to any governmental official, any foreign political party or official thereof, any candidate for foreign political office, or any commercial entity or person, for the purpose of influencing such person to purchase products or otherwise benefit the business of Seller. 04/2014



TORQUE
67-82 FT-LB

OPEN CIRCUIT
COMPENSATOR CONTROLLED
STROKING PISTON AND
CONTROLS CW ROTATION

(A1)
3 ± .3 FT-LB TORQUE
LOCTITE 242

3 TORQUE
169 ± 16 IN-LB

SEE
TORQUE
TABLE

SEE —
TORQUE
TABLE

6-8 FT-LBS TORQUE
LOCTITE #271

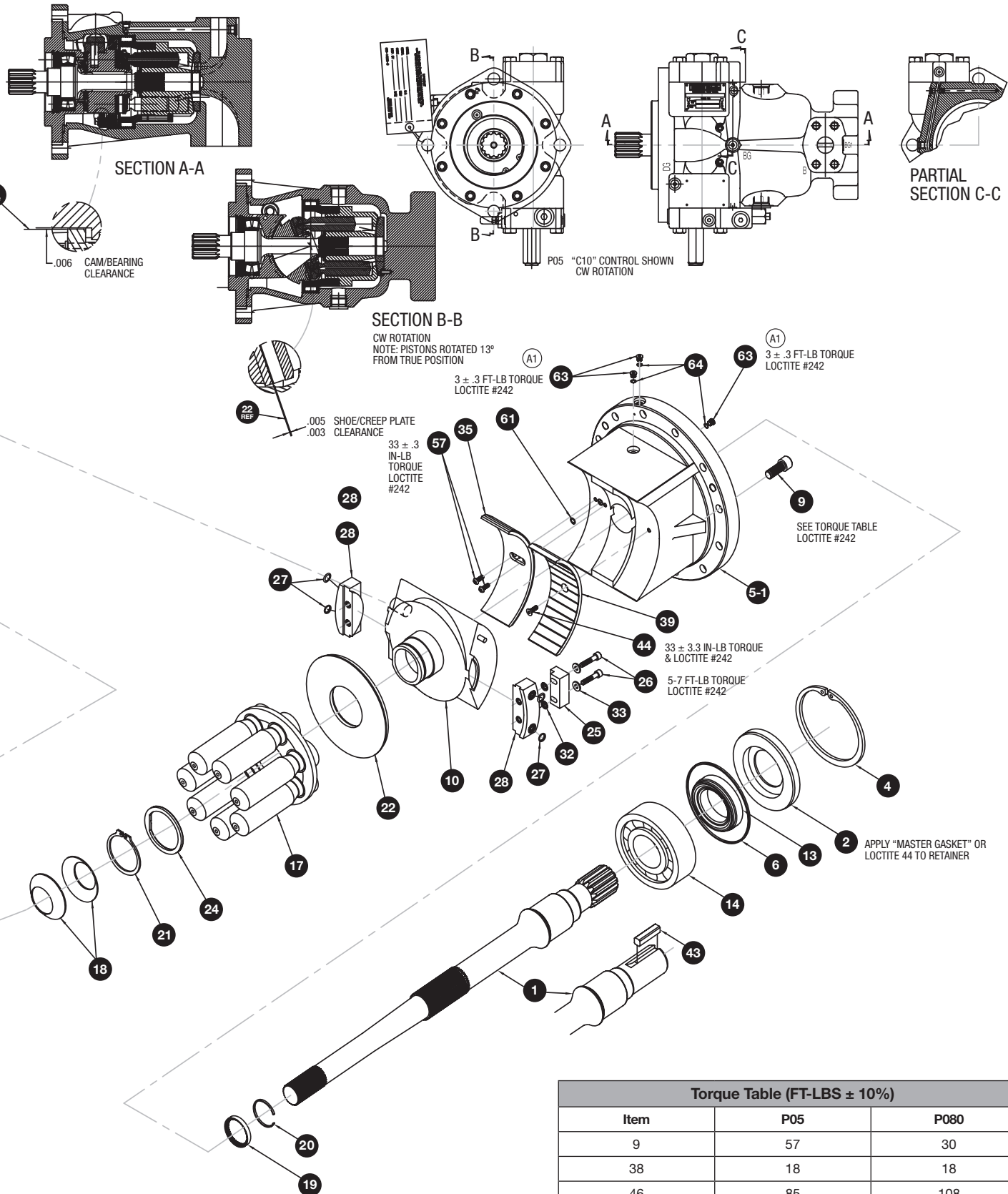
34 6-8 FT-LBS TORQUE
LOCTITE #271

SEE TORQUE TABLE

58
SEE TORQUE
TABLE

SEE TORQUE
TABLE

27-33 FT-LB TORQUE
LOCTITE #242



Balloon #	Pump Type	Item #	Description	Qty
1	P05 (SAE)	032-91829-0	Shaft, Keyed (Shaft Code 2) SAE 44-1 (D & E)	1
	P05 (SAE)	032-91852-0	Shaft, Keyed Rear Drive (Shaft Code 2) SAE 44-1 (D & E)	
	P05 (SAE)	032-91828-0	Shaft, Spline (Shaft Code 3) SAE 44-4 (D)	
	P05 (SAE)	032-91851-0	Shaft, Spline Rear Drive (Shaft Code 3) SAE 44-4 (D)	
	P080 (ISO)	032-92197-0	Shaft, Keyed 40mm (Shaft Code 2)	
	P080 (ISO)	032-92211-0	Shaft, Keyed Rear Drive 40mm (Shaft Code 2)	
	P080 (ISO)	032-92198-0	Shaft, Spline 40mm (Shaft Code 3)	
	P080 (ISO)	032-92210-0	Shaft, Spline Rear Drive 40mm (Shaft Code 3)	
	P080 (DIN)	032-92255-0	Shaft, Keyed 40mm (Shaft Code 6)	
	P080 (DIN)	032-92256-0	Shaft, Keyed Rear Drive 40mm (Shaft Code 6)	
	P080 (DIN)	032-92212-0	Shaft, Spline 40mm (Shaft Code 7)	
	P080 (DIN)	032-92213-0	Shaft, Spline Rear Drive 40mm (Shaft Code 7)	
2		032-91835-0	Seal Retainer	1
3		S22-18495-0	Barrel and Port Plate – CW (R)	1
3-1		S22-15323-0	Barrel and Sleeve Assembly	1
3-2		032-94238-0	Port Plate – CW	1
3		S22-18496-0	Barrel and Port Plate – CCW (L)	1
3-1		S22-15323-0	Barrel and Sleeve Assembly	1
3-2		032-94239-0	Port Plate – CCW	1
4		356-65086-0	Snap-Ring	1
5	P05	S22-17882-0	Cradle SAE (For Item 7-1, 032-93810-0 & 032-93811-0 ONLY) NOTE: Assembly Contains Items 5-1, 35, 39, 44, 53, 57, 61, 63 & 64	1
5-1		S22-18556-0	Rocker Cradle Assembly	1
5	P080	S22-17842-0	Cradle ISO/DIN (For Item 7-1, 032-93813-0 & 032-93814-0 ONLY) NOTE: Assembly Contains Items 5-1, 35, 39, 44, 53, 57, 61, 63 & 64	1
5-1		S22-18557-0	Rocker Cradle Assembly	1
6		605-00917-0	Quad Ring	1
7	P05	S22-17883-0	HSG/Port Block SAE NRD (For Item 5-1, S22-18556-0 ONLY) NOTE: Assembly Contains Items 7-1, 23, 29, 37, 38, 42, 45, 46, 49, 50, 54, 58, 59, 63, 64 & 67	1
7-1		032-93810-0	HSG/Port Block NRD	1
7	P05	S22-18498-0	HSG/Port Block SAE RD (For Item 5-1, S22-18556-0 ONLY) NOTE: Assembly Contains Items 7-1, 23, 29, 37, 38, 42, 45, 46, 49, 50, 54, 58, 59, 63, 64 & 67	1
7-1		032-93811-0	HSG/Port Block RD	1
7	P080	S22-17952-0	HSG/Port Block ISO/DIN NRD (For Item 5-1, S22-18557-0 ONLY) NOTE: Assembly Contains Items 7-1, 23, 38, 42, 46, 49, 50, 58, 59, 63, 64 & 67	1
7-1		032-93813-0	HSG/Port Block NRD	1
7	P080	S22-17841-0	HSG/Port Block ISO/DIN RD (For Item 5-1, S22-18557-0 ONLY) NOTE: Assembly Contains Items 7-1, 23, 38, 42, 46, 49, 50, 58, 59, 63, 64 & 67	1
7-1		032-93814-0	HSG/Port Block RD	

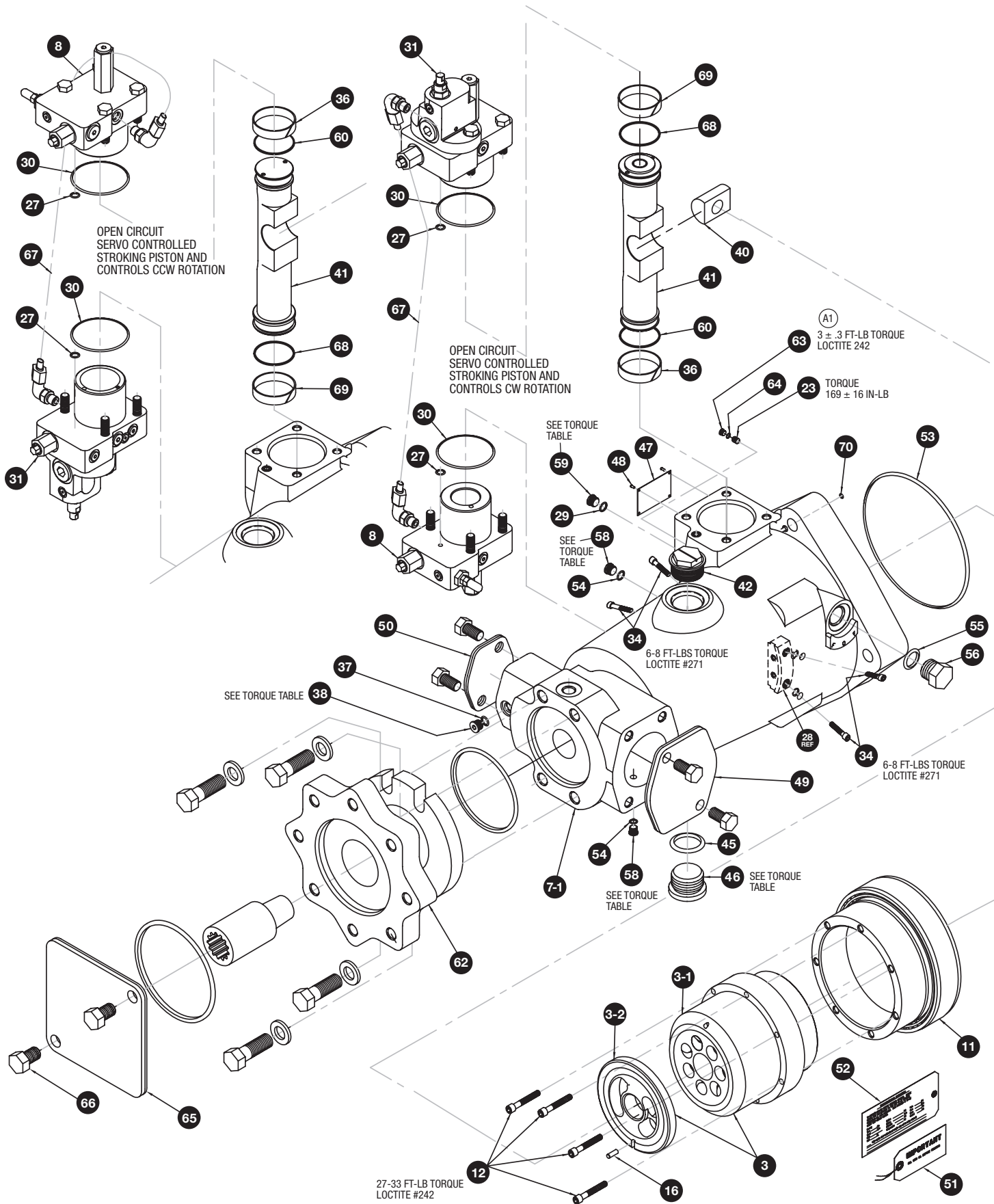
Balloon #	Pump Type	Item #	Description	Qty
8		S22-15447-0	Buck-Up Cap **0	1
9	P05 ONLY	361-11213-8	Screw-SHC M10 x 25mm LG.	8
	P080 ONLY	361-10204-8	Screw-SHC M8 x 20mm LG.	12
10		S22-18497-0	Rocker Cam and Pin Assembly	1
11		032-91807-0	Barrel Bearing	1
12		361-10234-8	Screw-SHC M8 x 35mm LG.	7
13		620-82080-0	Seal-SAE/ISO Shaft	1
14		230-82216-0	Bearing-SAE/ISO Shaft	1
15		363-12205-0	Screw-HHC M12 x 55mm (For Item 8)	4
16		324-21610-0	Dowel Pin 1/4 DIA. x 5/8 LG.	1
17		S22-15342-0	Piston, Shoes and Retainer	1
18		032-91827-0	Spring-Disc	2
19		032-91824-0	Stop-Barrel	1
20		032-91825-0	Ring-Retaining	1
21		032-92387-0	Retaining Ring (.059/.061 THK.) Orange	1
		032-91853-0	Retaining Ring (.061/.063 THK.) White	
		032-91854-0	Retaining Ring (.063/.065 THK.) Red	
		032-91855-0	Retaining Ring (.066/.068 THK.) Green	
		032-91856-0	Retaining Ring (.068/.070 THK.) Yellow	
		032-91857-0	Retaining Ring (.070/.072 THK.) Blue	
22		032-91826-0	Creep Plate	1
23		032-93419-0	Orifice .040	1
24		032-91830-0	Thrust Washer	1
25		032-91602-0	Bearing-Clearance	1
26		361-08704-8	Screw-SHC M6 x 30mm LG.	2
27		691-00013-0	O-Ring	6
28		032-91815-0	Retainer-Cam Bearing	2
29	P05	691-00904-0	O-Ring (For Item 59, 488-35041-0 ONLY)	1
30		671-00151-0	O-Ring	2

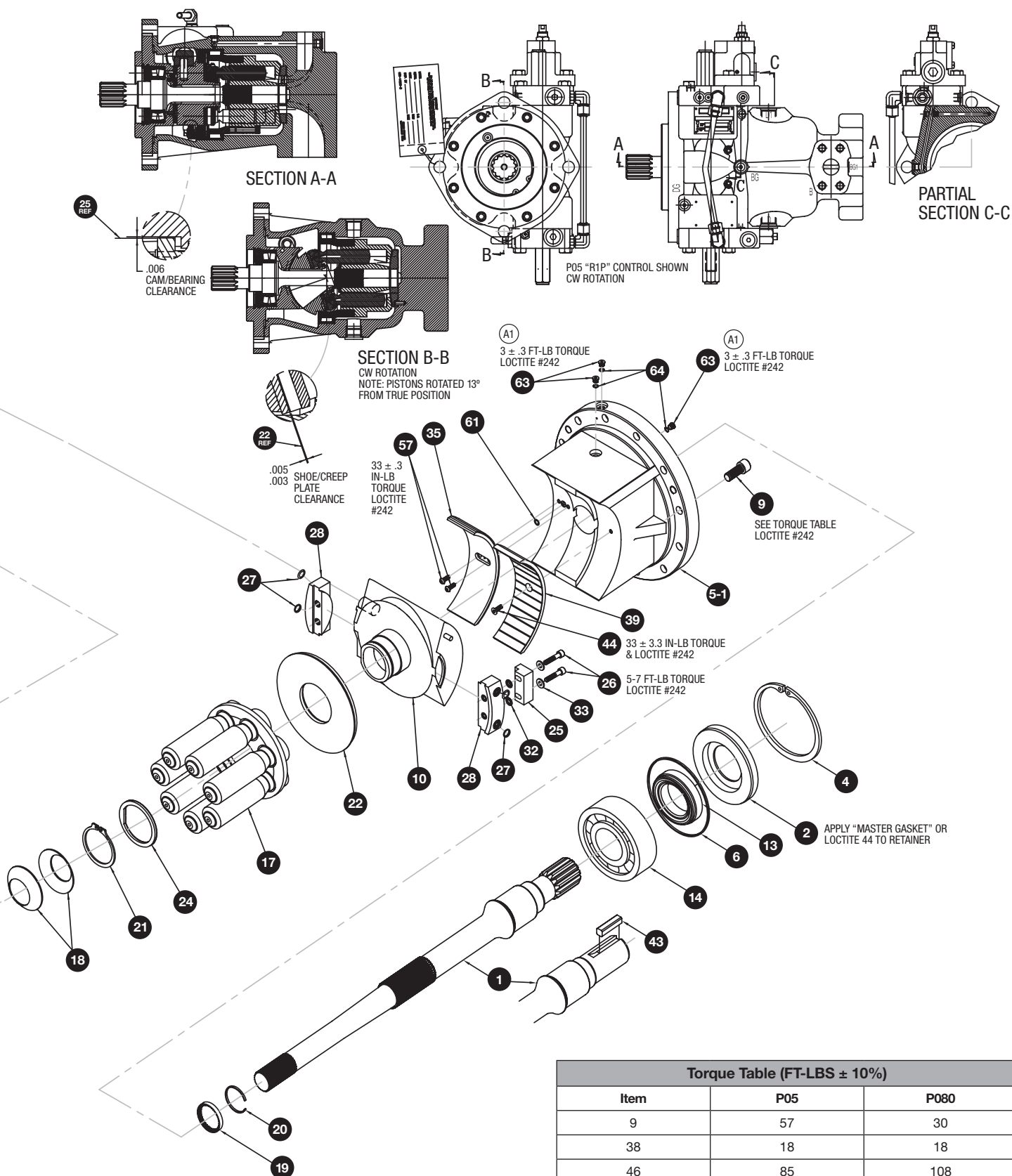
Compensator Controls (Primary) With Mounting Screws and Item 27 (QTY. 1) and Item 30 (QTY. 1)				
Balloon #	Pump Type	Item #	Description	Qty
31	P05	S22-16440-0	Compensator With Maximum Volume Adj. Screw C1*	1
	P080	S22-16444-0	Compensator With Maximum Volume Adj. Screw C1*	
	P05	S22-16445-0	Compensator With Maximum Volume Handwheel Adj. C2*	
	P080	S22-16446-0	Compensator With Maximum Volume Handwheel Adj. C2*	
	P05	S22-15401-0	Low Torque Limiter (TL) With Maximum Volume Screw J1*	
	P080	S22-15624-0	Low Torque Limiter (TL) With Maximum Volume Screw J1*	
	P05	S22-15627-0	Low Torque Limiter (TL) With Maximum Volume Handwheel Adj. J2*	
	P080	S22-15634-0	Low Torque Limiter (TL) With Maximum Volume Handwheel Adj. J2*	
	P05	S22-15629-0	High Torque Limiter (TL) With Maximum Volume Screw K1*	
	P080	S22-15631-0	High Torque Limiter (TL) With Maximum Volume Screw K1*	
	P05	S22-15635-0	High Torque Limiter (TL) With Maximum Volume Handwheel Adj. K2*	
	P080	S22-15636-0	High Torque Limiter (TL) With Maximum Volume Handwheel Adj. K2*	
	P05	S22-15402-0	Load Sensing 50 ΔP With Maximum Volume Screw L1*	
	P080	S22-15625-0	Load Sensing 50 ΔP With Maximum Volume Screw L1*	
	P05	S22-15628-0	Load Sensing 50 ΔP With Maximum Volume Handwheel Adj. L2*	
	P080	S22-15637-0	Load Sensing 50 ΔP With Maximum Volume Handwheel Adj. L2*	
	P05	S22-17860-0	Load Sensing 200 ΔP With Maximum Volume Screw M1*	
	P080	S22-17861-0	Load Sensing 200 ΔP With Maximum Volume Screw M1*	
	P05	Contact Tech Support	Load Sensing 200 ΔP With Maximum Volume Handwheel Adj. M2*	
	P080	Contact Tech Support	Load Sensing 200 ΔP WITH With Maximum Volume Handwheel Adj. M2*	
	P05	S22-16186-0	Low Torque Limiter (TL) With Load Sensing 50 ΔP & Maximum Volume Screw V1*	
	P080	S22-16188-0	Low Torque Limiter (TL) With Load Sensing 50 ΔP & Maximum Volume Screw V1*	
	P05	S22-16195-0	Low Torque Limiter (TL) With Load Sensing 50 ΔP & Maximum Volume Handwheel Adj. V2*	
	P080	S22-16196-0	Low Torque Limiter (TL) With Load Sensing 50 ΔP & Maximum Volume Handwheel Adj. V2*	
	P05	S22-16187-0	High Torque Limiter (TL) With Load Sensing 50 ΔP & Maximum Volume Screw W1*	
	P080	S22-16189-0	High Torque Limiter (TL) With Load Sensing 50 ΔP & Maximum Volume Screw W1*	
	P05	S22-16197-0	High Torque Limiter (TL) With Load Sensing 50 ΔP & Maximum Volume Handwheel Adj. W2*	
	P080	S22-16198-0	High Torque Limiter (TL) With Load Sensing 50 ΔP & Maximum Volume Handwheel Adj. W2*	
	P05	S22-17862-0	Low Torque Limiter (TL) With Load Sensing 200 ΔP & Maximum Volume Screw Y1*	
	P080	S22-17863-0	Low Torque Limiter (TL) With Load Sensing 200 ΔP & Maximum Volume Screw Y1*	
	P05	Contact Tech Support	Low Torque Limiter (TL) With Load Sensing 200 ΔP & Maximum Volume Handwheel Adj. Y2*	
	P080	Contact Tech Support	Low Torque Limiter (TL) With Load Sensing 200 ΔP & Maximum Volume Handwheel Adj. Y2*	
	P05	S22-17864-0	High Torque Limiter (TL) With Load Sensing 200 ΔP & Maximum Volume Screw Z1*	
	P080	S22-17865-0	High Torque Limiter (TL) With Load Sensing 200 ΔP & Maximum Volume Screw Z1*	
	P05	Contact Tech Support	High Torque Limiter (TL) With Load Sensing 200 ΔP & Maximum Volume Handwheel Adj. Z2*	
	P080	Contact Tech Support	High Torque Limiter (TL) With Load Sensing 200 ΔP & Maximum Volume Handwheel Adj. Z2*	

Compensator Controls (Primary) With Mounting Screws and Item 27 (QTY. 1) and Item 30 (QTY. 1) – Continued				
Balloon #	Pump Type	Item #	Description	Qty
32		348-10016-0	Washer-Internal Shakeproof	2
33		345-10012-0	Washer-Flat	2
34		361-08200-0	Screw-SHC M6 x 25mm LG.	4
35		032-93281-0	Bearing-Hydro Balance Cam	1
36		032-92854-0	Piston Ring	2
37	P05	691-00906-0	O-Ring (For Item 38, 488-35041-0 ONLY)	1
38	P05	488-35041-0	Plug SAE-6 (For Item 7-1, 032-93810-0 & 032-93811-0 ONLY)	1
	P080	447-01004-2	Plug BSPP 1/4" With Seal (For Item 7-1, 032-93813-0 & 032-93814-0 ONLY)	1
39		032-91808-0	Bearing-Cam	1
40		032-91823-0	Slide Link	1
41		032-91836-0	Piston Control	1
42	P05	449-00018-0	Plug-SAE-12 (For Item 7-1, 032-93810-0 & 032-93811-0 ONLY)	1
	P080	449-00600-0	Plug-BSPP 3/4" (For Item 7-1, 032-93813-0 & 032-93814-0 ONLY)	1
43	P05	033-71514-0	Key SAE (For Item 1 #2 ONLY)	1
	P080	211-40001-0	KEY ISO (For Item 1 #2 ONLY)	
		032-92263-0	KEY DIN (For Item 1 #6 ONLY)	
44		316-50001-0	Screw-Flat HD Socket M5 x 16mm LG.	1
45	P05	691-00912-0	O-Ring (For Item 46, 488-35014-0 ONLY)	1
46	P05	488-35014-0	Plug SAE-12 (For Item 7-1, 032-93810-0 & 032-93811-0 ONLY)	1
	P080	447-01012-2	Plug BSPP 3/4" With Seal (For Item 7-1, 032-93813-0 & 032-93814-0 ONLY)	1
47		032-92430-0	Nameplate	1
48		320-10203-0	Screw-Drive	4
49	P05	S21-11559-0	Cover-Inlet (For Item 7-1, 032-93810-0 & 032-93811-0 ONLY)	1
	P080	S22-15343-0	Cover-Inlet (For Item 7-1, 032-93813-0 & 032-93814-0 ONLY)	
50	P05	S21-11445-0	Cover-Outlet (For Item 7-1, 032-93810-0 & 032-93811-0 ONLY)	1
	P080	S22-15344-0	Cover-Outlet (For Item 7-1, 032-93813-0 & 032-93814-0 ONLY)	
51		035-12747-0	Tag-Fill	1
52		034-14292-0	Tag-Inspection	1
53		671-00261-0	O-Ring	1
54	P05	691-00904-0	O-Ring (For Item 58, 488-35061-0 ONLY)	2
55		691-00914-0	O-Ring	1
56		488-35030-0	Plug-SAE-14 (For Control Options "1" & "2")	1
		S22-16262-0	Volume Indicator (For Control Options "5" & "6")	
		S22-16707-0	Potentiometer – CW (For Control Options "3" & "6")	
		S22-16708-0	Potentiometer – CCW (For Control Options "3" & "6")	
		S22-17183-0	LVDT (For Control Options "4" & "7")	
57		353-25079-0	Screw-Button HD. M5 x 1mm LG.	2
58	P05	488-35061-0	Plug-SAE-4 (For Item 7-1, 032-93810-0 & 032-93811-0 ONLY)	2
	P080	447-01004-2	Plug BSPP 1/4" With Seal (For Item 7-1, 032-93813-0 & 032-93814-0 ONLY)	2
59	P05	488-35061-0	Plug-SAE-4 (For Item 7-1, 032-93810-0 & 032-93811-0 ONLY)	1
	P080	447-00032-0	Plug BSPP 3/8" With Seal (For Item 7-1, 032-93813-0 & 032-93814-0 ONLY)	1
60		671-10028-0	Ring-Square ARP-028	1
61		671-00006-0	O-Ring	1

Rear Adapters				
Balloon #	Pump Type	Item #	Description	Qty
62		S22-15372-0	A – SAE 82-2 (A) Mtg. With SAE 16-4 (A) Coupling	1
		S22-12867-0	B – SAE 101-2 or SAE 101-4 (B) Mtg. With SAE 22-4 (B) Coupling	
		S22-12869-0	C – SAE 127-2 or SAE 127-4 (C) Mtg. With SAE 32-4 (C) Coupling	
		S22-12870-0	D – SAE 152-4 (D) Mtg. With SAE 44-4 (D) Coupling	
		S22-15809-0	G – SAE 82-2 (A) Mtg. With SAE 22-4 (B) Coupling	
		S22-18140-0	M – Cover-Port Block Blanking	
		S22-12920-0	N – SAE 127-2 or SAE 127-4 (C) Mtg. With SAE 38-4 (C-C) Coupling	
		S22-15740-0	T – ISO 3019/2-180B4HW Mtg. With ISO 3019/2-K40N Coupling	
		S22-15570-0	U – ISO 3019/2-180B4HW Mtg. With ISO 3019/2-K50N Coupling	
		S22-12868-0	Q – SAE 101-2 or SAE 101-4 (B) Mtg. With SAE 25-4 (B-B) Coupling	
		S22-12874-0	X – ISO 3019/2-160B4HW Mtg. With ISO 3019/2-K40N Coupling	
		S22-12873-0	Y – ISO 3019/2-125B4HW Mtg. With ISO 3019/2-K32N Coupling	
		S2-12872-0	Z – ISO 3019/2-100B4HW Mtg. With ISO 3019/2-K25N Coupling	
63		488-35046-0	Plug-SAE-2	4
64		691-00902-0	O-Ring	4
65		034-59555-0	Cover-SAE-A Shipping (For Item 62, A & G)	1
		031-59564-0	Cover-SAE-B Shipping (For Item 62, B & Q)	
		031-57252-0	Cover-SAE-C Shipping (For Item 62, C & N)	
		031-57250-0	Cover-SAE-D Shipping (For Item 62, D)	
		032-92163-0	Cover-ISO 180 Shipping (For Item 62, T & U)	
		032-91407-0	Cover-ISO 160 Shipping (For Item 62, X)	
		032-91408-0	Cover-ISO 125 Shipping (For Item 62, Y)	
		032-91409-0	Cover-ISO 100 Shipping (For Item 62, Z)	
66		306-16120-0	Screw-HHC 3/8-16 x .75 LG. (For Item 62, A, B & G)	2
		306-24160-0	Screw-HHC 5/8-11 x 1.00 LG. (For Item 62, C & N)	2
		306-26160-0	Screw-HHC 3/4-10 x 1.00 LG. (For Item 62, D)	2
		363-14212-8	Screw-HHC M16 x 25mm LG. (For Item 62, T, U & X)	4
		363-16210-8	Screw-HHC M20 x 25mm LG. (For Item 62, M)	4
		306-20120-0	Screw-HHC 1/2-13 x .75 LG. (For Item 62, Q)	2
		363-12193-0	Screw-HHC M12 x 20mm LG. (For Item 62, Y)	2
		363-11120-8	Screw-HHC M10 x 12mm LG. (For Item 62, Z)	2
67		671-00010-0	O-Ring	1

This image shows a full page of white paper with horizontal blue ruling lines. The lines are evenly spaced and run across the width of the page, typical of notebook or legal stationery. There are no margins, text, or other markings on the page.



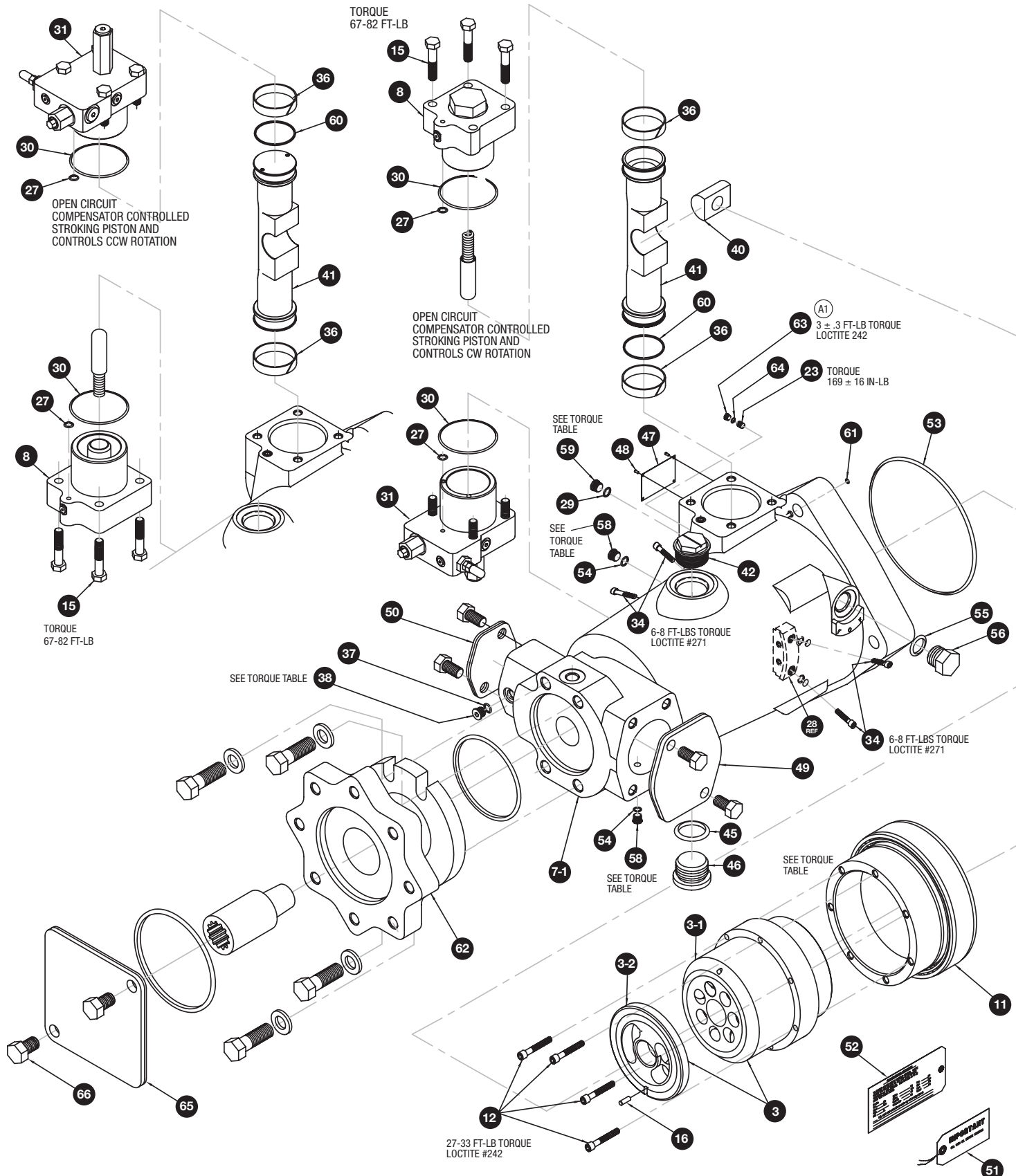


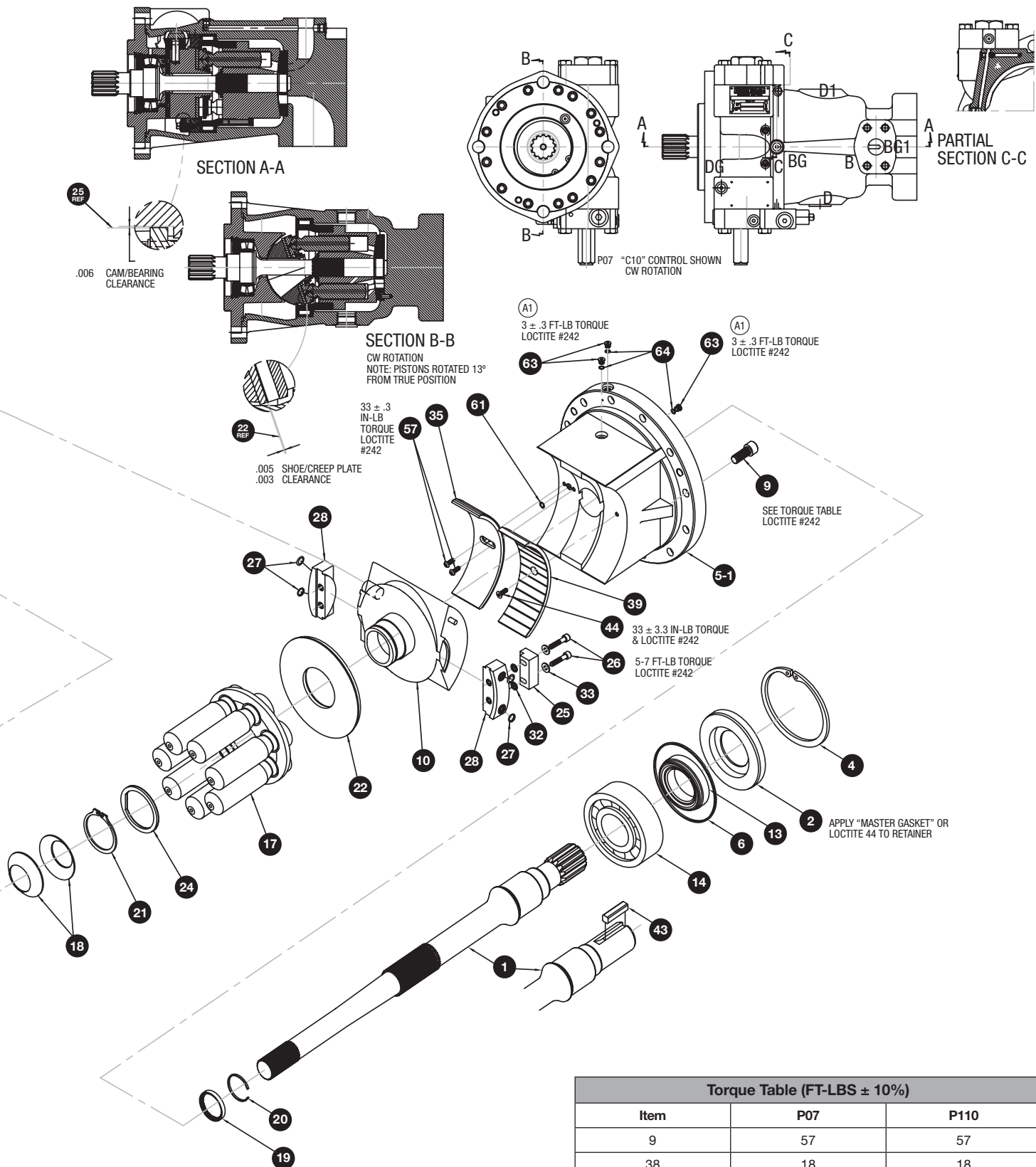
Balloon #	Pump Type	Item #	Description	Qty
1	P05 (SAE)	032-91829-0	Shaft, Keyed (Shaft Code 2) SAE 44-1 (D & E)	1
	P05 (SAE)	032-91852-0	Shaft, Keyed Rear Drive (Shaft Code 2) SAE 44-1 (D & E)	
	P05 (SAE)	032-91828-0	Shaft, Spline (Shaft Code 3) SAE 44-4 (D)	
	P05 (SAE)	032-91851-0	Shaft, Spline Rear Drive (Shaft Code 3) SAE 44-4 (D)	
	P080 (ISO)	032-92197-0	Shaft, Keyed 40mm (Shaft Code 2)	
	P080 (ISO)	032-92211-0	Shaft, Keyed Rear Drive 40mm (Shaft Code 2)	
	P080 (ISO)	032-92198-0	Shaft, Spline 40mm (Shaft Code 3)	
	P080 (ISO)	032-92210-0	Shaft, Spline Rear Drive 40mm (Shaft Code 3)	
	P080 (DIN)	032-92255-0	Shaft, Keyed 40mm (Shaft Code 6)	
	P080 (DIN)	032-92256-0	Shaft, Keyed Rear Drive 40mm (Shaft Code 6)	
	P080 (DIN)	032-92212-0	Shaft, Spline 40mm (Shaft Code 7)	
	P080 (DIN)	032-92213-0	Shaft, Spline Rear Drive 40mm (Shaft Code 7)	
2		032-91835-0	Seal Retainer	1
3		S22-18495-0	Barrel and Port Plate – CW (R)	1
3-1		S22-15323-0	Barrel and Sleeve Assembly	1
3-2		032-94238-0	Port Plate – CW	1
3		S22-18496-0	Barrel and Port Plate – CCW (L)	1
3-1		S22-15323-0	Barrel and Sleeve Assembly	1
3-2		032-94239-0	Port Plate – CCW	1
4		356-65086-0	Snap-Ring	1
5	P05	S22-17882-0	Cradle SAE (For Item 7-1, 032-93810-0 & 032-93811-0 ONLY) NOTE: Assembly Contains Items 5-1, 35, 39, 44, 53, 57, 61, 63 & 64	1
5-1		S22-18556-0	Rocker Cradle Assembly	1
5		S22-17842-0	Cradle ISO/DIN (For Item 7-1, 032-93813-0 & 032-93814-0 ONLY) NOTE: Assembly Contains Items 5-1, 35, 39, 44, 53, 57, 61, 63 & 64	1
5-1		S22-18557-0	Rocker Cradle Assembly	1
6		605-00917-8	Quad Ring	1
7	P05	S22-17883-0	HSG/Port Block SAE NRD (For Item 5-1, S22-18556-0 ONLY) NOTE: Assembly Contains Items 7-1, 23, 29, 37, 38, 42, 45, 46, 49, 50, 54, 58, 59, 63, 64 & 67	1
7-1		032-93810-0	HSG/Port Block NRD	1
7	P05	S22-18498-0	HSG/Port Block SAE RD (For Item 5-1, S22-18556-0 ONLY) NOTE: Assembly Contains Items 7-1, 23, 29, 37, 38, 42, 45, 46, 49, 50, 54, 58, 59, 63, 64 & 67	1
7-1		032-93811-0	HSG/Port Block RD	1
7	P080	S22-17952-0	HSG/Port Block ISO/DIN NRD (For Item 5-1, S22-18557-0 ONLY) NOTE: Assembly Contains Items 7-1, 23, 38, 42, 46, 49, 50, 58, 59, 63, 64 & 67	1
7-1		032-93813-0	HSG/Port Block NRD	1
7	P080	S22-17841-0	HSG/Port Block ISO/DIN RD (For Item 5-1, S22-18557-0 ONLY) NOTE: Assembly Contains Items 7-1, 23, 38, 42, 46, 49, 50, 58, 59, 63, 64 & 67	1
7-1		032-93814-0	HSG/Port Block RD	1

Override Controls (Secondary) With Adjacent Maximum Volume Screw and Mounting Screws				
Balloon #	Pump Type	Item #	Description	Qty
8	P05	S22-16205-0	Compensator *1P	1
	P080	S22-16206-0	Compensator *1P	
	P05	S22-16207-0	Low Torque Limiter *1J	
	P080	S22-16208-0	Low Torque Limiter *1J	
	P05	S22-16209-0	High Torque Limiter *1K	
	P080	S22-16210-0	High Torque Limiter *1K	
	P05	S22-15325-0	None *10	
	P080	S22-15613-0	None *10	
9	P05 ONLY	361-11213-8	Screw-SHC M10 x 25mm LG.	8
	P080 ONLY	361-10204-8	Screw-SHC M8 x 20mm LG.	12
10		S22-18497-0	Rocker Cam and Pin Assembly	1
11		032-91807-0	Barrel Bearing	1
12		361-10234-8	Screw-SHC M8 x 35mm LG.	7
13		620-82080-0	Seal-SAE/ISO Shaft	1
14		230-82216-0	Bearing-SAE/ISO Shaft	1
15			Not Used	
16		324-21610-0	Dowel Pin 1/4 DIA. x 5/8 LG.	1
17		S22-15342-0	Piston, Shoes and Retainer	1
18		032-91827-0	Spring-Disc	2
19		032-91824-0	Stop-Barrel	1
20		032-91825-0	Ring-Retaining	1
21		032-92387-0	Retaining Ring (.059/.061 THK.) Orange	1
		032-91853-0	Retaining Ring (.061/.063 THK.) White	
		032-91854-0	Retaining Ring (.063/.065 THK.) Red	
		032-91855-0	Retaining Ring (.066/.068 THK.) Green	
		032-91856-0	Retaining Ring (.068/.070 THK.) Yellow	
		032-91857-0	Retaining Ring (.070/.072 THK.) Blue	
22		032-91826-0	Creep Plate	1
23		032-93419-0	Orifice .040	1
24		032-91830-0	Thrust Washer	1
25		032-91602-0	Bearing-Clearance	1
26		361-08704-8	Screw-SHC M6 x 30mm LG.	2
27		691-00013-0	O-Ring	6
28		032-91815-0	Retainer-Cam Bearing	2
29	P07	691-00904-0	O-Ring (For Item 59, 488-35041-0 ONLY)	1
30		671-00151-0	O-Ring	2

Servo Controls (Primary) With Mounting Screws				
Balloon #	Pump Type	Item #	Description	Qty
31	P05	S22-16204-0	Electro Hydraulic Stoker E**	1
	P080	S22-16203-0	Electro Hydraulic Stoker E**	
	P05	S22-16202-0	Hydraulic Stoker H**	
	P080	S22-16201-0	Hydraulic Stoker H**	
	P05	S22-16200-0	Rotary Servo R**	
	P080	S22-16199-0	Rotary Servo R**	
32		348-10016-0	Washer-Internal Shakeproof	2
33		345-10012-0	Washer-Flat	2
34		361-08200-0	Screw-SHC M6 x 25mm LG.	4
35		032-93281-0	Bearing-Hydro Balance Cam	1
36		032-92854-0	Piston Ring	1
37	P05	691-00906-0	O-Ring (For Item 38, 488-35041-0 ONLY)	1
38	P05	488-35041-0	Plug SAE-6 (For Item 7-1, 032-93810-0 & 032-93811-0 ONLY)	1
	P080	447-01004-2	Plug BSPP 1/4" With Seal (For Item 7-1, 032-93813-0 & 032-93814-0 ONLY)	1
39		032-91808-0	Bearing-Cam	1
40		032-91823-0	Slide Link	1
41		S22-17827-0	Piston With Dowel	1
42	P05	449-00018-0	Plug-SAE-12 (For Item 7-1, 032-93810-0 & 032-93811-0 ONLY)	1
	P080	449-00600-0	Plug-BSPP 3/4" (For Item 7-1, 032-93813-0 & 032-93814-0 ONLY)	1
43	P05	033-71514-0	Key SAE (For Item 1 #2 ONLY)	1
	P080	211-40001-0	Key ISO (For Item 1 #2 ONLY)	
		032-92263-0	Key DIN (For Item 1 #6 ONLY)	
44		316-50001-0	Screw-Flat HD Socket M5 x 16mm LG.	1
45	P05	691-00912-0	O-Ring (For Item 46, 488-35014-0 ONLY)	1
46	P05	488-35014-0	Plug SAE-12 (For Item 7-1, 032-93810-0 & 032-93811-0 ONLY)	1
	P080	447-01012-2	Plug BSPP 3/4" With Seal (For Item 7-1, 032-93813-0 & 032-93814-0 ONLY)	1
47		032-92430-0	Nameplate	1
48		320-10203-0	Screw-Drive	4
49	P05	S21-11559-0	Cover-Inlet (For Item 7-1, 032-93810-0 & 032-93811-0 ONLY)	1
	P080	S22-15343-0	Cover-Inlet (For Item 7-1, 032-93813-0 & 032-93814-0 ONLY)	
50	P05	S21-11445-0	Cover-Outlet (For Item 7-1, 032-93810-0 & 032-93811-0 ONLY)	1
	P080	S22-15344-0	Cover-Outlet (For Item 7-1, 032-93813-0 & 032-93814-0 ONLY)	
51		035-12747-0	Tag-Fill	1
52		034-14292-0	Tag-Inspection	1
53		671-00261-0	O-Ring	1
54	P05	691-00904-0	O-Ring (For Items 58, 488-35061-0 ONLY)	2
55		691-00914-0	O-Ring	1
56		488-35030-0	Pilug-SAE-14 (For Control Options "1" AND "2")	1
		S22-16262-0	Volume Indicator (For Control Options "5" and "8")	
		S22-16707-0	Potentiometer - CW (For Control Options "3" and "6")	
		S22-16708-0	Potentiometer - CCW (For Control Options "3" and "6")	
		S22-17183-0	LVDT (For Control Options "4" and "7")	
57		353-25079-0	Screw-Button HD. M5 x 1mm LG.	2
58	P05	488-35061-0	Plug-SAE-4 (For Item 7-1, 032-93810-0 & 032-93811-0 ONLY)	2
	P080	447-01004-2	Plug BSPP 1/4" With Seal (For Item 7-1, 032-93813-0 & 032-93814-0 ONLY)	2
59	P05	488-35061-0	Plug-SAE-4 (For Item 7-1, 032-93810-0 & 032-93811-0 ONLY)	1
	P080	447-00032-0	Plug BSPP 3/8" With Seal (For Item 7-1, 032-93813-0 & 032-93814-0 ONLY)	1
60		671-10028-0	Ring-Square ARP-028	1
61		671-00006-0	O-Ring	1

Rear Adapters				
62		S22-15372-0	A – SAE 82-2 (A) Mtg. With SAE 16-4 (A) Coupling	1
		S22-12867-0	B – SAE 101-2 or SAE 101-4 (B) Mtg. With SAE 22-4 (B) Coupling	
		S22-12869-0	C – SAE 127-2 or SAE 127-4 (C) Mtg. With SAE 32-4 (C) Coupling	
		S22-12870-0	D – SAE 152-4 (D) Mtg. With SAE 44-4 (D) Coupling	
		S22-15809-0	G – SAE 82-2 (A) Mtg. With SAE 22-4 (B) Coupling	
		S22-18140-0	M – Cover-Port Block Blanking	
		S22-12920-0	N – SAE 127-2 or SAE 127-4 (C) Mtg. With SAE 38-4 (C-C) Coupling	
		S22-15740-0	T – ISO 3019/2-180B4HW Mtg. With ISO 3019/2-K40N Coupling	
		S22-15570-0	U – ISO 3019/2-180B4HW Mtg. With ISO 3019/2-K50N Coupling	
		S22-12868-0	Q – SAE 101-2 or SAE 101-4 (B) Mtg. With SAE 25-4 (B-B) Coupling	
		S22-12874-0	X – ISO 3019/2-160B4HW Mtg. With ISO 3019/2-K40N Coupling	
		S22-12873-0	Y – ISO 3019/2-125B4HW Mtg. With ISO 3019/2-K32N Coupling	
		S2-12872-0	Z – ISO 3019/2-100B4HW Mtg. With ISO 3019/2-K25N Coupling	
63		488-35046-0	Plug-SAE-2	4
64		691-00902-0	O-Ring	4
65		034-59555-0	Cover-SAE-A Shipping (For Item 62, A & G)	1
		031-59564-0	Cover-SAE-B Shipping (For Item 62, B & Q)	
		031-57252-0	Cover-SAE-C Shipping (For Item 62, C & N)	
		031-57250-0	Cover-SAE-D Shipping (For Item 62, D)	
		032-92163-0	Cover-ISO 180 Shipping (For Item 62, T & U)	
		032-91407-0	Cover-ISO 160 Shipping (For Item 62, X)	
		032-91408-0	Cover-ISO 125 Shipping (For Item 62, Y)	
		032-91409-0	Cover-ISO 100 Shipping (For Item 62, Z)	
66		306-16120-0	Screw-HHC 3/8-16 x .75 LG. (For Item 62, A, B & G)	2
		306-24160-0	Screw-HHC 5/8-11 x 1.00 LG. (For Item 62, C & N)	2
		306-26160-0	Screw-HHC 3/4-10 x 1.00 LG. (For Item 62, D)	2
		363-14212-8	Screw-HHC M16 x 25mm LG. (For Item 62, T, U & X)	4
		363-16210-8	Screw-HHC M20 x 25mm LG. (For Item 62, M)	4
		306-20120-0	Screw-HHC 1/2-13 x .75 LG. (For Item 62, Q)	2
		363-12193-0	Screw-HHC M12 x 20mm LG. (For Item 62, Y)	2
		363-11120-8	Screw-HHC M10 x 12mm LG. (For Item 62, Z)	2
67	P05	S22-16035-0	Tube Servo – CW	1
	P080	S22-16037-0	Tube Servo – CW	
	P05	S22-16036-0	Tube Servo – CCW	
	P080	S22-16038-0	Tube Servo – CCW	
68		671-10033-0	Ring-Square ARP-033	1
69		032-92855-0	Piston Ring	1
70		671-00010-0	O-Ring	1





Torque Table (FT-LBS ± 10%)		
Item	P07	P110
9	57	57
38	18	18
46	135	146
58	11	18
59	11	18

Balloon #	Pump Type	Item #	Description	Qty
1	P07 (SAE)	032-91829-0	Shaft, Keyed (Shaft Code 2) SAE 44-1 (D & E)	1
	P07 (SAE)	032-92525-0	Shaft, Keyed Rear Drive (Shaft Code 2) SAE 44-1 (D & E)	
	P07 (SAE)	032-91828-0	Shaft, Spline (Shaft Code 3) SAE 44-4 (D)	
	P07 (SAE)	032-92524-0	Shaft, Spline Rear Drive (Shaft Code 3) SAE 44-4 (D)	
	P110 (ISO)	032-92197-0	Shaft, Keyed 40mm (Shaft Code 2)	
	P110 (ISO)	032-92526-0	Shaft, Keyed Rear Drive 40mm (Shaft Code 2)	
	P110 (ISO)	032-92198-0	Shaft, Spline 40mm (Shaft Code 3)	
	P110 (ISO)	032-92527-0	Shaft, Spline Rear Drive 40mm (Shaft Code 3)	
	P110 (DIN)	032-92255-0	Shaft, Keyed 40mm (Shaft Code 6)	
	P110 (DIN)	032-92529-0	Shaft, Keyed Rear Drive 40mm (Shaft Code 6)	
	P110 (DIN)	032-92212-0	Shaft, Spline 40mm (Shaft Code 7)	
	P110 (DIN)	032-92528-0	Shaft, Spline Rear Drive 40mm (Shaft Code 7)	
2		032-91835-0	Seal Retainer	1
3		S22-18361-0	Barrel and Port Plate – CW (R)	1
3-1		S22-15904-0	Barrel and Sleeve Assembly	1
3-2		032-94213-0	Port Plate – CW	1
3		S22-18362-0	Barrel and Port Plate – CCW (L)	1
3-1		S22-15904-0	Barrel and Sleeve Assembly	1
3-2		032-94284-0	Port Plate – CCW	1
4		356-65086-0	Snap-Ring	1
5	P07	S22-17798-0	Cradle SAE (For Item 7-1, 032-93816-0 & 032-93817-0 ONLY) NOTE: Assembly Contains Items 5-1, 35, 39, 44, 53, 57, 61, 63 & 64	1
5-1		S22-18554-0	Rocker Cradle Assembly	1
5	P110	S22-17880-0	Cradle ISO/DIN (For Item 7-1, 032-93819-0 & 032-93820-0 ONLY) NOTE: Assembly Contains Items 5-1, 35, 39, 44, 53, 57, 61, 63 & 64	1
5-1		S22-18555-0	Rocker Cradle Assembly	1
6		605-00917-8	Quad Ring	1
7	P07	S22-17999-0	HSG/Port Block SAE NRD (For Item 5-1, S22-18554-0 ONLY) NOTE: Assembly Contains Items 7-1, 23, 29, 37, 38, 42, 45, 46, 49, 50, 54, 58, 59, 63 & 64	1
7-1		032-93816-0	HSG/Port Block NRD	1
7	P07	S22-18364-0	HSG/Port Block SAE RD (For Item 5-1, S22-18554-0 ONLY) NOTE: Assembly Contains Items 7-1, 23, 29, 37, 38, 42, 45, 46, 49, 50, 54, 58, 59, 63 & 64	1
7-1		032-93817-0	HSG/Port Block RD	1
7	P110	S22-17881-0	HSG/Port Block ISO/DIN NRD (For Item 5-1, S22-18555-0 ONLY) NOTE: Assembly Contains Items 7-1, 23, 38, 42, 46, 49, 50, 58, 59, 63 & 64	1
7-1		032-93819-0	HSG/Port Block NRD	1
7	P110	S22-18365-0	HSG/PORT Block ISO/DIN RD (For Item 5-1, S22-18555-0 ONLY) NOTE: Assembly Contains Items 7-1, 23, 38, 42, 46, 49, 50, 58, 59, 63 & 64	1
7-1		032-93820-0	HSG/Port Block NRD	1

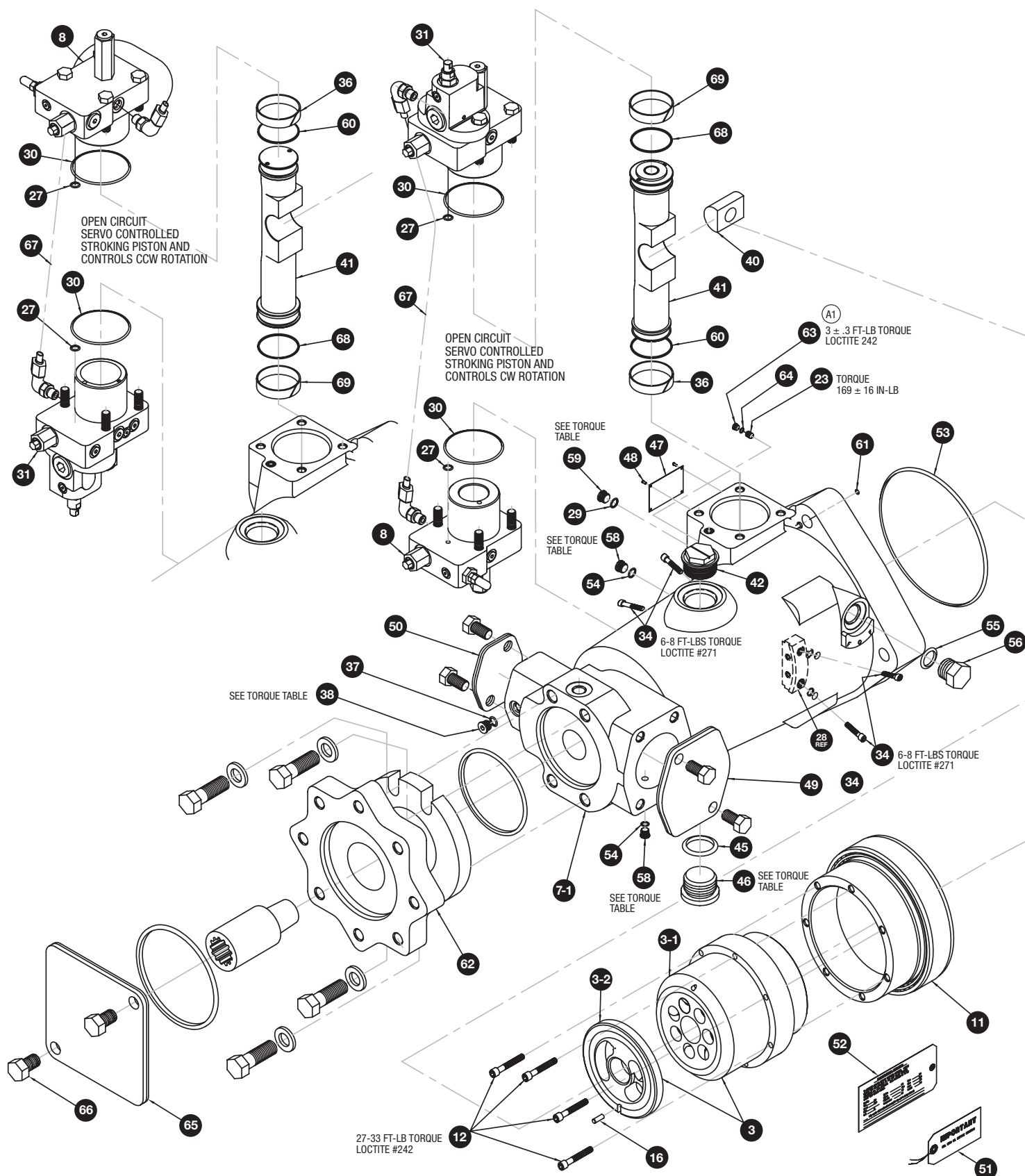
Balloon #	Pump Type	Item #	Description	Qty
8		S22-15447-0	Buck-Up Cap **0	1
9		361-11213-8	Screw-SHC M10 x 25mm LG.	14
10		S22-18363-0	Rocker Cam and Pin Assembly	1
11		032-92449-0	Barrel Bearing	1
12		361-10234-0	Screw-SHC M8 x 35mm LG.	7
13		620-82080-0	Seal-SAE/ISO Shaft	1
14		230-82216-0	Bearing-SAE/ISO Shaft	1
15		363-12205-0	Screw-HHC M12 x 55mm (For Item 8)	4
16		324-21610-0	Dowel Pin 1/4 DIA. x 5/8 LG.	1
17		S22-16039-0	Piston, Shoes and Retainer	1
18		032-91827-0	Spring-Disc	2
19		032-91824-0	Stop-Barrel	1
20		032-91825-0	Ring-Retaining	1
21		032-91853-0	Retaining Ring (.061/.063 THK.) White	1
		032-91854-0	Retaining Ring (.063/.065 THK.) Red	
		032-91855-0	Retaining Ring (.066/.068 THK.) Green	
		032-91856-0	Retaining Ring (.068/.070 THK.) Yellow	
		032-91857-0	Retaining Ring (.070/.072 THK.) Blue	
22		032-92452-0	Creep Plate	1
23		032-93419-0	Orifice .040	1
24		032-91830-0	Thrust Washer	1
25		032-91602-0	Bearing-Clearance	1
26		361-08704-8	Screw-SHC M6 x 30mm LG.	2
27		691-00013-0	O-Ring	6
28		032-92470-0	Retainer-Cam Bearing	2
29	P07	691-00904-0	O-Ring (For Item 59, 488-35041-0 ONLY)	1
30		671-00151-0	O-Ring	2

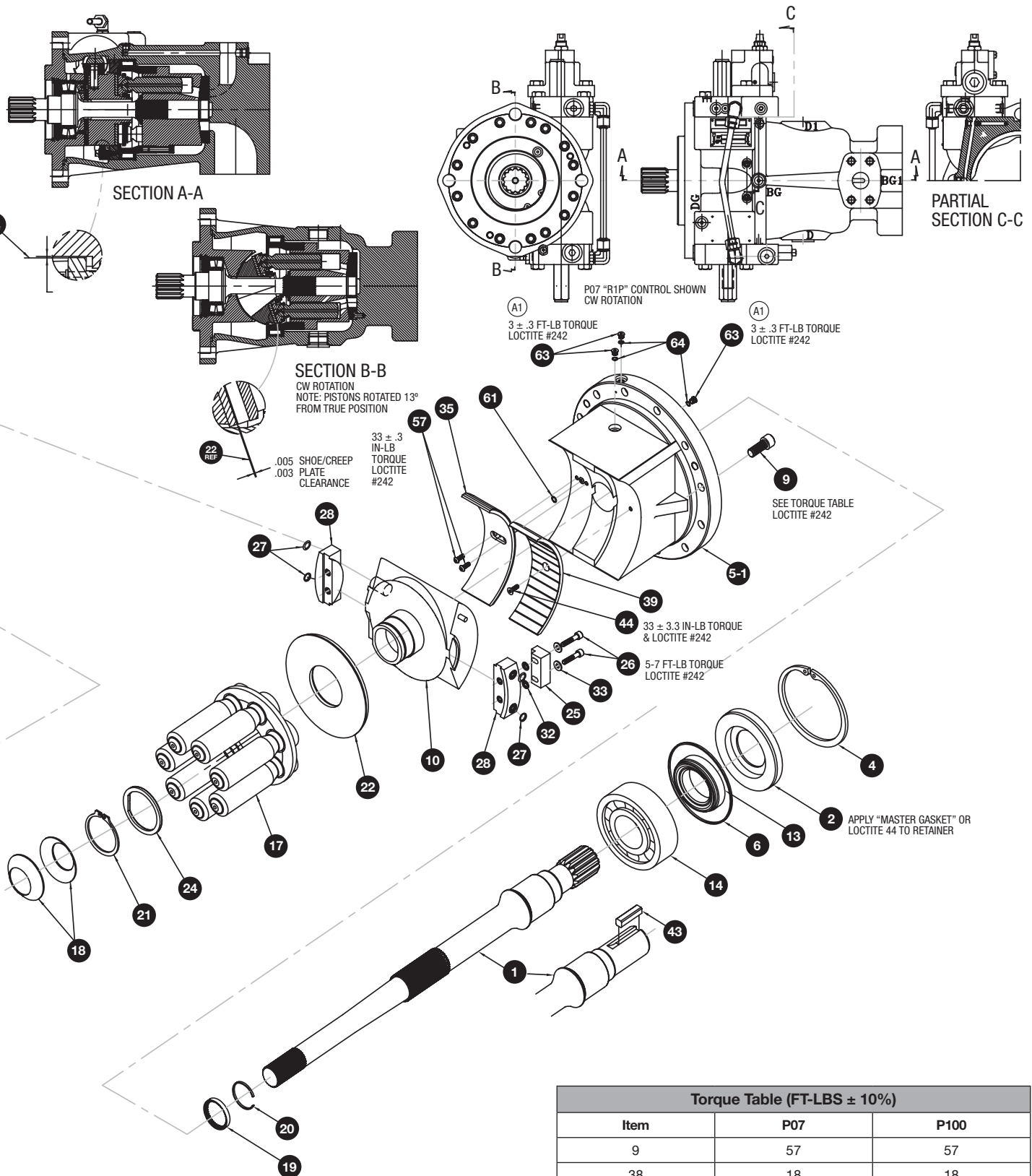
Compensator Controls (Primary) With Mounting Screws and Item 27 (QTY. 1) and Item 30 (QTY. 1)				
Balloon #	Pump Type	Item #	Description	Qty
31	P07	S22-16440-0	Compensator With Maximum Volume Adj. Screw C1*	1
	P110	S22-16444-0	Compensator With Maximum Volume Adj. Screw C1*	
	P07	S22-16445-0	Compensator With Maximum Volume Handwheel Adj. C2*	
	P110	S22-16446-0	Compensator With Maximum Volume Handwheel Adj. C2*	
	P07	S22-15401-0	Low Torque Limiter (TL) With Maximum Volume Screw J1*	
	P110	S22-15624-0	Low Torque Limiter (TL) With Maximum Volume Screw J1*	
	P07	S22-15627-0	Low Torque Limiter (TL) With Maximum Volume Handwheel Adj. J2*	
	P110	S22-15634-0	Low Torque Limiter (TL) With Maximum Volume Handwheel Adj. J2*	
	P07	S22-15629-0	High Torque Limiter (TL) With Maximum Volume Screw K1*	
	P110	S22-15631-0	High Torque Limiter (TL) With Maximum Volume Screw K1*	
	P07	S22-15635-0	High Torque Limiter (TL) With Maximum Volume Handwheel Adj. K2*	
	P110	S22-15636-0	High Torque Limiter (TL) With Maximum Volume Handwheel Adj. K2*	
	P07	S22-15402-0	Load Sensing 50 ΔP With Maximum Volume Screw L1*	
	P110	S22-15625-0	Load Sensing 50 ΔP With Maximum Volume Screw L1*	
	P07	S22-15628-0	Load Sensing 50 ΔP With Maximum Volume Handwheel Adj. L2*	
	P110	S22-15637-0	Load Sensing 50 ΔP With Maximum Volume Handwheel Adj. L2*	
	P07	S22-17860-0	Load Sensing 200 ΔP With Maximum Volume Screw M1*	
	P110	S22-17861-0	Load Sensing 200 ΔP With Maximum Volume Screw M1*	
	P07	Contact Tech Support	Load Sensing 200 ΔP With Maximum Volume Handwheel Adj. M2*	
	P110	Contact Tech Support	Load Sensing 200 ΔP With Maximum Volume Handwheel Adj. M2*	
	P07	S22-16186-0	Low Torque Limiter (TL) With Load Sensing 50 ΔP & Maximum Volume Screw V1*	
	P110	S22-16188-0	Low Torque Limiter (TL) With Load Sensing 50 ΔP & Maximum Volume Screw V1*	
	P07	S22-16195-0	Low Torque Limiter (TL) With Load Sensing 50 ΔP & Maximum Volume Handwheel Adj. V2*	
	P110	S22-16196-0	Low Torque Limiter (TL) With Load Sensing 50 ΔP & Maximum Volume Handwheel Adj. V2*	
	P07	S22-16187-0	High Torque Limiter (TL) With Load Sensing 50 ΔP & Maximum Volume Screw W1*	
	P110	S22-16189-0	High Torque Limiter (TL) With Load Sensing 50 ΔP & Maximum Volume Screw W1*	
	P07	S22-16197-0	High Torque Limiter (TL) With Load Sensing 50 ΔP & Maximum Volume Handwheel Adj. W2*	
	P110	S22-16198-0	High Torque Limiter (TL) With Load Sensing 50 ΔP & Maximum Volume Handwheel Adj. W2*	
	P07	S22-17862-0	Low Torque Limiter (TL) With Load Sensing 200 ΔP & Maximum Volume Screw Y1*	
	P110	S22-17863-0	Low Torque Limiter (TL) With Load Sensing 200 ΔP & Maximum Volume Screw Y1*	
	P07	Contact Tech Support	Low Torque Limiter (TL) With Load Sensing 200 ΔP & Maximum Volume Handwheel Adj. Y2*	
	P110	Contact Tech Support	Low Torque Limiter (TL) With Load Sensing 200 ΔP & Maximum Volume Handwheel Adj. Y2*	
	P07	S22-17864-0	High Torque Limiter (TL) With Load Sensing 200 ΔP & Maximum Volume Screw Z1*	
	P110	S22-17865-0	High Torque Limiter (TL) With Load Sensing 200 ΔP & Maximum Volume Screw Z1*	
	P07	Contact Tech Support	High Torque Limiter (TL) With Load Sensing 200 ΔP & Maximum Volume Handwheel Adj. Z2*	
	P110	Contact Tech Support	High Torque Limiter (TL) With Load Sensing 200 ΔP & Maximum Volume Handwheel Adj. Z2*	

Compensator Controls (Primary) With Mounting Screws and Item 27 (QTY. 1) and Item 30 (QTY. 1) – Continued				
Balloon #	Pump Type	Item #	Description	Qty
32		348-10016-0	Washer-Internal Shakeproof	2
33		345-10012-0	Washer-Flat	2
34		361-08200-0	Screw-SHC M6 x 25mm LG.	4
35		032-93410-0	Bearing-Hydro Balance Cam	1
36		032-92854-0	Piston Ring	2
37	P07	691-00906-0	O-Ring (For Item 38, 488-35041-0 ONLY)	1
38	P07	488-35041-0	Plug SAE-6 (For Item 7-1, 032-93816-0 & 032-93817-0 ONLY)	1
	P110	447-01004-2	Plug BSPP 1/4" With Seal (For Item 7-1, 032-93819-0 & 032-93820-0 ONLY)	1
39		032-92454-0	Bearing-Cam	1
40		032-91823-0	Slide Link	1
41		032-91836-0	Piston Control	1
42	P07	449-00019-0	Plug-SAE-16 (For Item 7-1, 032-93816-0 & 032-93817-0 ONLY)	1
	P110	449-00613-0	Plug-BSPP 1" (For Item 7-1, 032-93819-0 & 032-93820-0 ONLY)	1
43	P07	033-71514-0	Key SAE (For Item 1 #2 ONLY)	1
	P110	211-40001-0	KEY ISO (For Item 1 #2 ONLY)	
		032-92263-0	KEY DIN (For Item 1 #6 ONLY)	
44		316-50001-0	Screw-Flat HD Socket M5 x 16mm LG.	1
45	P07	691-00916-0	O-Ring (For Item 46, 488-35014-0 ONLY)	1
46	P07	488-35024-0	Plug SAE-16 (For Item 7-1, 032-93816-0 & 032-93817-0 ONLY)	1
	P110	447-01016-2	Plug BSPP 1" With Seal (For Item 7-1, 032-93819-0 & 032-93820-0 ONLY)	1
47		032-92430-0	Nameplate	1
48		320-10203-0	Screw-Drive	4
49	P07	S24-10484-0	Cover-Inlet (For Item 7-1, 032-93816-0 & 032-93817-0 ONLY)	1
	P110	S22-15369-0	Cover-Inlet (For Item 7-1, 032-93819-0 & 032-93820-0 ONLY)	
50	P07	S21-11445-0	Cover-Outlet (For Item 7-1, 032-93816-0 & 032-93817-0 ONLY)	1
	P110	S22-15344-0	Cover-Outlet (For Item 7-1, 032-93819-0 & 032-93820-0 ONLY)	
51		035-12747-0	Tag-Fill	1
52		034-14292-0	Tag-Inspection	1
53		671-00263-0	O-Ring	1
54	P07	691-00904-0	O-Ring (For Item 58, 488-35061-0 ONLY)	2
55		691-00914-0	O-Ring	1
56		488-35030-0	Plug-SAE-14	1
		S22-15943-0	Volume Indicator	
		S22-16711-0	Potentiometer – CW	
		S22-16712-0	Potentiometer – CCW	
		S22-17185-0	LVDT	
57		353-25079-0	Screw-Button HD. M5 x 1mm LG.	2
58	P07	488-35061-0	Plug-SAE-4 (For Item 7-1, 032-93816-D & 032-93817-0 ONLY)	2
	P110	447-01004-2	Plug BSPP 1/4" With Seal (For Item 7-1, 032-93819-0 & 032-93820-0 ONLY)	2
59	P07	488-35061-0	Plug-SAE-4 (For Item 7-1, 032-93816-0 & 032-93817-0 ONLY)	1
	P110	447-01004-2	Plug BSPP 1/4" With Seal (For Item 7-1, 032-93819-0 & 032-93820-0 ONLY)	1
60		671-10028-0	Ring-Square ARP-028	1
61		671-00010-0	O-Ring	1

Rear Adapters				
Balloon #	Pump Type	Item #	Description	Qty
62		S22-15372-0	A – SAE 82-2 (A) Mtg. With SAE 16-4 (A) Coupling	1
		S22-12867-0	B – SAE 101-2 or SAE 101-4 (B) Mtg. With SAE 22-4 (B) Coupling	
		S22-12869-0	C – SAE 127-2 or SAE 127-4 (C) Mtg. With SAE 32-4 (C) Coupling	
		S22-12870-0	D – SAE 152-4 (D) Mtg. With SAE 44-4 (D) Coupling	
		S22-15809-0	G – SAE 82-2 (A) Mtg. With SAE 22-4 (B) Coupling	
		S22-18140-0	M – Cover-Port Block Blanking	
		S22-12920-0	N – SAE 127-2 or SAE 127-4 (C) Mtg. With SAE 38-4 (C-C) Coupling	
		S22-15740-0	T – ISO 3019/2-180B4HW Mtg. With ISO 3019/2-K40N Coupling	
		S22-15570-0	U – ISO 3019/2-180B4HW Mtg. With ISO 3019/2-K50N Coupling	
		S22-12868-0	Q – SAE 101-2 or SAE 101-4 (B) Mtg. With SAE 25-4 (B-B) Coupling	
		S22-12874-0	X – ISO 3019/2-160B4HW Mtg. With ISO 3019/2-K40N Coupling	
		S22-12873-0	Y – ISO 3019/2-125B4HW Mtg. With ISO 3019/2-K32N Coupling	
		S2-12872-0	Z – ISO 3019/2-100B4HW Mtg. With ISO 3019/2-K25N Coupling	
63		488-35046-0	Plug-SAE-2	4
64		691-00902-0	O-Ring	4
65		034-59555-0	Cover-SAE-A Shipping (For Item 62, A & G)	1
		031-59564-0	Cover-SAE-B Shipping (For Item 62, B & Q)	
		031-57252-0	Cover-SAE-C Shipping (For Item 62, C & N)	
		031-57250-0	Cover-SAE-D Shipping (For Item 62, D)	
		032-92163-0	Cover-ISO 180 Shipping (For Item 62, T & U)	
		032-91407-0	Cover-ISO 160 Shipping (For Item 62, X)	
		032-91408-0	Cover-ISO 125 Shipping (For Item 62, Y)	
		032-91409-0	Cover-ISO 100 Shipping (For Item 62, Z)	
66		306-16120-0	Screw-HHC 3/8-16 x .75 LG. (For Item 62, A, B & G)	2
		306-24160-0	Screw-HHC 5/8-11 x 1.00 LG. (For Item 62, C & N)	2
		306-26160-0	Screw-HHC 3/4-10 x 1.00 LG. (For Item 62, D)	2
		363-14212-8	Screw-HHC M16 x 25mm LG. (For Item 62, T, U & X)	4
		363-16210-8	Screw-HHC M20 x 25mm LG. (For Item 62, M)	4
		306-20120-0	Screw-HHC 1/2-13 x .75 LG. (For Item 62, Q)	2
		363-12193-0	Screw-HHC M12 x 20mm LG. (For Item 62, Y)	2
		363-11120-8	Screw-HHC M10 x 12mm LG. (For Item 62, Z)	2

[illegible]





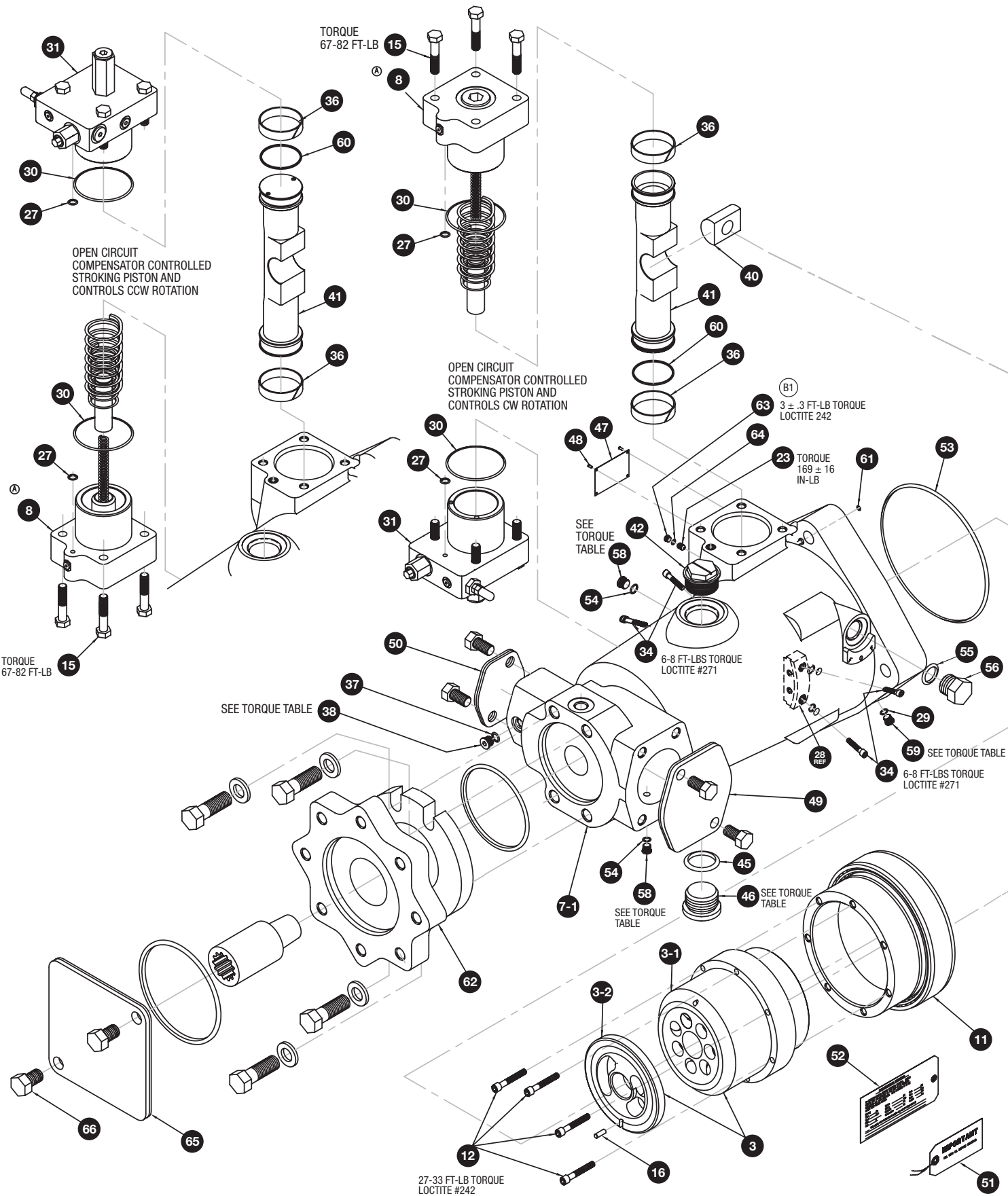
Torque Table (FT-LBS ± 10%)		
Item	P07	P100
9	57	57
38	18	18
46	135	146
58	11	18
59	11	18

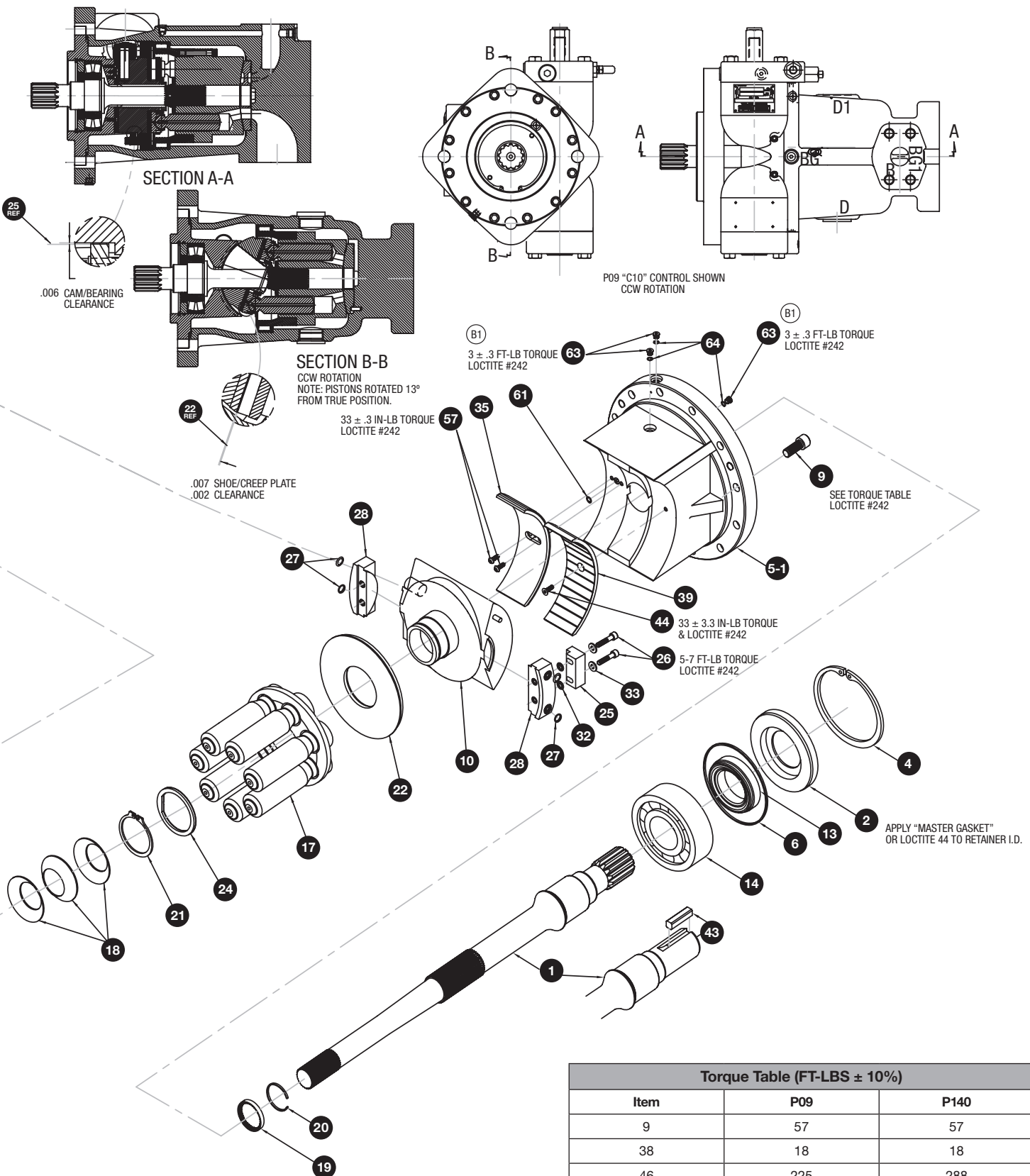
Balloon #	Pump Type	Item #	Description	Qty
1	P07 (SAE)	032-91829-0	Shaft, Keyed (Shaft Code 2) SAE 44-1 (D & E)	1
	P07 (SAE)	032-92525-0	Shaft, Keyed Rear Drive (Shaft Code 2) SAE 44-1 (D & E)	
	P07 (SAE)	032-91828-0	Shaft, Spline (Shaft Code 3) SAE 44-4 (D)	
	P07 (SAE)	032-92524-0	Shaft, Spline Rear Drive (Shaft Code 3) SAE 44-4 (D)	
	P110 (ISO)	032-92197-0	Shaft, Keyed 40mm (Shaft Code 2)	
	P110 (ISO)	032-92526-0	Shaft, Keyed Rear Drive 40mm (Shaft Code 2)	
	P110 (ISO)	032-92198-0	Shaft, Spline 40mm (Shaft Code 3)	
	P110 (ISO)	032-92527-0	Shaft, Spline Rear Drive 40mm (Shaft Code 3)	
	P110 (DIN)	032-92255-0	Shaft, Keyed 40mm (Shaft Code 6)	
	P110 (DIN)	032-92529-0	Shaft, Keyed Rear Drive 40mm (Shaft Code 6)	
	P110 (DIN)	032-92212-0	Shaft, Spline 40mm (Shaft Code 7)	
	P110 (DIN)	032-92528-0	Shaft, Spline Rear Drive 40mm (Shaft Code 7)	
2		032-91835-0	Seal Retainer	1
3		S22-18361-0	Barrel and Port Plate – CW (R)	1
3-1		S22-15904-0	Barrel and Sleeve Assembly	1
3-2		032-94213-0	Port Plate – CW	1
3		S22-18362-0	Barrel and Port Plate – CCW (L)	1
3-1		S22-15904-0	Barrel and Sleeve Assembly	1
3-2		032-94284-0	Port Plate – CCW	1
4		356-65086-0	Snap-Ring	1
5	P07	S22-17798-0	Cradle SAE (For Item 7-1, 032-93816-0 & 032-93817-0 ONLY) NOTE: Assembly Contains Items 5-1, 35, 39, 44, 53, 57, 61, 63 & 64	1
5-1		S22-18554-0	Rocker Cradle Assembly	1
5	P110	S22-17880-0	Cradle ISO/DIN (For Item 7-1, 032-93819-0 & 032-93820-0 ONLY) NOTE: Assembly Contains Items 5-1, 35, 39, 44, 53, 57, 61, 63 & 64	1
5-1		S22-18555-0	Rocker Cradle Assembly	1
6		605-00917-8	Quad Ring	1
7	P07	S22-17999-0	HSG/Port Block SAE NRD (For Item 5-1, S22-18554-0 ONLY) Assembly Contains Items 7-1, 23, 29, 37, 38, 42, 45, 46, 49, 50, 54, 58, 59, 63 & 64	1
7-1		032-93816-0	HSG/Port Block NRD	1
7	P07	S22-18364-0	HSG/Port Block SAE RD (For Item 5-1, S22-18554-0 ONLY) NOTE: Assembly Contains Items 7-1, 23, 29, 37, 38, 42, 45, 46, 49, 50, 54, 58, 59, 63 & 64	1
7-1		032-93817-0	HSG/Port Block RD	1
7	P110	S22-17881-0	HSG/Port Block ISO/DIN NRD (For Item 5-1, S22-18555-0 ONLY) NOTE: Assembly Contains Items 7-1, 23, 38, 42, 46, 49, 50, 58, 59, 63 & 64	1
7-1		032-93819-0	HSG/Port Block NRD	1
7	P110	S22-18365-0	HSG/Port Block ISO/DIN RD (For Item 5-1, S22-18555-0 ONLY) NOTE: Assembly Contains Items 7-1, 23, 38, 42, 46, 49, 50, 58, 59, 63 & 64	
7-1		032-93820-0	HSG/Port Block RD	1

Override Controls (Secondary) With Adjacent Maximum Volume Screw and Mounting Screws				
Balloon #	Pump Type	Item #	Description	Qty
8	P07	S22-16205-0	Compensator *1P	1
	P110	S22-16206-0	Compensator *1P	
	P07	S22-16207-0	Low Torque Limiter *1J	
	P110	S22-16208-0	Low Torque Limiter *1J	
	P07	S22-16209-0	High Torque Limiter *1K	
		S22-16210-0	High Torque Limiter *1K	
	P07	S22-15325-0	None *10	
	P110	S22-15613-0	None *10	
9		361-11213-8	Screw-SHC M10 x 25mm LG.	14
10		S22-18363-0	Rocker Cam and Pin Assembly	1
11		032-92449-0	Barrel Bearing	1
12		361-10234-0	Screw-SHC M8 x 35mm LG.	7
13		620-82080-0	Seal-SAE/ISO Shaft	1
14		230-82216-0	Bearing-SAE/ISO Shaft	1
15			Not Used	
16		324-21610-0	Dowel Pin 1/4 DIA. x 5/8 LG.	1
17		S22-16039-0	Piston, Shoes and Retainer	1
18		032-91827-0	Spring-Disc	2
19		032-91824-0	Stop-Barrel	1
20		032-91825-0	Ring-Retaining	1
21		032-91853-0	Retaining Ring (.061/.063 THK.) White	1
		032-91854-0	Retaining Ring (.063/.065 THK.) Red	
		032-91855-0	Retaining Ring (.066/.068 THK.) Green	
		032-91856-0	Retaining Ring (.068/.070 THK.) Yellow	
		032-91857-0	Retaining Ring (.070/.072 THK.) Blue	
22		032-92452-0	Creep Plate	1
23		032-93419-0	Orifice .040	1
24		032-91830-0	Thrust Washer	1
25		032-91602-0	Bearing-Clearance	1
26		361-08704-8	Screw-SHC M6 x 30mm LG.	2
27		691-00013-0	O-Ring	6
28		032-92470-0	Retainer-Cam Bearing	2
29	P07	691-00904-0	O-Ring (For Item 59, 488-35041-0 ONLY)	1
30		671-00151-0	O-Ring	2

Servo Controls (Primary) With Mounting Screws				
Balloon #	Pump Type	Item #	Description	Qty
31	P07	S22-16204-0	Electro Hydraulic Stoker E**	1
	P110	S22-16203-0	Electro Hydraulic Stoker E**	
	P07	S22-16202-0	Hydraulic Stoker H**	
	P110	S22-16201-0	Hydraulic Stoker H**	
	P07	S22-16200-0	Rotary Servo R**	
	P110	S22-16199-0	Rotary Servo R**	
32		348-10016-0	Washer-Internal Shakeproof	2
33		345-10012-0	Washer-Flat	2
34		361-08200-0	Screw-SHC M6 x 25mm LG.	4
35		032-93410-0	Bearing-Hydro Balance Cam	1
36		032-92854-0	Piston Ring	1
37	P07	691-00906-0	O-Ring (For Item 38, 488-35041-0 ONLY)	1
38	P07	488-35041-0	Plug SAE-6 (For Item 7-1, 032-93816-0 & 032-93817-0 ONLY)	1
	P110	447-01004-2	Plug BSPP 1/4" With Seal (For Item 7-1, 032-93819-0 & 032-93820-0 ONLY)	1
39		032-92454-0	Bearing-Cam	1
40		032-91823-0	Slide Link	1
41		S22-17827-0	Piston With Dowel	1
42	P07	449-00019-0	Plug-SAE-16 (For Item 7-1, 032-93816-0 & 032-93817-0 ONLY)	1
	P110	449-00613-0	Plug-BSPP 1" (For Item 7-1, 032-93819-0 & 032-93820-0 ONLY)	1
43	P07	033-71514-0	Key SAE (For Item 1 #2 ONLY)	1
	P110	211-40001-0	Key ISO (For Item 1 #2 ONLY)	
		032-92263-0	Key DIN (For Item 1 #6 ONLY)	
44		316-50001-0	Screw-Flat HD Socket M5 x 16mm LG.	1
45	P07	691-00916-0	O-Ring (For Item 46, 488-35024-0 ONLY)	1
46	P07	488-35024-0	Plug SAE-16 (For Item 7-1, 032-93816-0 & 032-93817-0 ONLY)	1
	P110	447-01016-2	Plug BSPP 1" With Seal (For Item 7-1, 032-93819-0 & 032-93820-0 ONLY)	1
47		032-92430-0	Nameplate	1
48		320-10203-0	Screw-Drive	4
49	P07	S24-10484-0	Cover-Inlet (For Item 7-1, 032-93816-0 & 032-93817-0 ONLY)	1
	P110	S22-15369-0	Cover-Inlet (For Item 7-1, 032-93819-0 & 032-93820-0 ONLY)	
50	P07	S21-11445-0	Cover-Outlet (For Item 7-1, 032-93816-0 & 032-93817-0 ONLY)	1
	P110	S22-15344-0	Cover-Outlet (For Item 7-1, 032-93819-0 & 032-93820-0 ONLY)	
51		035-12747-0	Tag-Fill	1
52		034-14292-0	Tag-Inspection	1
53		671-00263-0	O-Ring	1
54	P07	691-00904-0	O-Ring (For Items 58, 488-35061-0 ONLY)	2
55		691-00914-0	O-Ring	1
56		488-35030-0	Pilug-SAE-14	1
		S22-15943-0	Volume Indicator	
		S22-16711-0	Potentiometer - CW	
		S22-16712-0	Potentiometer - CCW	
		S22-17185-0	LVDT	
57		353-25079-0	Screw-Button HD. M5 x 1mm LG.	2
58	P07	488-35061-0	Plug-SAE-4 (For Item 7-1, 032-93816-0 & 032-93817-0 ONLY)	2
	P110	447-01004-2	Plug BSPP 1/4" With Seal (For Item 7-1, 032-93819-0 & 032-93820-0 ONLY)	2
59	P07	488-35061-0	Plug-SAE-4 (For Item 7-1, 032-93816-0 & 032-93817-0 ONLY)	1
	P110	447-01004-2	Plug BSPP 1/4" With Seal (For Item 7-1, 032-93819-0 & 032-93820-0 ONLY)	1
60		671-10028-0	Ring-Square ARP-028	1
61		671-00006-0	O-Ring	2

Rear Adapters				
62		S22-15372-0	A – SAE 82-2 (A) Mtg. With SAE 16-4 (A) Coupling	1
		S22-12867-0	B – SAE 101-2 or SAE 101-4 (B) Mtg. With SAE 22-4 (B) Coupling	
		S22-12869-0	C – SAE 127-2 or SAE 127-4 (C) Mtg. With SAE 32-4 (C) Coupling	
		S22-12870-0	D – SAE 152-4 (D) Mtg. With SAE 44-4 (D) Coupling	
		S22-15809-0	G – SAE 82-2 (A) Mtg. With SAE 22-4 (B) Coupling	
		S22-18140-0	M – Cover-Port Block Blanking	
		S22-12920-0	N – SAE 127-2 or SAE 127-4 (C) Mtg. With SAE 38-4 (C-C) Coupling	
		S22-15740-0	T – ISO 3019/2-180B4HW Mtg. With ISO 3019/2-K40N Coupling	
		S22-15570-0	U – ISO 3019/2-180B4HW Mtg. With ISO 3019/2-K50N Coupling	
		S22-12868-0	Q – SAE 101-2 or SAE 101-4 (B) Mtg. With SAE 25-4 (B-B) Coupling	
		S22-12874-0	X – ISO 3019/2-160B4HW Mtg. With ISO 3019/2-K40N Coupling	
		S22-12873-0	Y – ISO 3019/2-125B4HW Mtg. With ISO 3019/2-K32N Coupling	
		S2-12872-0	Z – ISO 3019/2-100B4HW Mtg. With ISO 3019/2-K25N Coupling	
63		488-35046-0	Plug-SAE-2	4
64		691-00902-0	O-Ring	4
65		034-59555-0	Cover-SAE-A Shipping (For Item 62, A & G)	1
		031-59564-0	Cover-SAE-B Shipping (For Item 62, B & Q)	
		031-57252-0	Cover-SAE-C Shipping (For Item 62, C & N)	
		031-57250-0	Cover-SAE-D Shipping (For Item 62, D)	
		032-92163-0	Cover-ISO 180 Shipping (For Item 62, T & U)	
		032-91407-0	Cover-ISO 160 Shipping (For Item 62, X)	
		032-91408-0	Cover-ISO 125 Shipping (For Item 62, Y)	
		032-91409-0	Cover-ISO 100 Shipping (For Item 62, Z)	
66		306-16120-0	Screw-HHC 3/8-16 x .75 LG. (For Item 62, A, B & G)	2
		306-24160-0	Screw-HHC 5/8-11 x 1.00 LG. (For Item 62, C & N)	2
		306-26160-0	Screw-HHC 3/4-10 x 1.00 LG. (For Item 62, D)	2
		363-14212-8	Screw-HHC M16 x 25mm LG. (For Item 62, T, U & X)	4
		363-16210-8	Screw-HHC M20 x 25mm LG. (For Item 62, M)	4
		306-20120-0	Screw-HHC 1/2-13 x .75 LG. (For Item 62, Q)	2
		363-12193-0	Screw-HHC M12 x 20mm LG. (For Item 62, Y)	2
		363-11120-8	Screw-HHC M10 x 12mm LG. (For Item 62, Z)	2
67	P07	S22-16035-0	Tube Servo – CW	1
	P110	S22-16037-0	Tube Servo – CW	
	P07	S22-16036-0	Tube Servo – CCW	
	P110	S22-16038-0	Tube Servo – CCW	
68		671-10033-0	Ring-Square ARP-033	1
69		032-92855-0	Piston Ring	1





Balloon #	Pump Type	Item #	Description	Qty
1	P09 (SAE)	032-91592-0	Shaft, Keyed (Shaft Code 2) SAE 44-1 (D & E)	1
	P09 (SAE)	032-91635-0	Shaft, Keyed Rear Drive (Shaft Code 2) SAE 44-1 (D & E)	
	P09 (SAE)	032-91591-0	Shaft, Spline (Shaft Code 3) SAE 44-4 (D)	
	P09 (SAE)	032-91634-0	Shaft, Spline Rear Drive (Shaft Code 3) SAE 44-4 (D)	
	P140 (ISO)	032-91594-0	Shaft, Keyed 50mm (Shaft Code 2)	
	P140 (ISO)	032-91637-0	Shaft, Keyed Rear Drive 50mm (Shaft Code 2)	
	P140 (ISO)	032-91593-0	Shaft, Spline 50mm (Shaft Code 3)	
	P140 (ISO)	032-9636-0	Shaft, Spline Rear Drive 50mm (Shaft Code 3)	
	P140 (DIN)	032-92261-0	Shaft, Keyed 50mm (Shaft Code 6)	
	P140 (DIN)	032-92262-0	Shaft, Keyed Rear Drive 50mm (Shaft Code 6)	
	P140 (DIN)	032-92260-0	Shaft, Spline 50mm (Shaft Code 7)	
	P140 (DIN)	032-92259-0	Shaft, Spline Rear Drive 50mm (Shaft Code 7)	
2		032-91269-0	Seal Retainer	1
3		S22-18289-0	Barrel and Port Plate – CW (R) (Style H or Q)	1
3		S22-16147-0	Barrel and Port Plate – CW (Style M or N)	
3-1		S22-15081-0	Barrel and Sleeve Assembly	1
3-2		032-94199-0	Port Plate – CW (Style H or Q)	1
3-2		032-92218-0	Port Plate – CW (Style M or N)	
3		S22-18290-0	Barrel and Port Plate – CCW (L) (Style H or Q)	1
3		S22-16148-0	Barrel and Port Plate – CCW (Style M or N)	
3-1		S22-15081-0	Barrel and Sleeve Assembly	1
3-2		032-94200-0	Port Plate – CCW (Style H or Q)	1
3-2		032-91578-0	Port Plate – CCW (Style M or N)	
4		356-65130-0	Snap-Ring	1
5	P09	S22-17809-0	Cradle SAE (For Item 7-1, 032-93717-0 & 032-93718-0 ONLY) NOTE: Assembly Contains Items 5-1, 35, 39, 44, 53, 57, 61, 63 & 64	1
5-1		S22-18552-0	Rocker Cradle Assembly	1
5	P140	S22-17782-0	Cradle ISO/DIN (For Item 7-1, 032-93720-0 & 032-93721-0 ONLY) NOTE: Assembly Contains Items 5-1, 35, 39, 44, 53, 57, 61, 63 & 64	1
5-1		S22-18553-0	Rocker Cradle Assembly	1
6		605-00915-8	Quad Ring	1
7	P09	S22-17943-0	HSG/Port Block SAE NRD (For Item 5-1, S22-18552-0 ONLY) NOTE: Assembly Contains Items 7-1, 23, 29, 37, 38, 42, 45, 46, 49, 50, 54, 58, 59, 63 & 64	1
7-1		032-93717-0	HSG/Port Block NRD	1
7	P09	S22-17810-0	HSG/Port Block SAE RD (For Item 5-1, S22-18552-0 ONLY) NOTE: Assembly Contains Items 7-1, 23, 29, 37, 38, 42, 45, 46, 49, 50, 54, 58, 59, 63 & 64	1
7-1		032-93718-0	HSG/Port Block RD	1
7	P140	S22-18292-0	HSG/Port Block ISO/DIN NRD (For Item 5-1, S22-18553-0 ONLY) NOTE: Assembly Contains Items 7-1, 23, 29, 37, 38, 42, 45, 46, 49, 50, 54, 58, 59, 63 & 64	1
7-1		032-93720-0	HSG/Port Block NRD	1
7	P140	S22-17783-0	HSG/PORT Block ISO/DIN RD (For Item 5-1, S22-18553-0 ONLY) NOTE: Assembly Contains Items 7-1, 23, 29, 37, 38, 42, 45, 46, 49, 50, 54, 58, 59, 63 & 64	1
7-1		032-93721-0	HSG/Port Block NRD	1

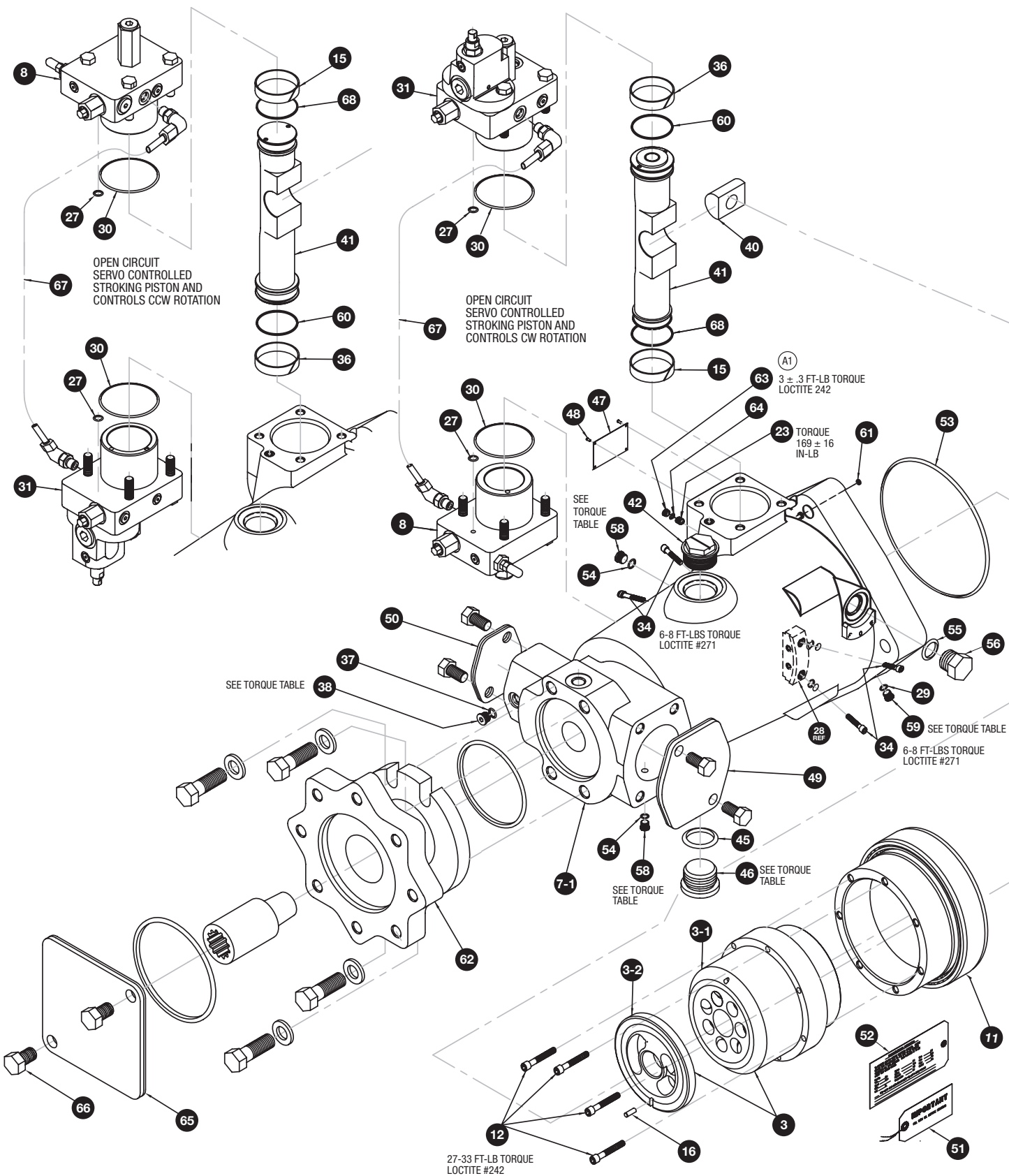
Balloon #	Pump Type	Item #	Description	Qty
8		S22-15653-0	Buck-Up Cap **0	1
9		361-11213-8	Screw-SHC M10 x 25mm LG.	12
10		S22-18291-0	Rocker Cam and Pin Assembly (Style H or Q)	1
		S22-16581-0	Rocker Cam and Pin Assembly (Style M or N)	
11		032-91570-0	Barrel Bearing	1
12		361-10245-0	Screw-SHC M8 x 45mm LG.	7
13	P09	620-82080-0	Seal-SAE Shaft (For Item 1 #2 & #3 ONLY)	1
	P140	620-82099-0	Seal-ISO/DIN Shaft (For Item 1 #2, #3, #6 & #7 ONLY)	
14		230-82215-0	Bearing-SAE/ISO Shaft	1
15		363-12210-0	Screw-HHC M12 x 60mm (For Item 8)	4
16		324-21610-0	Dowel Pin 1/4 DIA. x 5/8 LG.	1
17		S22-15119-0	Piston, Shoes and Retainer	1
18	P09/140	032-91597-0	Spring-Disc (Style H or M)	2
	P09/140	032-94223-0	Spring-Disc (Style Q or N)	2
19		032-91596-0	Stop-Barrel	1
20		032-91595-0	Ring-Retaining	1
21		032-91894-0	Retaining Ring (.062/.060 THK.)	1
		032-91895-0	Retaining Ring (.060/.058 THK.)	
		032-91896-0	Retaining Ring (.058/.056 THK.)	
		032-91897-0	Retaining Ring (.056/.054 THK.)	
		032-91898-0	Retaining Ring (.054/.052 THK.)	
		032-92389-0	Retaining Ring (.052/.050 THK.)	
22		032-91598-0	Creep Plate	1
23		032-93419-0	Orifice .040	1
24		032-91599-0	Thrust Washer	1
25		032-91602-0	Bearing-Clearance	1
26		361-08250-0	Screw-SHC M6 x 35mm LG.	2
27		691-00013-0	O-Ring	6
28		032-91600-0	Retainer-Cam Bearing	2
29	P09	691-00904-0	O-Ring (For Item 59, 488-35041-0 ONLY)	1
	P140	671-00011-0	Gasket (For Item 59, 447-01058-0 ONLY)	1
30		671-00152-0	O-Ring	2

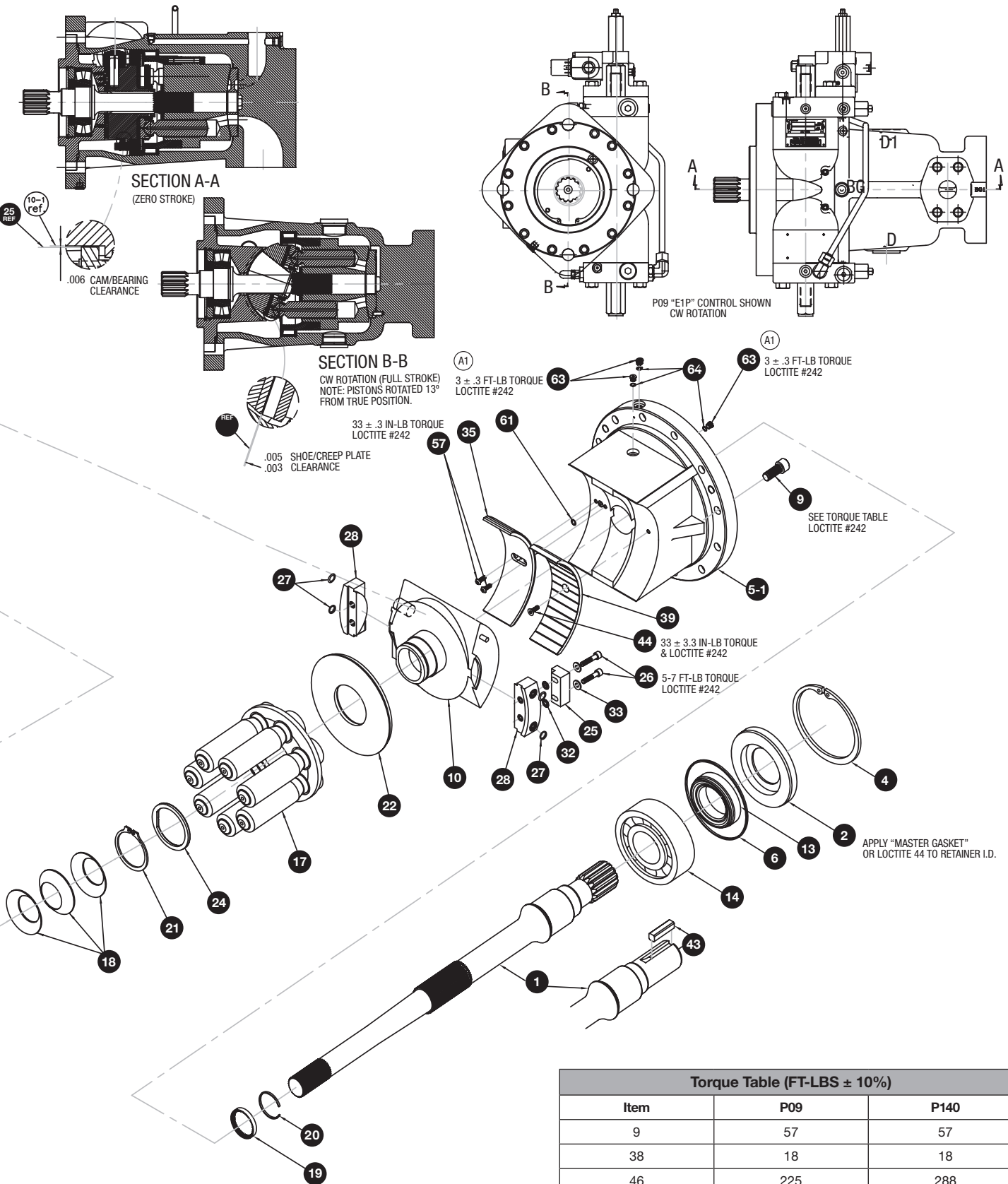
Compensator Controls (Primary) With Mounting Screws and Item 27 (QTY. 1) and Item 30 (QTY. 1)				
Balloon #	Pump Type	Item #	Description	Qty
31	P09	S22-15311-0	Compensator With Maximum Volume Adj. Screw C1*	1
	P140	S22-15312-0	Compensator With Maximum Volume Adj. Screw C1*	
	P09	Contact Tech Support	Compensator With Maximum Volume Handwheel Adj. C2*	
	P140	Contact Tech Support	Compensator With Maximum Volume Handwheel Adj. C2*	
	P09	S22-15732-0	Low Torque Limiter (TL) With Maximum Volume Screw J1*	
	P140	S22-15733-0	Low Torque Limiter (TL) With Maximum Volume Screw J1*	
	P09	Contact Tech Support	Low Torque Limiter (TL) With Maximum Volume Handwheel Adj. J2*	
	P140	Contact Tech Support	Low Torque Limiter (TL) With Maximum Volume Handwheel Adj. J2*	
	P09	S22-15313-0	High Torque Limiter (TL) With Maximum Volume Screw K1*	
	P140	S22-15314-0	High Torque Limiter (TL) With Maximum Volume Screw K1*	
	P09	Contact Tech Support	High Torque Limiter (TL) With Maximum Volume Handwheel Adj. K2*	
	P140	Contact Tech Support	High Torque Limiter (TL) With Maximum Volume Handwheel Adj. K2*	
	P09	S22-15536-0	Load Sensing 50 ΔP With Maximum Volume Screw L1*	
	P140	S22-15537-0	Load Sensing 50 ΔP With Maximum Volume Screw L1*	
	P09	Contact Tech Support	Load Sensing 50 ΔP With Maximum Volume Handwheel Adj. L2*	
	P140	Contact Tech Support	Load Sensing 50 ΔP With Maximum Volume Handwheel Adj. L2*	
	P09	S22-17866-0	Load Sensing 200 ΔP With Maximum Volume Screw M1*	
	P140	S22-17867-0	Load Sensing 200 ΔP With Maximum Volume Screw M1*	
	P09	Contact Tech Support	Load Sensing 200 ΔP With Maximum Volume Handwheel Adj. M2*	
	P140	Contact Tech Support	Load Sensing 200 ΔP With Maximum Volume Handwheel Adj. M2*	
	P09	S22-16193-0	Low Torque Limiter (TL) With Load Sensing 50 ΔP & Maximum Volume Screw V1*	
	P140	S22-16194-0	Low Torque Limiter (TL) With Load Sensing 50 ΔP & Maximum Volume Screw V1*	
	P09	Contact Tech Support	Low Torque Limiter (TL) With Load Sensing 50 ΔP & Maximum Volume Handwheel Adj. V2*	
	P140	Contact Tech Support	Low Torque Limiter (TL) With Load Sensing 50 ΔP & Maximum Volume Handwheel Adj. V2*	
	P09	S22-15790-0	High Torque Limiter (TL) With Load Sensing 50 ΔP & Maximum Volume Screw W1*	
	P140	S22-15802-0	High Torque Limiter (TL) With Load Sensing 50 ΔP & Maximum Volume Screw W1*	
	P09	Contact Tech Support	High Torque Limiter (TL) With Load Sensing 50 ΔP & Maximum Volume Handwheel Adj. W2*	
	P140	Contact Tech Support	High Torque Limiter (TL) With Load Sensing 50 ΔP & Maximum Volume Handwheel Adj. W2*	
	P09	S22-17868-0	Low Torque Limiter (TL) With Load Sensing 200 ΔP & Maximum Volume Screw Y1*	
	P140	S22-17869-0	Low Torque Limiter (TL) With Load Sensing 200 ΔP & Maximum Volume Screw Y1*	
	P09	Contact Tech Support	Low Torque Limiter (TL) With Load Sensing 200 ΔP & Maximum Volume Handwheel Adj. Y2*	
	P140	Contact Tech Support	Low Torque Limiter (TL) With Load Sensing 200 ΔP & Maximum Volume Handwheel Adj. Y2*	
	P09	S22-17872-0	High Torque Limiter (TL) With Load Sensing 200 ΔP & Maximum Volume Screw Z1*	
	P140	S22-17873-0	High Torque Limiter (TL) With Load Sensing 200 ΔP & Maximum Volume Screw Z1*	
	P09	Contact Tech Support	High Torque Limiter (TL) With Load Sensing 200 ΔP & Maximum Volume Handwheel Adj. Z2*	
	P140	Contact Tech Support	High Torque Limiter (TL) With Load Sensing 200 ΔP & Maximum Volume Handwheel Adj. Z2*	

Compensator Controls (Primary) With Mounting Screws and Item 27 (QTY. 1) and Item 30 (QTY. 1) – Continued				
Balloon #	Pump Type	Item #	Description	Qty
32		348-10016-0	Washer-Internal Shakeproof	2
33		345-10012-0	Washer-Flat	2
34		361-08200-0	Screw-SHC M6 x 25mm LG.	4
35		032-92748-0	Bearing-Hydro Balance Cam	1
36		032-92856-0	Piston Ring	2
37	P09	691-00906-0	O-Ring (For Item 38, 488-35041-0 ONLY)	1
	P140	605-10063-0	Gasket (For Item 38, 447-01053-2 ONLY)	1
38	P09	488-35041-0	Plug SAE-6 (For Item 7-1, 032-93717-0 & 032-93718-0 ONLY)	1
	P140	447-01053-2	Plug BSPP 1/4" With Seal (For Item 7-1, 032-93720-0 & 032-93721-0 ONLY)	1
39		032-91590-0	Bearing-Cam	1
40		032-91579-0	Slide Link	1
41		032-91585-0	Piston Control	1
42	P09	449-00020-0	Plug-SAE-20 (For Item 7-1, 032-93717-0 & 032-93718-0 ONLY)	1
	P140	449-00611-0	Plug-BSPP-G-1-1/2" (For Item 7-1, 032-93720-0 & 032-93721-0 ONLY)	1
43	P09	033-71514-0	Key SAE (For Item 1 #2 ONLY)	1
	P140	032-91429-0	Key ISO (For Item 1 #2 ONLY)	
		032-92264-0	Key DIN (For Item 1 #6 ONLY)	
44		316-50001-0	Screw-Flat HD Socket M5 x 16mm LG.	1
45	P09	691-00924-0	O-Ring (For Item 46, 488-35019-0 ONLY)	1
	P140	605-10065-0	Gasket (For Item 46, 447-01057-2 ONLY)	1
46	P09	488-35019-0	Plug SAE-20 (For Item 7-1, 032-93717-0 & 032-93718-0 ONLY)	1
	P140	447-01057-2	Plug BSPP-G-1-1/2" (For Item 7-1, 032-93720-0 & 032-93721-0 ONLY)	1
47		032-92430-0	Nameplate	1
48		320-10203-0	Screw-Drive	4
49	P09	S24-10484-0	Cover-Inlet (For Item 7-1, 032-93717-0 & 032-93718-0 ONLY)	1
	P140	S22-15369-0	Cover-Inlet (For Item 7-1, 032-93720-0 & 032-93721-0 ONLY)	
50	P09	S13-26133-0	Cover-Outlet (For Item 7-1, 032-93717-0 & 032-93718-0 ONLY)	1
	P140	S22-12823-0	Cover-Outlet (For Item 7-1, 032-93720-0 & 032-93721-0 ONLY)	
51		035-12747-0	Tag-Fill	1
52		034-14292-0	Tag-Inspection	1
53		671-00263-0	O-Ring	1
54	P09	691-00904-0	O-Ring (For Item 58, 488-35061-0 ONLY)	2
	P140	605-10061-0	Gasket (For Item 58, 477-01053-2 ONLY)	2
55		691-00914-0	O-Ring	1
56		488-35030-0	Plug-SAE-14	1
		S22-15943-0	Volume Indicator	
		S22-16711-0	Potentiometer – CW	
		S22-16712-0	Potentiometer – CCW	
		S22-17185-0	LVDT	
57		353-25079-0	Screw-Button HD. M5 x 1mm LG.	2
58	P09	488-35061-0	Plug-SAE-4 (For Item 7-1, 032-93717-0 & 032-93718-0 ONLY)	2
	P140	447-01053-2	Plug BSPP 1/4" (For Item 7-1, 032-93720-0 & 032-93721-0 ONLY)	2
59	P09	488-35061-0	Plug-SAE-4 (For Item 7-1, 032-93717-0 & 032-93718-0 ONLY)	1
	P140	447-01058-0	Plug BSPP 1/8" (For Item 7-1, 032-93720-0 & 032-93721-0 ONLY)	1
60		671-10035-0	Ring-Square ARP-035	1
61		671-00010-0	O-Ring	2

Rear Adapters				
Balloon #	Pump Type	Item #	Description	Qty
62		S22-15372-0	A – SAE 82-2 (A) Mtg. With SAE 16-4 (A) Coupling	1
		S22-12867-0	B – SAE 101-2 or SAE 101-4 (B) Mtg. With SAE 22-4 (B) Coupling	
		S22-12869-0	C – SAE 127-2 or SAE 127-4 (C) Mtg. With SAE 32-4 (C) Coupling	
		S22-12870-0	D – SAE 152-4 (D) Mtg. With SAE 44-4 (D) Coupling	
		S22-15809-0	G – SAE 82-2 (A) Mtg. With SAE 22-4 (B) Coupling	
		S22-18140-0	M – Cover-Port Block Blanking	
		S22-12920-0	N – SAE 127-2 or SAE 127-4 (C) Mtg. With SAE 38-4 (C-C) Coupling	
		S22-15740-0	T – ISO 3019/2-180B4HW Mtg. With ISO 3019/2-K40N Coupling	
		S22-15570-0	U – ISO 3019/2-180B4HW Mtg. With ISO 3019/2-K50N Coupling	
		S22-12868-0	Q – SAE 101-2 or SAE 101-4 (B) Mtg. With SAE 25-4 (B-B) Coupling	
		S22-12874-0	X – ISO 3019/2-160B4HW Mtg. With ISO 3019/2-K40N Coupling	
		S22-12873-0	Y – ISO 3019/2-125B4HW Mtg. With ISO 3019/2-K32N Coupling	
		S2-12872-0	Z – ISO 3019/2-100B4HW Mtg. With ISO 3019/2-K25N Coupling	
63		488-35046-0	Plug-SAE-2	4
64		691-00902-0	O-Ring	4
65		034-59555-0	Cover-SAE-A Shipping (For Item 62, A & G)	1
		031-59564-0	Cover-SAE-B Shipping (For Item 62, B & Q)	
		031-57252-0	Cover-SAE-C Shipping (For Item 62, C & N)	
		031-57250-0	Cover-SAE-D Shipping (For Item 62, D)	
		032-92163-0	Cover-ISO 180 Shipping (For Item 62, T & U)	
		032-91407-0	Cover-ISO 160 Shipping (For Item 62, X)	
		032-91408-0	Cover-ISO 125 Shipping (For Item 62, Y)	
		032-91409-0	Cover-ISO 100 Shipping (For Item 62, Z)	
66		306-16120-0	Screw-HHC 3/8-16 x .75 LG. (For Item 62, A, B & G)	2
		306-24160-0	Screw-HHC 5/8-11 x 1.00 LG. (For Item 62, C & N)	2
		306-26160-0	Screw-HHC 3/4-10 x 1.00 LG. (For Item 62, D)	2
		363-14212-8	Screw-HHC M16 x 25mm LG. (For Item 62, T, U & X)	4
		363-16210-8	Screw-HHC M20 x 25mm LG. (For Item 62, M)	4
		306-20120-0	Screw-HHC 1/2-13 x .75 LG. (For Item 62, Q)	2
		363-12193-0	Screw-HHC M12 x 20mm LG. (For Item 62, Y)	2
		363-11120-8	Screw-HHC M10 x 12mm LG. (For Item 62, Z)	2

[illegible]



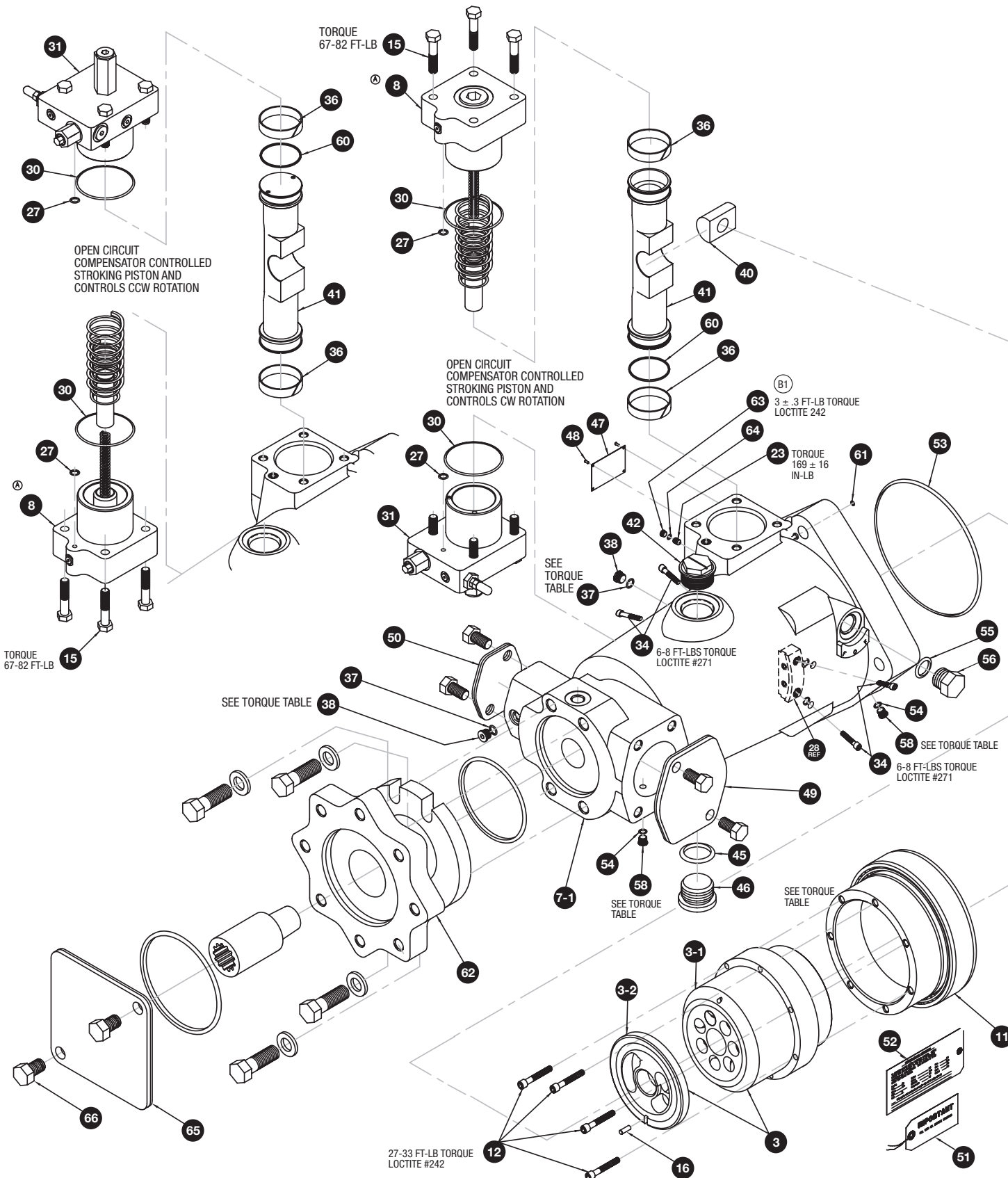


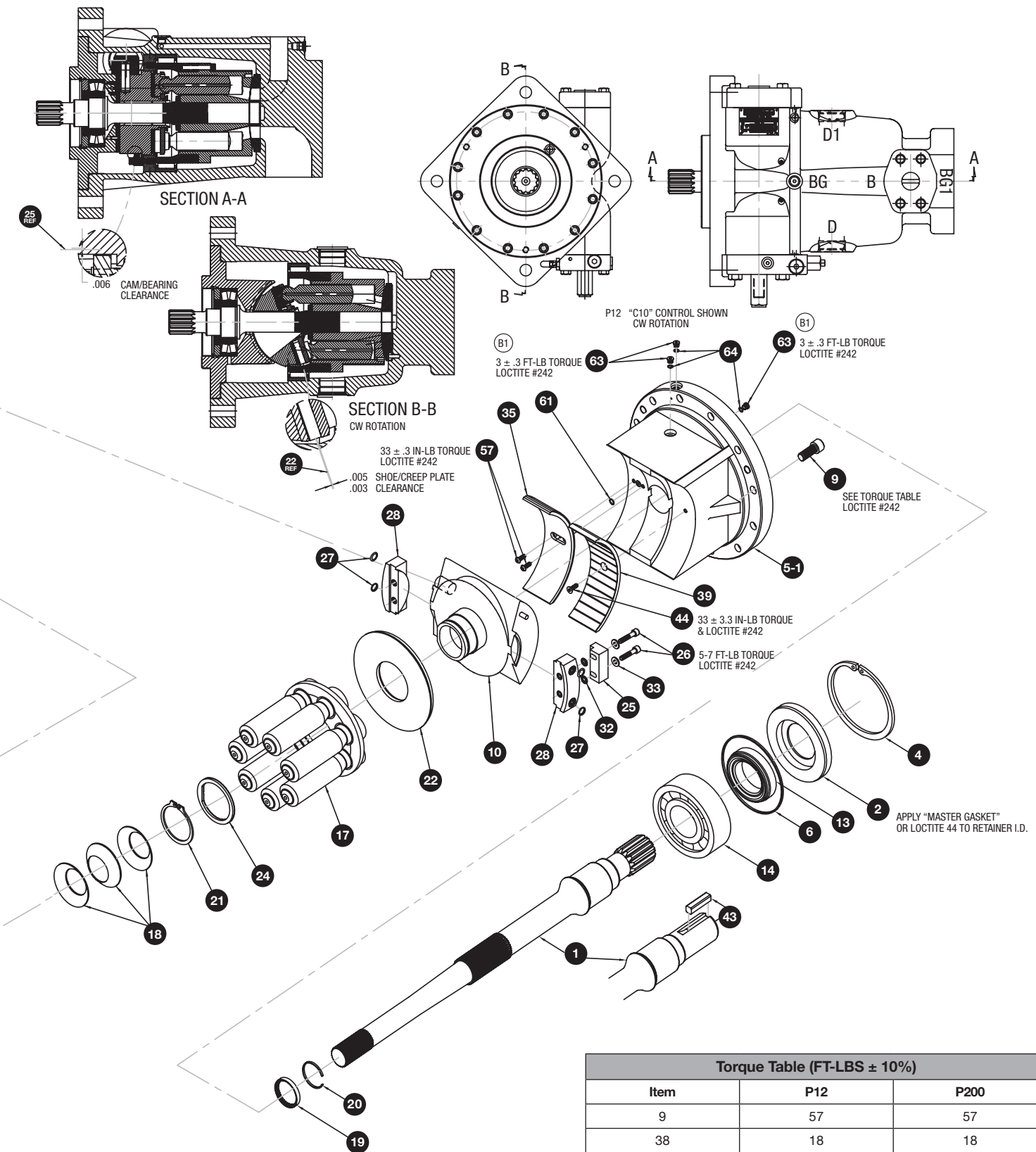
Balloon #	Pump Type	Item #	Description	Qty
1	P09 (SAE)	032-91592-0	Shaft, Keyed (Shaft Code 2) SAE 44-1 (D & E)	1
	P09 (SAE)	032-91635-0	Shaft, Keyed Rear Drive (Shaft Code 2) SAE 44-1 (D & E)	
	P09 (SAE)	032-91591-0	Shaft, Spline (Shaft Code 3) SAE 44-4 (D)	
	P09 (SAE)	032-91634-0	Shaft, Spline Rear Drive (Shaft Code 3) SAE 44-4 (D)	
	P140 (ISO)	032-91594-0	Shaft, Keyed 50mm (Shaft Code 2)	
	P140 (ISO)	032-91637-0	Shaft, Keyed Rear Drive 50mm (Shaft Code 2)	
	P140 (ISO)	032-91593-0	Shaft, Spline 50mm (Shaft Code 3)	
	P140 (ISO)	032-9636-0	Shaft, Spline Rear Drive 50mm (Shaft Code 3)	
	P140 (DIN)	032-92261-0	Shaft, Keyed 50mm (Shaft Code 6)	
	P140 (DIN)	032-92262-0	Shaft, Keyed Rear Drive 50mm (Shaft Code 6)	
	P140 (DIN)	032-92260-0	Shaft, Spline 50mm (Shaft Code 7)	
	P140 (DIN)	032-92259-0	Shaft, Spline Rear Drive 50mm (Shaft Code 7)	
2		032-91269-0	Seal Retainer	1
3		S22-18289-0	Barrel and Port Plate – CW (R) (Style H or Q)	1
3		S22-16147-0	Barrel and Port Plate – CW (Style M or N)	
3-1		S22-15081-0	Barrel and Sleeve Assembly	1
3-2		032-94199-0	Port Plate – CW (Style H or Q)	1
3-2		032-92218-0	Port Plate – CW (Style M or N)	
3		S22-18290-0	Barrel and Port Plate – CCW (L) (Style H or Q)	1
3		S22-16148-0	Barrel and Port Plate – CCW (Style M or N)	
3-1		S22-15081-0	Barrel and Sleeve Assembly	1
3-2		032-94200-0	Port Plate – CCW (Style H or Q)	1
3-2		032-91578-0	Port Plate – CCW (Style M or N)	
4		356-65130-0	Snap-Ring	1
5	P09	S22-17809-0	Cradle SAE (For Item 7-1, 032-93717-0 & 032-93718-0 ONLY) NOTE: Assembly Contains Items 5-1, 35, 39, 44, 53, 57, 61, 63 & 64	1
5-1		S22-18552-0	Rocker Cradle Assembly	1
5		S22-17782-0	Cradle ISO/DIN (For Item 7-1, 032-93720-0 & 032-93721-0 ONLY) NOTE: Assembly Contains Items 5-1, 35, 39, 44, 53, 57, 61, 63 & 64	1
5-1		S22-18553-0	Rocker Cradle Assembly	1
6		605-00915-8	Quad Ring	1
7	P09	S22-17943-0	HSG/Port Block SAE NRD (For Item 5-1, S22-18552-0 ONLY) Assembly Contains Items 7-1, 23, 29, 37, 38, 42, 45, 46, 49, 50, 54, 58, 59, 63 & 64	1
7-1		032-93717-0	HSG/Port Block NRD	1
7	P09	S22-17810-0	HSG/Port Block SAE RD (For Item 5-1, S22-18552-0 ONLY) NOTE: Assembly Contains Items 7-1, 23, 29, 37, 38, 42, 45, 46, 49, 50, 54, 58, 59, 63 & 64	1
7-1		032-93718-0	HSG/Port Block RD	1
7	P140	S22-18292-0	HSG/Port Block ISO/DIN NRD (For Item 5-1, S22-18553-0 ONLY) NOTE: Assembly Contains Items 7-1, 23, 29, 37, 38, 42, 45, 46, 49, 50, 54, 58, 59, 63 & 64	1
7-1		032-93720-0	HSG/Port Block NRD	1
7	P140	S22-17783-0	HSG/Port Block ISO/DIN RD (For Item 5-1, S22-18553-0 ONLY) NOTE: Assembly Contains Items 7-1, 23, 29, 37, 38, 42, 45, 46, 49, 50, 54, 58, 59, 63 & 64	1
7-1		032-93721-0	HSG/Port Block RD	1

Override Controls (Secondary) With Adjacent Maximum Volume Screw and Mounting Screws				
Balloon #	Pump Type	Item #	Description	Qty
8	P09	S22-15983-0	Compensator *1P	1
	P140	S22-15984-0	Compensator *1P	
	P09	S22-16082-0	Low Torque Limiter *1J	
	P140	S22-16083-0	Low Torque Limiter *1J	
	P09	S22-15985-0	High Torque Limiter *1K	
	P140	S22-15986-0	High Torque Limiter *1K	
	P09	S22-15256-0	None *10	
	P140	S22-15272-0	None *10	
9		361-11213-8	Screw-SHC M10 x 25mm LG.	12
10		S22-18291-0	Rocker Cam and Pin Assembly (Style H or Q)	1
		S22-16581-0	Rocker Cam and Pin Assembly (Style M or N)	1
11		032-91570-0	Barrel Bearing	1
12		361-10245-0	Screw-SHC M8 x 35mm LG.	7
13	P09	620-82080-0	Seal-SAE/ISO Shaft (For Item 1 #2 & #3 ONLY)	1
	P140	620-82099-0	Seal-ISO/DIN Shaft (For Item 1 #2, #3, #6 & #7 ONLY)	
14		230-82215-0	Bearing-SAE/ISO Shaft	1
15		363-12210-0	Screw-HHC M12 x 60mm (For Item 8)	4
16		324-21610-0	Dowel Pin 1/4 DIA. x 5/8 LG.	1
17		S22-15119-0	Piston, Shoes and Retainer	1
18	P09/140	032-91597-0	Spring-Disc (Style H or M)	2
	P09/140	032-94223-0	Spring-Disc (Style Q or N)	2
19		032-91596-0	Stop-Barrel	1
20		032-91595-0	Ring-Retaining	1
21		032-91894-0	Retaining Ring (.062/.060 THK.)	1
		032-91895-0	Retaining Ring (.060/.058 THK.)	
		032-91896-0	Retaining Ring (.058/.056 THK.)	
		032-91897-0	Retaining Ring (.056/.054 THK.)	
		032-91898-0	Retaining Ring (.054/.052 THK.)	
		032-92389-0	Retaining Ring (.052/.050 THK.)	
22		032-91598-0	Creep Plate	1
23		032-93419-0	Orifice .040	1
24		032-91599-0	Thrust Washer	1
25		032-91602-0	Bearing-Clearance	1
26		361-08250-0	Screw-SHC M6 x 30mm LG.	2
27		691-00013-0	O-Ring	6
28		032-91600-0	Retainer-Cam Bearing	2
29	P09	691-00904-0	O-Ring (For Item 59, 488-35041-0 ONLY)	1
	P140	671-00011-0	Gasket (For Item 59, 447-01058-0 ONLY)	1
30		671-00152-0	O-Ring	2

Servo Controls (Primary) With Mounting Screws				
Balloon #	Pump Type	Item #	Description	Qty
31	P09	S22-15898-0	Electro Hydraulic Stoker E**	1
	P140	S22-15899-0	Electro Hydraulic Stoker E**	
	P09	S22-15896-0	Hydraulic Stoker H**	
	P140	S22-15897-0	Hydraulic Stoker H**	
	P09	S22-15894-0	Rotary Servo R**	
	P140	S22-15895-0	Rotary Servo R**	
32		348-10016-0	Washer-Internal Shakeproof	2
33		345-10012-0	Washer-Flat	2
34		361-08200-0	Screw-SHC M6 x 25mm LG.	4
35		032-92748-0	Bearing-Hydro Balance Cam	1
36		032-92856-0	Piston Ring	2
37	P09	691-00906-0	O-Ring (For Item 38, 488-35041-0 ONLY)	1
		605-10063-0	Gasket (For Item 38, 447-01053-2 ONLY)	1
38	P09	488-35041-0	Plug SAE-6 (For Item 7-1, 032-93717-0 & 032-93718-0 ONLY)	1
	P140	447-01053-2	Plug BSPP 1/4" (7-1, 032-93720-0 & 032-93721-0 ONLY)	1
39		032-91590-0	Bearing-Cam	1
40		032-91579-0	Slide Link	1
41		S22-17825-0	Piston With Dowel	1
42	P09	449-00020-0	Plug-SAE (For Item 7-1, 032-93717-0 & 032-93718-0 ONLY)	1
	P140	449-00611-0	Plug-BSPP (For Item 7-1, 032-93720-0 & 032-93721-0 ONLY)	1
43	P09	033-71514-0	Key SAE (For Item 1 #2 ONLY)	1
	P140	032-91429-0	Key ISO (For Item 1 #2 ONLY)	
		032-92264-0	Key DIN (For Item 1 #6 ONLY)	
44		316-50001-0	Screw-Flat HD Socket M5 x 16mm LG.	1
45	P09	691-00924-0	O-Ring (For Item 46, 488-35019-0 ONLY)	1
	P140	605-10065-0	Gasket (For Item 46, 447-01057-2 ONLY)	1
46	P09	488-35019-0	Plug SAE-20 (For Item 7-1, 032-93717-0 & 032-93718-0 ONLY)	1
	P140	447-01057-2	Plug BSPP 1-1/2" (For Item 7-1, 032-93720-0 & 032-93721-0 ONLY)	1
47		032-92430-0	Nameplate	1
48		320-10203-0	Screw-Drive	4
49	P09	S24-10484-0	Cover-Inlet (For Item 7-1, 032-93717-0 & 032-93718-0 ONLY)	1
	P140	S22-15369-0	Cover-Inlet (For Item 7-1, 032-93720-0 & 032-93721-0 ONLY)	
50	P09	S13-26133-0	Cover-Outlet (For Item 7-1, 032-93717-0 & 032-93718-0 ONLY)	1
	P140	S22-12823-0	Cover-Outlet (For Item 7-1, 032-93720-0 & 032-93721-0 ONLY)	
51		035-12747-0	Tag-Fill	1
52		035-14292-0	Tag-Inspection	1
53		671-00265-0	O-Ring	1
54	P09	691-00904-0	O-Ring (For Items 58, 488-35061-0 ONLY)	2
	P140	605-10061-0	Gasket (For Items 58, 447-01053-2 ONLY)	2
55		691-00914-0	O-Ring	1
56		488-35030-0	Pllug-SAE-14	1
		S22-15943-0	Volume Indicator	
		S22-16711-0	Potentiometer – CW	
		S22-16712-0	Potentiometer – CCW	
		S22-17185-0	LVDT	
57		353-25079-0	Screw-Button HD. M5 x 1mm LG.	2
58	P09	488-35061-0	Plug-SAE-4 (For Item 7-1, 032-93717-0 & 032-93718-0 ONLY)	2
	P140	447-01053-2	Plug BSPP 1/4" (For Item 7-1, 032-93720-0 & 032-93721-0 ONLY)	2
59	P09	488-35061-0	Plug-SAE-4 (For Item 7-1, 032-93717-0 & 032-93718-0 ONLY)	1
	P140	447-01058-0	Plug BSPP 1/8" (For Item 7-1, 032-93720-0 & 032-93721-0 ONLY)	1
60		671-10035-0	Ring-Square ARP-035	1
61		671-00010-0	O-Ring	2

Rear Adapters				
62		S22-15372-0	A – SAE 82-2 (A) Mtg. With SAE 16-4 (A) Coupling	1
		S22-12867-0	B – SAE 101-2 or SAE 101-4 (B) Mtg. With SAE 22-4 (B) Coupling	
		S22-12869-0	C – SAE 127-2 or SAE 127-4 (C) Mtg. With SAE 32-4 (C) Coupling	
		S22-12870-0	D – SAE 152-4 (D) Mtg. With SAE 44-4 (D) Coupling	
		S22-15809-0	G – SAE 82-2 (A) Mtg. With SAE 22-4 (B) Coupling	
		S22-18140-0	M – Cover-Port Block Blanking	
		S22-12920-0	N – SAE 127-2 or SAE 127-4 (C) Mtg. With SAE 38-4 (C-C) Coupling	
		S22-15740-0	T – ISO 3019/2-180B4HW Mtg. With ISO 3019/2-K40N Coupling	
		S22-15570-0	U – ISO 3019/2-180B4HW Mtg. With ISO 3019/2-K50N Coupling	
		S22-12868-0	Q – SAE 101-2 or SAE 101-4 (B) Mtg. With SAE 25-4 (B-B) Coupling	
		S22-12874-0	X – ISO 3019/2-160B4HW Mtg. With ISO 3019/2-K40N Coupling	
		S22-12873-0	Y – ISO 3019/2-125B4HW Mtg. With ISO 3019/2-K32N Coupling	
		S2-12872-0	Z – ISO 3019/2-100B4HW Mtg. With ISO 3019/2-K25N Coupling	
63		488-35046-0	Plug-SAE-2	4
64		691-00902-0	O-Ring	4
65		034-59555-0	Cover-SAE-A Shipping (For Item 62, A & G)	1
		031-59564-0	Cover-SAE-B Shipping (For Item 62, B & Q)	
		031-57252-0	Cover-SAE-C Shipping (For Item 62, C & N)	
		031-57250-0	Cover-SAE-D Shipping (For Item 62, D)	
		032-92163-0	Cover-ISO 180 Shipping (For Item 62, T & U)	
		032-91407-0	Cover-ISO 160 Shipping (For Item 62, X)	
		032-91408-0	Cover-ISO 125 Shipping (For Item 62, Y)	
		032-91409-0	Cover-ISO 100 Shipping (For Item 62, Z)	
66		306-16120-0	Screw-HHC 3/8-16 x .75 LG. (For Item 62, A, B & G)	2
		306-24160-0	Screw-HHC 5/8-11 x 1.00 LG. (For Item 62, C & N)	2
		306-26160-0	Screw-HHC 3/4-10 x 1.00 LG. (For Item 62, D)	2
		363-14212-8	Screw-HHC M16 x 25mm LG. (For Item 62, T, U & X)	4
		363-16210-8	Screw-HHC M20 x 25mm LG. (For Item 62, M)	4
		306-20120-0	Screw-HHC 1/2-13 x .75 LG. (For Item 62, Q)	2
		363-12193-0	Screw-HHC M12 x 20mm LG. (For Item 62, Y)	2
		363-11120-8	Screw-HHC M10 x 12mm LG. (For Item 62, Z)	2
67	P09	S22-16084-0	Tube Servo	1
	P140	S22-16086-0	Tube Servo	
68		671-10033-0	Ring-Square ARP-033	1





Torque Table (FT-LBS ± 10%)		
Item	P12	P200
9	57	57
38	18	18
46	250	288
58	11	18

Balloon #	Pump Type	Item #	Description	Qty
1	P12 (SAE)	032-92961-0	Shaft, Keyed (Shaft Code 2) SAE 44-1 (D & E)	1
	P12 (SAE)	032-92903-0	Shaft, Keyed Rear Drive (Shaft Code 2) SAE 44-1 (D & E)	
	P12 (SAE)	032-92677-0	Shaft, Spline (Shaft Code 3) SAE 44-4 (E)	
	P12 (SAE)	032-92890-0	Shaft, Spline Rear Drive (Shaft Code 3) SAE 44-4 (E)	
	P200 (ISO)	032-92962-0	Shaft, Keyed 50mm (Shaft Code 2)	
	P200 (ISO)	032-92908-0	Shaft, Keyed Rear Drive 50mm (Shaft Code 2)	
	P200 (ISO)	032-92974-0	Shaft, Spline 50mm (Shaft Code 3)	
	P200 (ISO)	032-92975-0	Shaft, Spline Rear Drive 50mm (Shaft Code 3)	
	P200 (DIN)	032-92967-0	Shaft, Keyed 50mm (Shaft Code 6)	
	P200 (DIN)	032-92968-0	Shaft, Keyed Rear Drive 50mm (Shaft Code 6)	
	P200 (DIN)	032-92965-0	Shaft, Spline 50mm (Shaft Code 7)	
	P200 (DIN)	032-92966-0	Shaft, Spline Rear Drive 50mm (Shaft Code 7)	
	P200 (DIN)	032-92969-0	Shaft, Keyed 60mm (Shaft Code 8)	
	P200 (DIN)	032-92970-0	Shaft, Keyed Rear Drive 60mm (Shaft Code 8)	
	P200 (DIN)	032-92971-0	Shaft, Spline 60mm (Shaft Code 9)	
	P200 (DIN)	032-92972-0	Shaft, Spline Rear Drive 60mm (Shaft Code 9)	
2		032-91269-0	Seal Retainer (For Item 1 #2 & #3 ONLY)	1
		032-92973-0	Seal Retainer (For Item 1 #6, #7, #8 & #9 ONLY)	
3		S22-18272-0	Barrel and Port Plate – CW (R) (Style H or Q)	1
3		S22-16223-0	Barrel and Port Plate – CW (Style M or N)	
3-1		S22-16237-0	Barrel and Sleeve Assembly	1
3-2		032-94197-0	Port Plate – CW (Style H or Q)	1
3-2		032-92934-0	Port Plate – CCW (Style M or N)	
3		S22-18273-0	Barrel and Port Plate – CCW (L) (Style H or Q)	1
3		S22-16535-0	Barrel and Port Plate – CCW (Style M or N)	
3-1		S22-16237-0	Barrel and Sleeve Assembly	1
3-2		032-94198-0	Port Plate – CCW (Style H or Q)	1
3-2		032-92928-0	Port Plate – CW (Style M or N)	
4		356-65130-0	Snap-Ring	1
5	P12	S22-17878-0	Cradle SAE (For Item 7-1, 032-93723-0 & 032-93724-0 ONLY) NOTE: Assembly Contains Items 5-1, 35, 39, 44, 53, 57, 61, 63 & 64	1
5-1		S22-18550-0	Rocker Cradle Assembly	1
5	P200	S22-17816-0	Cradle ISO/DIN (For Item 7-1, 032-93726-0 & 032-93727-0 ONLY) NOTE: Assembly Contains Items 5-1, 35, 39, 44, 53, 57, 61, 63 & 64	1
5-1		S22-18551-0	Rocker Cradle Assembly	1
6		605-00915-8	Quad Ring	1
7	P12	S22-17949-0	HSG/Port Block SAE NRD (For Item 5-1, S22-18550-0 ONLY) NOTE: Assembly Contains Items 7-1, 23, 37, 38, 42, 45, 46, 49, 50, 54, 58, 63 & 64	1
7-1		032-93723-0	HSG/Port Block NRD	1
7	P12	S22-17879-0	HSG/Port Block SAE RD (For Item 5-1, S22-18550-0 ONLY) NOTE: Assembly Contains Items 7-1, 23, 37, 38, 42, 45, 46, 49, 50, 54, 58, 63 & 64	1
7-1		032-93724-0	HSG/Port Block RD	1
7	P200	S22-17817-0	HSG/Port Block ISO/DIN NRD (For Item 5-1, S22-18551-0 ONLY) NOTE: Assembly Contains Items 7-1, 23, 38, 42, 46, 49, 50, 58, 63 & 64	1
7-1		032-93726-0	HSG/Port Block NRD	1
7	P200	S22-17999-0	HSG/PORT Block ISO/DIN RD (For Item 5-1, S22-18551-0 ONLY) NOTE: Assembly Contains Items 7-1, 23, 38, 42, 46, 49, 50, 58, 59, 63 & 64	1
7-1		032-93727-0	HSG/Port Block NRD	1

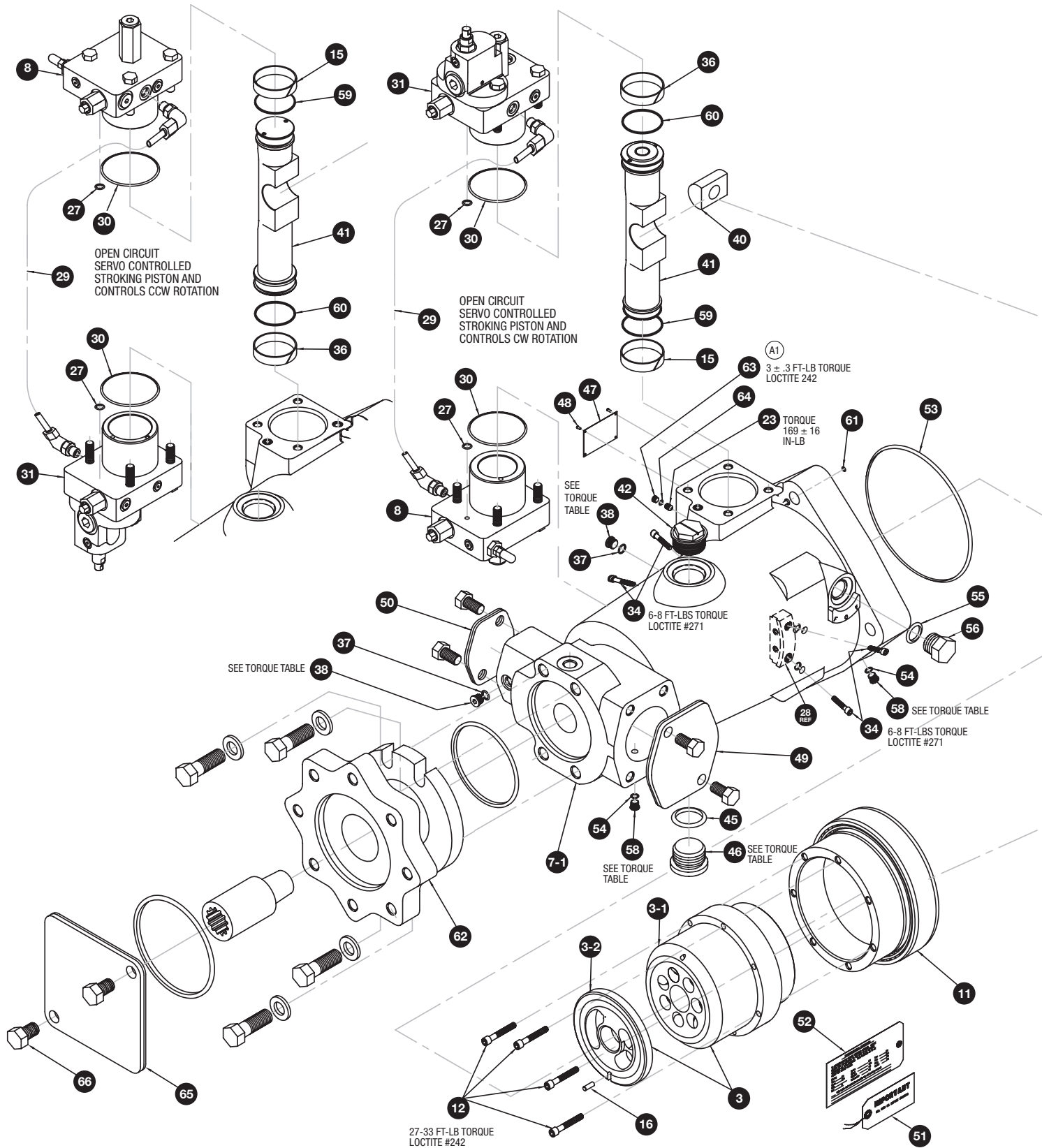
Balloon #	Pump Type	Item #	Description	Qty
8		S22-15653-0	Buck-Up Cap **0	1
9		361-11213-8	Screw-SHC M10 x 25mm LG.	12
10		S22-18274-0	Rocker Cam and Pin Assembly (Style H or Q)	1
		S22-16632-0	Rocker Cam and Pin Assembly (Style M or N)	
11		032-92679-0	Barrel Bearing	1
12		361-10234-8	Screw-SHC M8 x 45mm LG.	7
13	P12	620-82080-0	Seal-SAE Shaft (For Item #2 & #3 ONLY)	1
	P200	620-82099-0	Seal-ISO/DIN Shaft (For Item #2, #3, #6 & #7 ONLY)	
		620-82051-0	Seal-DIN Shaft (For Item 1 #8 & #9 ONLY)	
14		230-82215-0	Bearing-SAE/ISO Shaft (For Item 1 #2, #3, #6 & #7 ONLY)	1
		230-82217-0	Bearing-DIN Shaft (For Item 1 #8 & #9 ONLY)	
15		363-12210-0	Screw-HHC M12 x 60mm	4
16		324-21610-0	Dowel Pin 1/4 DIA. x 5/8 LG.	1
17		S22-16536-0	Piston, Shoes and Retainer	1
18	P012/200	032-91597-0	Spring-Disc (Style H or M)	3
	P12/200	032-94223-0	Spring-Disc (Style Q or N)	3
19		032-92728-0	Stop-Barrel	1
20		032-92707-0	Ring-Retaining	1
21		032-92945-0	Retaining Ring (.052/.054 THK.)	1
		032-92946-0	Retaining Ring (.054/.056 THK.)	
		032-92947-0	Retaining Ring (.056/.058 THK.)	
		032-92948-0	Retaining Ring (.058/.060 THK.)	
		032-92949-0	Retaining Ring (.060/.062 THK.)	
22		032-92695-0	Creep Plate	1
23		032-93969-0	Orifice .062	1
24		032-91599-0	Thrust Washer	1
25		032-91602-0	Bearing-Clearance	1
26		361-08250-0	Screw-SHC M6 x 35mm LG.	2
27		691-00013-0	O-Ring	6
28		032-92708-0	Retainer-Cam Bearing	2
29			Not Used	
30		671-00152-0	O-Ring	2

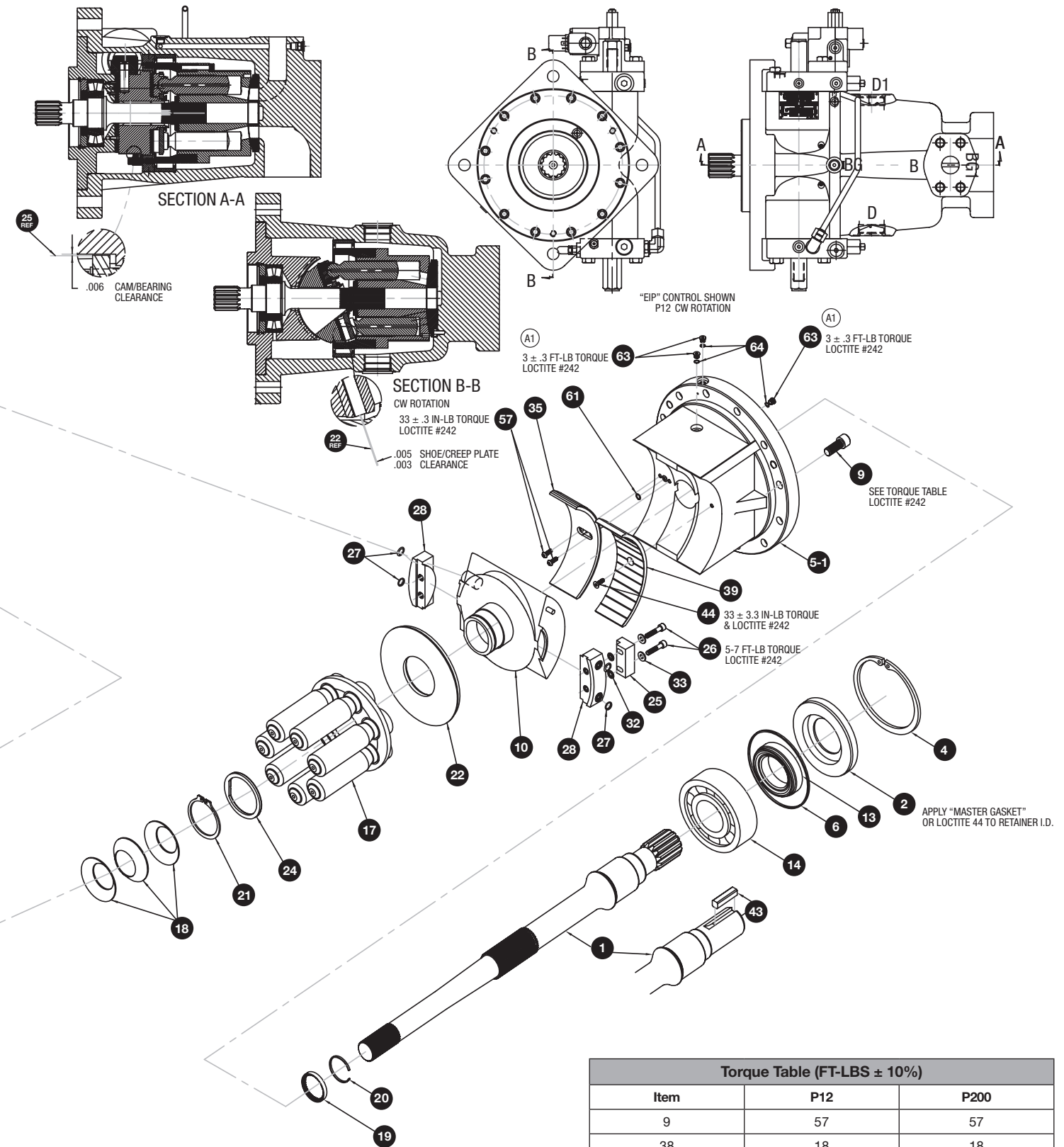
Compensator Controls (Primary) With Mounting Screws and Item 27 (QTY. 1) and Item 30 (QTY. 1)				
Balloon #	Pump Type	Item #	Description	Qty
31	P12	S22-15311-0	Compensator With Maximum Volume Adj. Screw C1*	1
	P200	S22-15312-0	Compensator With Maximum Volume Adj. Screw C1*	
	P12	Contact Tech Support	Compensator With Maximum Volume Handwheel Adj. C2*	
	P200	Contact Tech Support	Compensator With Maximum Volume Handwheel Adj. C2*	
	P12	S22-15732-0	Low Torque Limiter (TL) With Maximum Volume Screw J1*	
	P200	S22-15733-0	Low Torque Limiter (TL) With Maximum Volume Screw J1*	
	P12	Contact Tech Support	Low Torque Limiter (TL) With Maximum Volume Handwheel Adj. J2*	
	P200	Contact Tech Support	Low Torque Limiter (TL) With Maximum Volume Handwheel Adj. J2*	
	P12	S22-15315-0	High Torque Limiter (TL) With Maximum Volume Screw K1*	
	P200	S22-15316-0	High Torque Limiter (TL) With Maximum Volume Screw K1*	
	P12	Contact Tech Support	High Torque Limiter (TL) With Maximum Volume Handwheel Adj. K2*	
	P200	Contact Tech Support	High Torque Limiter (TL) With Maximum Volume Handwheel Adj. K2*	
	P12	S22-15536-0	Load Sensing 50 ΔP With Maximum Volume Screw L1*	
	P200	S22-15537-0	Load Sensing 50 ΔP With Maximum Volume Screw L1*	
	P12	Contact Tech Support	Load Sensing 50 ΔP With Maximum Volume Handwheel Adj. L2*	
	P200	Contact Tech Support	Load Sensing 50 ΔP With Maximum Volume Handwheel Adj. L2*	
	P12	S22-17866-0	Load Sensing 200 ΔP With Maximum Volume Screw M1*	
	P200	S22-17867-0	Load Sensing 200 ΔP With Maximum Volume Screw M1*	
	P12	Contact Tech Support	Load Sensing 200 ΔP With Maximum Volume Handwheel Adj. M2*	
	P200	Contact Tech Support	Load Sensing 200 ΔP WITH With Maximum Volume Handwheel Adj. M2*	
	P12	S22-16193-0	Low Torque Limiter (TL) With Load Sensing 50 ΔP & Maximum Volume Screw V1*	
	P200	S22-16194-0	Low Torque Limiter (TL) With Load Sensing 50 ΔP & Maximum Volume Screw V1*	
	P12	Contact Tech Support	Low Torque Limiter (TL) With Load Sensing 50 ΔP & Maximum Volume Handwheel Adj. V2*	
	P200	Contact Tech Support	Low Torque Limiter (TL) With Load Sensing 50 ΔP & Maximum Volume Handwheel Adj. V2*	
	P12	S22-16191-0	High Torque Limiter (TL) With Load Sensing 50 ΔP & Maximum Volume Screw W1*	
	P200	S22-16192-0	High Torque Limiter (TL) With Load Sensing 50 ΔP & Maximum Volume Screw W1*	
	P12	Contact Tech Support	High Torque Limiter (TL) With Load Sensing 50 ΔP & Maximum Volume Handwheel Adj. W2*	
	P200	Contact Tech Support	High Torque Limiter (TL) With Load Sensing 50 ΔP & Maximum Volume Handwheel Adj. W2*	
	P12	S22-17868-0	Low Torque Limiter (TL) With Load Sensing 200 ΔP & Maximum Volume Screw Y1*	
	P200	S22-17869-0	Low Torque Limiter (TL) With Load Sensing 200 ΔP & Maximum Volume Screw Y1*	
	P12	Contact Tech Support	Low Torque Limiter (TL) With Load Sensing 200 ΔP & Maximum Volume Handwheel Adj. Y2*	
	P200	Contact Tech Support	Low Torque Limiter (TL) With Load Sensing 200 ΔP & Maximum Volume Handwheel Adj. Y2*	
	P12	S22-17870-0	High Torque Limiter (TL) With Load Sensing 200 ΔP & Maximum Volume Screw Z1*	
	P200	S22-17871-0	High Torque Limiter (TL) With Load Sensing 200 ΔP & Maximum Volume Screw Z1*	
	P12	Contact Tech Support	High Torque Limiter (TL) With Load Sensing 200 ΔP & Maximum Volume Handwheel Adj. Z2*	
	P200	Contact Tech Support	High Torque Limiter (TL) With Load Sensing 200 ΔP & Maximum Volume Handwheel Adj. Z2*	

Compensator Controls (Primary) With Mounting Screws and Item 27 (QTY. 1) and Item 30 (QTY. 1) – Continued				
Balloon #	Pump Type	Item #	Description	Qty
32		348-10016-0	Washer-Internal Shakeproof	2
33		345-10012-0	Washer-Flat	2
34		361-08200-0	Screw-SHC M6 x 25mm LG.	4
35		032-93028-0	Bearing-Hydro Balance Cam	1
36		032-92856-0	Piston Ring	2
37	P12	691-00906-0	O-Ring (For Item 38, 488-35041-0 ONLY)	2
38	P12	488-35041-0	Plug SAE-6 (For Item 7-1, 032-93723-0 & 032-93724-0 ONLY)	2
	P200	447-01004-2	Plug With Gasket (For Item 7-1, 032-93726-0 & 032-93727-0 ONLY)	
39		032-92683-0	Bearing-Cam	1
40		032-92706-0	Slide Link	1
41		032-92710-0	Piston Control	1
42	P12	449-00021-0	Plug-SAE (For Item 7-1, 032-93723-0 & 032-93724-0 ONLY)	1
	P200	449-00611-0	Plug-ISO (For Item 7-1, 032-93726-0 & 032-93727-0 ONLY)	1
43	P12	033-71514-0	Key SAE (For Item 1 #2 ONLY)	1
	P200	032-91429-0	Key ISO (For Item 1 #2 ONLY)	
		032-92264-0	Key DIN (For Item 1 #6 ONLY)	
		032-92246-0	Key DIN (For Item 1 #8 ONLY)	
44		316-50001-0	Screw-Flat HD Socket M5 x 16mm LG.	1
45	P12	691-00924-0	O-Ring (For Item 46, 488-35062-0 ONLY)	1
46	P12	488-35062-0	Plug SAE-24 (For Item 7-1, 032-93723-0 & 032-93724-0 ONLY)	1
	P200	447-00034-0	Plug With Gasket (For Item 7-1, 032-93726-0 & 032-93727-0 ONLY)	1
47		032-92430-0	Nameplate	1
48		320-10203-0	Screw-Drive	4
49	P12	S14-28136-0	Cover-Inlet (For Item 7-1, 032-93723-0 & 032-93724-0 ONLY)	1
	P200	S22-12822-0	Cover-Inlet (For Item 7-1, 032-93726-0 & 032-93727-0 ONLY)	
50	P12	S13-26133-0	Cover-Outlet (For Item 7-1, 032-93723-0 & 032-93724-0 ONLY)	1
	P200	S22-12823-0	Cover-Outlet (For Item 7-1, 032-93726-0 & 032-93727-0 ONLY)	
51		035-12747-0	Tag-Fill	1
52		035-14292-0	Tag-Inspection	1
53		671-00268-0	O-Ring	1
54	P12	691-00904-0	O-Ring (For Item 58, 488-35061-0 ONLY)	2
55		691-00914-0	O-Ring	1
56		488-35030-0	Plug-SAE-14	1
		S22-15943-0	Volume Indicator	
		S22-16711-0	Potentiometer – CW	
		S22-16712-0	Potentiometer – CCW	
		S22-17185-0	LVDT	
57		353-25079-0	Screw-Button HD. M5 x 1mm LG.	2
58	P12	488-35061-0	Plug-SAE-4 (For Item 7-1, 032-93723-0 & 032-93724-0 ONLY)	2
	P200	447-01004-2	Plug With Seal (For Item 7-1, 7-1, 032-93726-0 & 032-93727-0 ONLY)	
59			Not Used	
60		671-10035-0	Ring-Square ARP-035	1
61		671-00010-0	O-Ring	2

Rear Adapters				
Balloon #	Pump Type	Item #	Description	Qty
62		S22-15372-0	A – SAE 82-2 (A) Mtg. With SAE 16-4 (A) Coupling	1
		S22-12867-0	B – SAE 101-2 or SAE 101-4 (B) Mtg. With SAE 22-4 (B) Coupling	
		S22-12869-0	C – SAE 127-2 or SAE 127-4 (C) Mtg. With SAE 32-4 (C) Coupling	
		S22-12870-0	D – SAE 152-4 (D) Mtg. With SAE 44-4 (D) Coupling	
		S22-12871-0	E – SAE 165-4 (E) Mtg. With SAE 44-4 (D) Coupling	
		S22-15809-0	G – SAE 82-2 (A) Mtg. With SAE 22-4 (B) Coupling	
		S22-18140-0	M – Cover-Port Block Blanking	
		S22-12920-0	N – SAE 127-2 or SAE 127-4 (C) Mtg. With SAE 38-4 (C-C) Coupling	
		S22-15740-0	T – ISO 3019/2-180B4HW Mtg. With ISO 3019/2-K40N Coupling	
		S22-15570-0	U – ISO 3019/2-180B4HW Mtg. With ISO 3019/2-K50N Coupling	
		S22-12868-0	Q – SAE 101-2 or SAE 101-4 (B) Mtg. With SAE 25-4 (B-B) Coupling	
		S22-12875-0	W – ISO 3019/2-200B4HW Mtg. With ISO 3019/2-K50N Coupling	
		S22-12874-0	X – ISO 3019/2-160B4HW Mtg. With ISO 3019/2-K40N Coupling	
		S22-12873-0	Y – ISO 3019/2-125B4HW Mtg. With ISO 3019/2-K32N Coupling	
		S2-12872-0	Z – ISO 3019/2-100B4HW Mtg. With ISO 3019/2-K25N Coupling	
63		488-35046-0	Plug-SAE-2	4
64		691-00902-0	O-Ring	4
65		034-59555-0	Cover-SAE-A Shipping (For Item 62, A & G)	1
		031-59564-0	Cover-SAE-B Shipping (For Item 62, B & Q)	
		031-57252-0	Cover-SAE-C Shipping (For Item 62, C & N)	
		031-57250-0	Cover-SAE-D Shipping (For Item 62, D)	
		032-91405-0	Cover-SAE-E Shipping (For Item 62, E)	
		032-92163-0	Cover-ISO 180 Shipping (For Item 62, T & U)	
		032-91406-0	Cover-ISO 200 Shipping (For Item 62, W)	
		032-91407-0	Cover-ISO 160 Shipping (For Item 62, X)	
		032-91408-0	Cover-ISO 125 Shipping (For Item 62, Y)	
		032-91409-0	Cover-ISO 100 Shipping (For Item 62, Z)	
66		306-16120-0	Screw-HHC 3/8-16 x .75 LG. (For Item 62, A, B & G)	2
		306-24160-0	Screw-HHC 5/8-11 x 1.00 LG. (For Item 62, C & N)	2
		306-26160-0	Screw-HHC 3/4-10 x 1.00 LG. (For Item 62, D & E)	2
		363-14212-8	Screw-HHC M16 x 25mm LG. (For Item 62, T, U & X)	4
		363-16210-8	Screw-HHC M20 x 25mm LG. (For Item 62, M)	4
		306-20120-0	Screw-HHC 1/2-13 x .75 LG. (For Item 62, Q)	2
		363-18210-8	Screw-HHC M24 x 25mm LG. (For Item 62, W)	2
		363-12193-0	Screw-HHC M12 x 20mm LG. (For Item 62, Y)	2
		363-11120-8	Screw-HHC M10 x 12mm LG. (For Item 62, Z)	2

[illegible]



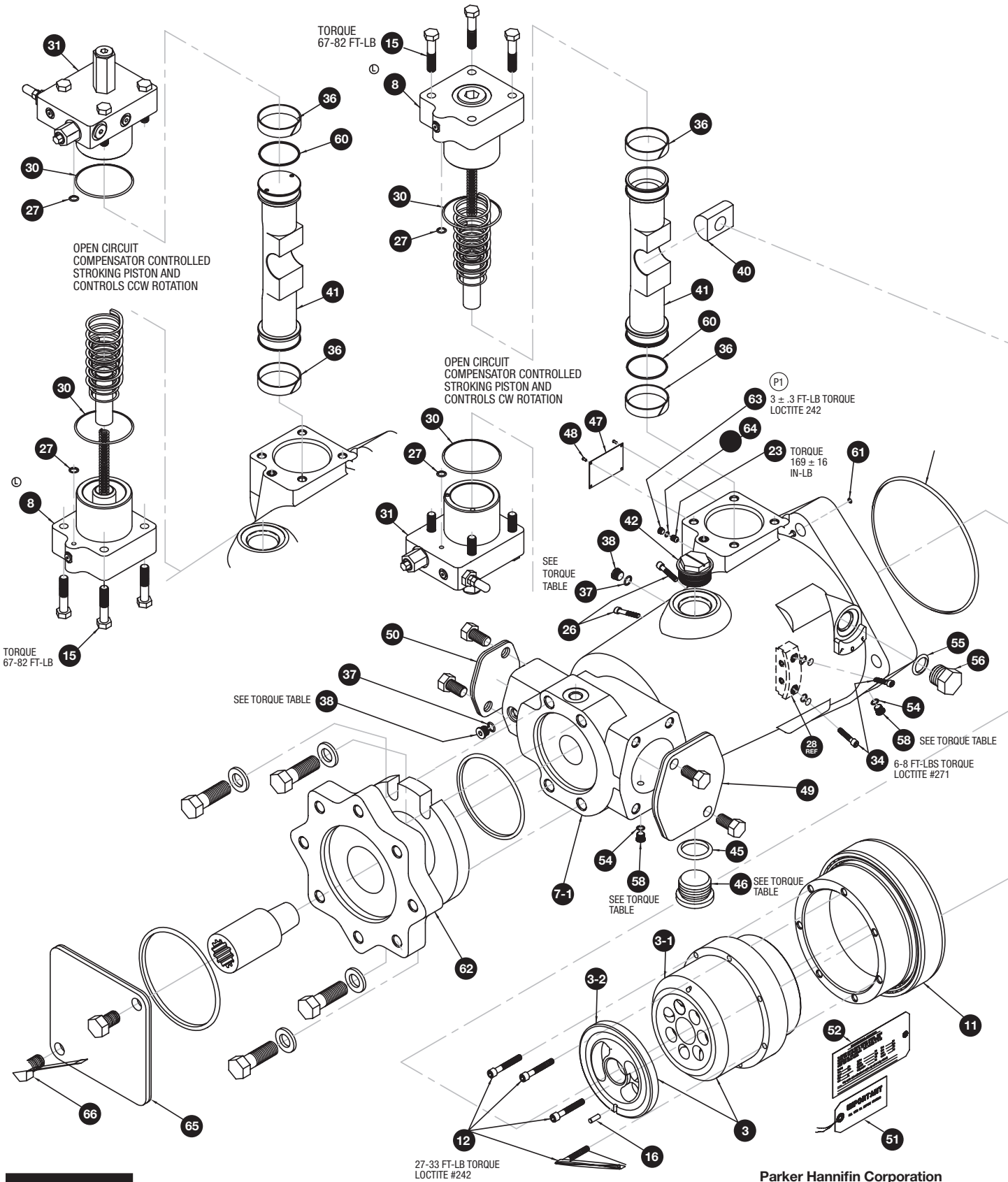


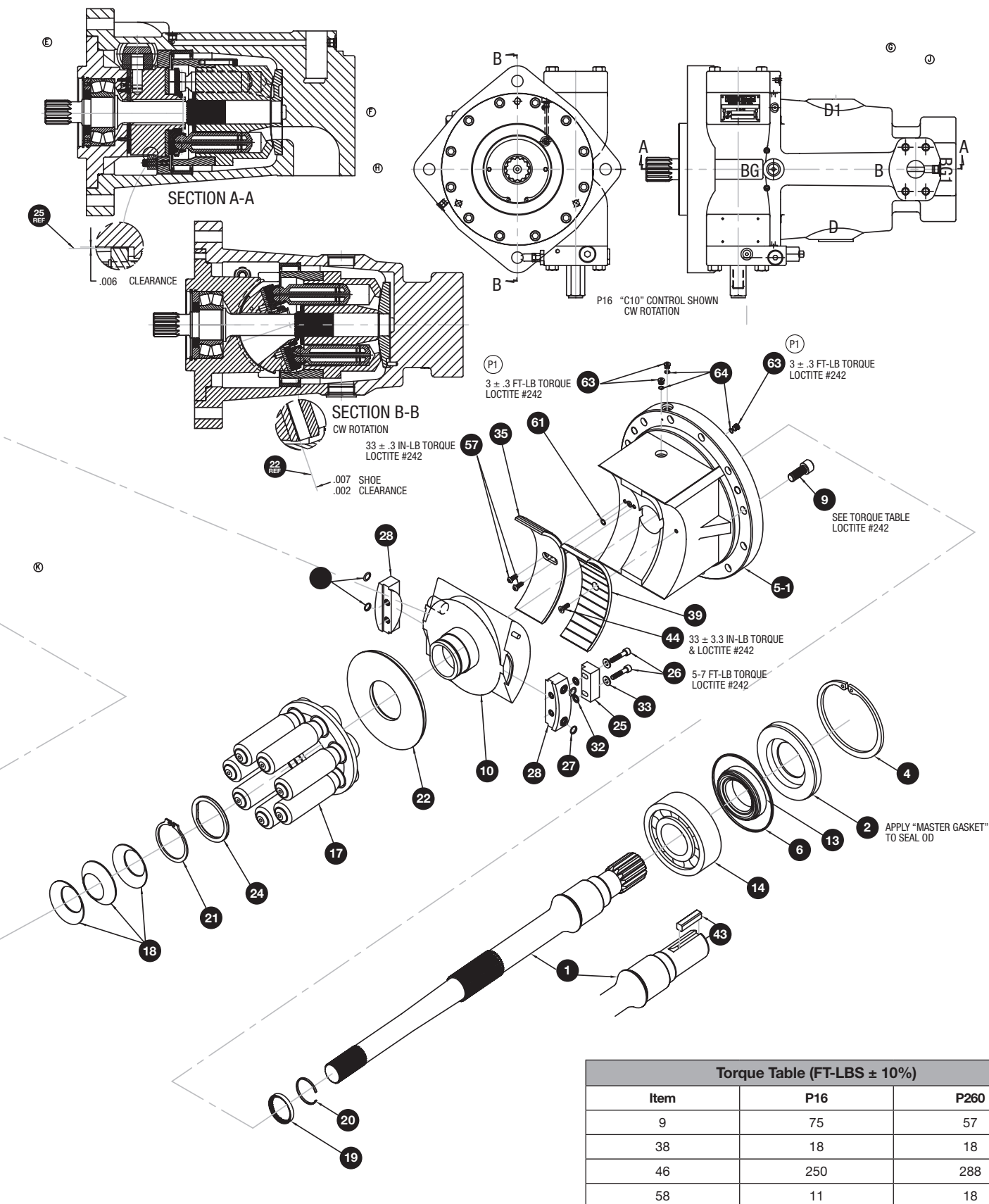
Balloon #	Pump Type	Item #	Description	Qty
1	P12 (SAE)	032-92961-0	Shaft, Keyed (Shaft Code 2) SAE 44-1 (D & E)	1
	P12 (SAE)	032-92903-0	Shaft, Keyed Rear Drive (Shaft Code 2) SAE 44-1 (D & E)	
	P12 (SAE)	032-92677-0	Shaft, Spline (Shaft Code 3) SAE 44-4 (E)	
	P12 (SAE)	032-92890-0	Shaft, Spline Rear Drive (Shaft Code 3) SAE 44-4 (E)	
	P200 (ISO)	032-92962-0	Shaft, Keyed 50mm (Shaft Code 2)	
	P200 (ISO)	032-92908-0	Shaft, Keyed Rear Drive 50mm (Shaft Code 2)	
	P200 (ISO)	032-92974-0	Shaft, Spline 50mm (Shaft Code 3)	
	P200 (ISO)	032-92975-0	Shaft, Spline Rear Drive 50mm (Shaft Code 3)	
	P200 (DIN)	032-92967-0	Shaft, Keyed 50mm (Shaft Code 6)	
	P200 (DIN)	032-92968-0	Shaft, Keyed Rear Drive 50mm (Shaft Code 6)	
	P200 (DIN)	032-92965-0	Shaft, Spline 50mm (Shaft Code 7)	
	P200 (DIN)	032-92966-0	Shaft, Spline Rear Drive 50mm (Shaft Code 7)	
	P200 (DIN)	032-92969-0	Shaft, Keyed 60mm (Shaft Code 8)	
	P200 (DIN)	032-92970-0	Shaft, Keyed Rear Drive 60mm (Shaft Code 8)	
	P200 (DIN)	032-92971-0	Shaft, Spline 60mm (Shaft Code 9)	
	P200 (DIN)	032-92972-0	Shaft, Spline Rear Drive 60mm (Shaft Code 9)	
2		032-91269-0	Seal Retainer (For Item 1 #2 & #3 ONLY)	1
		032-92973-0	Seal Retainer (For Item 1 #6, #7, #8 & #9 ONLY)	
3		S22-18272-0	Barrel and Port Plate – CW (R) (Style H or Q)	1
3		S22-16223-0	Barrel and Port Plate – CW (Style M or N)	
3-1		S22-16237-0	Barrel and Sleeve Assembly	1
3-2		032-94197-0	Port Plate – CW (Style H or Q)	1
3-2		032-92934-0	Port Plate – CCW (Style M or N)	
3		S22-18273-0	Barrel and Port Plate – CCW (L) (Style H or Q)	1
3		S22-16535-0	Barrel and Port Plate – CCW (Style M or N)	
3-1		S22-16237-0	Barrel and Sleeve Assembly	1
3-2		032-94198-0	Port Plate – CCW (Style H or Q)	1
3-2		032-92928-0	Port Plate – CW (Style M or N)	
4		356-65130-0	Snap-Ring	1
5	P12	S22-17878-0	Cradle SAE (For Item 7-1, 032-93723-0 & 032-93724-0 ONLY) NOTE: Assembly Contains Items 5-1, 35, 39, 44, 53, 57, 61, 63 & 64	1
5-1		S22-18550-0	Rocker Cradle Assembly	1
5	P200	S22-17816-0	Cradle ISO/DIN (For Item 7-1, 032-93726-0 & 032-93727-0 ONLY) NOTE: Assembly Contains Items 5-1, 35, 39, 44, 53, 57, 61, 63 & 64	1
5-1		S22-18551-0	Rocker Cradle Assembly	1
6		605-00915-8	Quad Ring	1
7	P12	S22-17949-0	HSG/Port Block SAE NRD (For Item 5-1, S22-18550-0 ONLY) Assembly Contains Items 7-1, 23, 37, 38, 42, 45, 46, 49, 50, 54, 58, 63 & 64	1
7-1		032-93723-0	HSG/Port Block NRD	1
7	P12	S22-17879-0	HSG/Port Block SAE RD (For Item 5-1, S22-18550-0 ONLY) NOTE: Assembly Contains Items 7-1, 23, 37, 38, 42, 45, 46, 49, 50, 54, 58, 63 & 64	1
7-1		032-93724-0	HSG/Port Block RD	1
7	P200	S22-17817-0	HSG/Port Block ISO/DIN NRD (For Item 5-1, S22-18551-0 ONLY) NOTE: Assembly Contains Items 7-1, 23, 38, 42, 46, 49, 50, 58, 63 & 64	1
7-1		032-93726-0	HSG/Port Block NRD	1
7	P200	S22-17999-0	HSG/Port Block ISO/DIN RD (For Item 5-1, S22-18551-0 ONLY) NOTE: Assembly Contains Items 7-1, 23, 38, 42, 46, 49, 50, 58, 63 & 64	
7-1		032-93727-0	HSG/Port Block NRD	1

Override Controls (Secondary) With Adjacent Maximum Volume Screw and Mounting Screws				
Balloon #	Pump Type	Item #	Description	Qty
8	P12	S22-15983-0	Compensator *1P	1
	P200	S22-15984-0	Compensator *1P	
	P12	S22-16082-0	Low Torque Limiter *1J	
	P200	S22-16083-0	Low Torque Limiter *1J	
	P12	S22-15987-0	High Torque Limiter *1K	
	P200	S22-15988-0	High Torque Limiter *1K	
	P12	S22-15256-0	None *10	
	P200	S22-15272-0	None *10	
9		361-11213-8	Screw-SHC M10 x 25mm LG.	12
10		S22-18274-0	Rocker Cam and Pin Assembly (Style H or Q)	1
		S22-16632-0	Rocker Cam and Pin Assembly (Style M or N)	
11		032-92679-0	Barrel Bearing	1
12		361-10234-8	Screw-SHC M8 x 35mm LG.	7
13	P12	620-82080-0	Seal-SAE Shaft (For Item 1 #2 & #3 ONLY)	1
	P200	620-82099-0	Seal-ISO/DIN Shaft (For Item 1 #2, #3, #6 & #7 ONLY)	
		620-82051-0	Seal-DIN Shaft (For Item 1 #8 & #9 ONLY)	
14		230-82215-0	Bearing-SAE/ISO Shaft (For Item 1 #2, #3, #6 & #7 ONLY)	1
		230-82217-0	Bearing-DIN Shaft (For Item 1 #8 & #9 ONLY)	
15		032-92855-0	Piston – Ring	1
16		324-21610-0	Dowel Pin 1/4 DIA. x 5/8 LG.	1
17		S22-16536-0	Piston, Shoes and Retainer	1
18	P12/200	032-91597-0	Spring-Disc (Style H or M)	3
	P12/200	032-94223-0	Spring-Disc (Style Q or N)	3
19		032-92728-0	Stop-Barrel	1
20		032-92707-0	Ring-Retaining	1
21		032-92945-0	Retaining Ring (.052/.054 THK.)	1
		032-92946-0	Retaining Ring (.054/.056 THK.)	
		032-92947-0	Retaining Ring (.056/.058 THK.)	
		032-92948-0	Retaining Ring (.058/.060 THK.)	
		032-92949-0	Retaining Ring (.060/.062 THK.)	
22		032-92695-0	Creep Plate	1
23		032-93969-0	Orifice .062	1
24		032-91599-0	Thrust Washer	1
25		032-91602-0	Bearing-Clearance	1
26		361-08250-0	Screw-SHC M6 x 30mm LG.	2
27		691-00013-0	O-Ring	6
28		032-92708-0	Retainer-Cam Bearing	2
29	P12	S22-16574-0	Tube Servo	1
	P200	S22-16575-0	Tube Servo	1
30		671-00152-0	O-Ring	2

Servo Controls (Primary) With Mounting Screws				
Balloon #	Pump Type	Item #	Description	Qty
31	P12	S22-15898-0	Electro Hydraulic Stoker E**	1
	P200	S22-15899-0	Electro Hydraulic Stoker E**	
	P12	S22-15896-0	Hydraulic Stoker H**	
	P200	S22-15897-0	Hydraulic Stoker H**	
	P12	S22-15894-0	Rotary Servo R**	
	P200	S22-15895-0	Rotary Servo R**	
32		348-10016-0	Washer-Internal Shakeproof	2
33		345-10012-0	Washer-Flat	2
34		361-08200-0	Screw-SHC M6 x 25mm LG.	4
35		032-93028-0	Bearing-Hydro Balance Cam	1
36		032-92856-0	Piston Ring	1
37	P12	691-00906-0	O-Ring (For Item 38, 488-35041-0 ONLY)	2
38	P12	488-35041-0	Plug SAE-6 (For Item 7-1, 032-93723-0 & 032-93724-0 ONLY)	2
	P200	447-01004-2	Plug With Gasket (For Item 7-1, 032-93726-0 & 032-93727-0 ONLY)	
39		032-92683-0	Bearing-Cam	1
40		032-92706-0	Slide Link	1
41		S22-17828-0	Piston With Dowel	1
42	P12	449-00021-0	Plug-SAE (For Item 7-1, 032-93723-0 & 032-93724-0 ONLY)	1
	P200	449-00611-0	Plug-ISO (For Item 7-1, 032-93726-0 & 032-93727-0 ONLY)	
43	P12	033-71514-0	Key SAE (For Item 1 #2 ONLY)	1
	P200	032-91429-0	Key ISO (For Item 1 #2 ONLY)	
		032-92264-0	Key DIN (For Item 1 #6 ONLY)	
		032-92246-0	Key DIN (For Item 1 #8 ONLY)	
44		316-50001-0	Screw-Flat HD Socket M5 x 16mm LG.	1
45	P12	691-00924-0	O-Ring (For Item 46, 488-35062-0 ONLY)	1
46	P12	488-35062-0	Plug SAE-24 (For Item 7-1, 032-93723-0 & 032-93724-0 ONLY)	1
	P200	447-00034-0	Plug With Gasket (For Item 7-1, 032-93726-0 & 032-93727-0 ONLY)	1
47		032-92430-0	Nameplate	1
48		320-10203-0	Screw-Drive	4
49	P12	S14-28136-0	Cover-Inlet (For Item 7-1, 032-93723-0 & 032-93724-0 ONLY)	1
	P200	S22-12822-0	Cover-Inlet (For Item 7-1, 032-93726-0 & 032-93727-0 ONLY)	
50	P12	S13-26133-0	Cover-Outlet (For Item 7-1, 032-93723-0 & 032-93724-0 ONLY)	1
	P200	S22-12823-0	Cover-Outlet (For Item 7-1, 032-93726-0 & 032-93727-0 ONLY)	
51		035-12747-0	Tag-Fill	1
52		035-14292-0	Tag-Inspection	1
53		671-00268-0	O-Ring	1
54	P12	691-00904-0	O-Ring (For Items 58, 488-35061-0 ONLY)	2
55		691-00914-0	O-Ring	1
56		488-35030-0	Plug-SAE-14	1
		S22-15943-0	Volume Indicator	
		S22-16711-0	Potentiometer – CW	
		S22-16712-0	Potentiometer – CCW	
		S22-17185-0	LVDT	
57		353-25079-0	Screw-Button HD. M5 x 1mm LG.	2
58	P12	488-35061-0	Plug-SAE-4 (For Item 7-1, 032-93723-0 & 032-93724-0 ONLY)	2
	P200	447-01004-2	Plug With Seal (For Item 7-1, 032-93726-0 & 032-93727-0 ONLY)	2
59		671-10033-0	Ring-Square ARP-033	1
60		671-10035-0	Ring-Square ARP-035	1
61		671-00010-0	O-Ring	2

Rear Adapters				
62		S22-15372-0	A – SAE 82-2 (A) Mtg. With SAE 16-4 (A) Coupling	1
		S22-12867-0	B – SAE 101-2 or SAE 101-4 (B) Mtg. With SAE 22-4 (B) Coupling	
		S22-12869-0	C – SAE 127-2 or SAE 127-4 (C) Mtg. With SAE 32-4 (C) Coupling	
		S22-12870-0	D – SAE 152-4 (D) Mtg. With SAE 44-4 (D) Coupling	
		S22-12871-0	E – SAE 165-4 (E) Mtg. With SAE 44-4 (D) Coupling	
		S22-15809-0	G – SAE 82-2 (A) Mtg. With SAE 22-4 (B) Coupling	
		S22-18140-0	M – Cover-Port Block Blanking	
		S22-12920-0	N – SAE 127-2 or SAE 127-4 (C) Mtg. With SAE 38-4 (C-C) Coupling	
		S22-15740-0	T – ISO 3019/2-180B4HW Mtg. With ISO 3019/2-K40N Coupling	
		S22-15570-0	U – ISO 3019/2-180B4HW Mtg. With ISO 3019/2-K50N Coupling	
		S22-12868-0	Q – SAE 101-2 or SAE 101-4 (B) Mtg. With SAE 25-4 (B-B) Coupling	
		S22-12875-0	W – ISO 3019/2-200B4HW Mtg. With ISO 3019/2-K50N Coupling	
		S22-12874-0	X – ISO 3019/2-160B4HW Mtg. With ISO 3019/2-K40N Coupling	
		S22-12873-0	Y – ISO 3019/2-125B4HW Mtg. With ISO 3019/2-K32N Coupling	
		S2-12872-0	Z – ISO 3019/2-100B4HW Mtg. With ISO 3019/2-K25N Coupling	
63		488-35046-0	Plug-SAE-2	4
64		691-00902-0	O-Ring	4
65		034-59555-0	Cover-SAE-A Shipping (For Item 62, A & G)	1
		031-59564-0	Cover-SAE-B Shipping (For Item 62, B & Q)	
		031-57252-0	Cover-SAE-C Shipping (For Item 62, C & N)	
		031-57250-0	Cover-SAE-D Shipping (For Item 62, D)	
		032-91405-0	Cover-SAE-E Shipping (For Item 62, E)	
		032-92163-0	Cover-ISO 180 Shipping (For Item 62, T & U)	
		032-91406-0	Cover-ISO 200 Shipping (For Item 62, W)	
		032-91407-0	Cover-ISO 160 Shipping (For Item 62, X)	
		032-91408-0	Cover-ISO 125 Shipping (For Item 62, Y)	
		032-91409-0	Cover-ISO 100 Shipping (For Item 62, Z)	
66		306-16120-0	Screw-HHC 3/8-16 x .75 LG. (For Item 62, A, B & G)	2
		306-24160-0	Screw-HHC 5/8-11 x 1.00 LG. (For Item 62, C & N)	2
		306-26160-0	Screw-HHC 3/4-10 x 1.00 LG. (For Item 62, D & E)	2
		363-14212-8	Screw-HHC M16 x 25mm LG. (For Item 62, T, U & X)	4
		363-16210-8	Screw-HHC M20 x 25mm LG. (For Item 62, M)	4
		306-20120-0	Screw-HHC 1/2-13 x .75 LG. (For Item 62, Q)	2
		363-18210-8	Screw-HHC M24 x 25mm LG. (For Item 62, W)	2
		363-12193-0	Screw-HHC M12 x 20mm LG. (For Item 62, Y)	2
		363-11120-8	Screw-HHC M10 x 12mm LG. (For Item 62, Z)	2





Balloon #	Pump Type	Item #	Description	Qty
1	P16 (SAE)	032-92877-0	Shaft, Hi-Torque Spline (Shaft Code 5) SAE 50-4 (F)	1
	P16 (SAE)	032-91365-0	Shaft, Hi-Torque Spline Rear Drive (Shaft Code 5) SAE 50-4 (F)	
	P16 (SAE)	032-91087-0	Shaft, Spline (Shaft Code 3) SAE 44-4 (E)	
	P16 (SAE)	032-91398-0	Shaft, Spline Rear Drive (Shaft Code 3) SAE 44-4 (E)	
	P260 (ISO)	032-91320-0	Shaft, Spline (Shaft Code 3)	
	P260 (ISO)	032-91399-0	Shaft, Spline Rear Drive (Shaft Code 3)	
	P16 (SAE)	032-91303-0	Shaft, Keyed (Shaft Code 2) SAE 44-1 (D & E)	
	P16 (SAE)	032-91394-0	Shaft, Keyed Rear Drive (Shaft Code 2) SAE 44-1 (D & E)	
	P260 (ISO)	032-91319-0	Shaft, Keyed (Shaft Code 2)	
	P260 (ISO)	032-91400-0	Shaft, Keyed Rear Drive (Shaft Code 2)	
	P260 (DIN)	032-92223-0	Shaft, Spline Rear Drive (Shaft Code 7) DIN 60mm	
	P260 (DIN)	032-92222-0	Shaft, Spline (Shaft Code 7) DIN 60mm	
	P260 (DIN)	032-92225-0	Shaft, Keyed Rear Drive (Shaft Code 6) DIN 60mm	
	P260 (DIN)	032-92224-0	Shaft, Keyed (Shaft Code 6) DIN 60mm	
2		032-91269-0	Seal Retainer (For Item 1, 032-92877-D, 032-91365-D, 032-91087-C, 032-91398-D, 032-91303-C, 032-91319-C, 032-91320-C, 032-91400-D, 032-91399-D, & 032-91394-D ONLY)	1
		032-92235-0	Seal Retainer (For Item 1, 032-92224-C, 032-92225-D, 032-92222-C & 032-92223-D ONLY)	
3	P16/260	S22-18138-0	Barrel and Port Plate – CW (R) (Style H or Q)	1
3		S22-16100-0	Barrel and Port Plate – CW (Style M)	
3		S22-16123-0	Barrel and Port Plate – CW (Style N)	
3-1		S22-12725-0	Barrel and Sleeve Assembly	1
3-2		032-94132-0	Port Plate – CW (Style H or Q)	1
3-2		032-91280-0	Port Plate – CW (Style M)	
3-2		032-92201-0	Port Plate – CW (Style N)	
3	P16/260	S22-18139-0	Barrel and Port Plate – CCW (L) (Style H or Q)	1
3		S22-15672-0	Barrel and Port Plate – CCW (Style M)	
3		S22-16125-0	Barrel and Port Plate – CCW (Style N)	
3-1		S22-12725-0	Barrel and Sleeve Assembly	1
3-2		032-94133-0	Port Plate – CCW (Style H or Q)	1
3-2		032-91279-0	Port Plate – CCW (Style M)	
3-2		032-92393-0	Port Plate – CCW (Style N)	
4		356-65130-0	Snap-Ring (WT #N5000-475)	1
5	P16	S22-17764-0	Cradle SAE (For Item 7-1, 032-93729-0 & 032-93730-0 ONLY) NOTE: Assembly Contains Items 5-1, 35, 39, 44, 53, 57, 61, 63 & 64	1
5-1		S22-18548-0	Rocker Cradle Assembly	1
5	P260	S22-17840-0	Cradle ISO/DIN (For Item 7-1, 032-93732-0 & 032-93733-0 ONLY) NOTE: Assembly Contains Items 5-1, 35, 39, 44, 53, 57, 61, 63 & 64	1
5-1		S22-18549-0	Rocker Cradle Assembly	1
6		605-00915-8	Quad Ring	1
7	P16	S22-17765-0	HSG/Port Block SAE NRD (For Item 5-1, S22-18548-0 ONLY) NOTE: Assembly Contains Items 7-1, 23, 37, 38, 42, 45, 46, 49, 50, 54, 58, 63 & 64	1
7-1		032-93729-0	HSG/Port Block NRD	1
7	P16	S22-17843-0	HSG/Port Block SAE RD (For Item 5-1, S22-18548-0 ONLY) NOTE: Assembly Contains Items 7-1, 23, 37, 38, 42, 45, 46, 49, 50, 54, 58, 63 & 64	1
7-1		032-93730-0	HSG/Port Block RD	1
7	P260	S22-18081-0	HSG/Port Block ISO/DIN NRD (For Item 5-1, S22-18549-0 ONLY) NOTE: Assembly Contains Items 7-1, 23, 38, 42, 46, 49, 50, 58, 63 & 64	1
7-1		032-93732-0	HSG/Port Block NRD	1
7	P260	S22-17839-0	HSG/Port Block ISO/DIN RD (For Item 5-1, S22-18549-0 ONLY) NOTE: Assembly Contains Items 7-1, 23, 38, 42, 46, 49, 50, 58, 63 & 64	1
7-1		032-93733-0	HSG/Port Block NRD	1

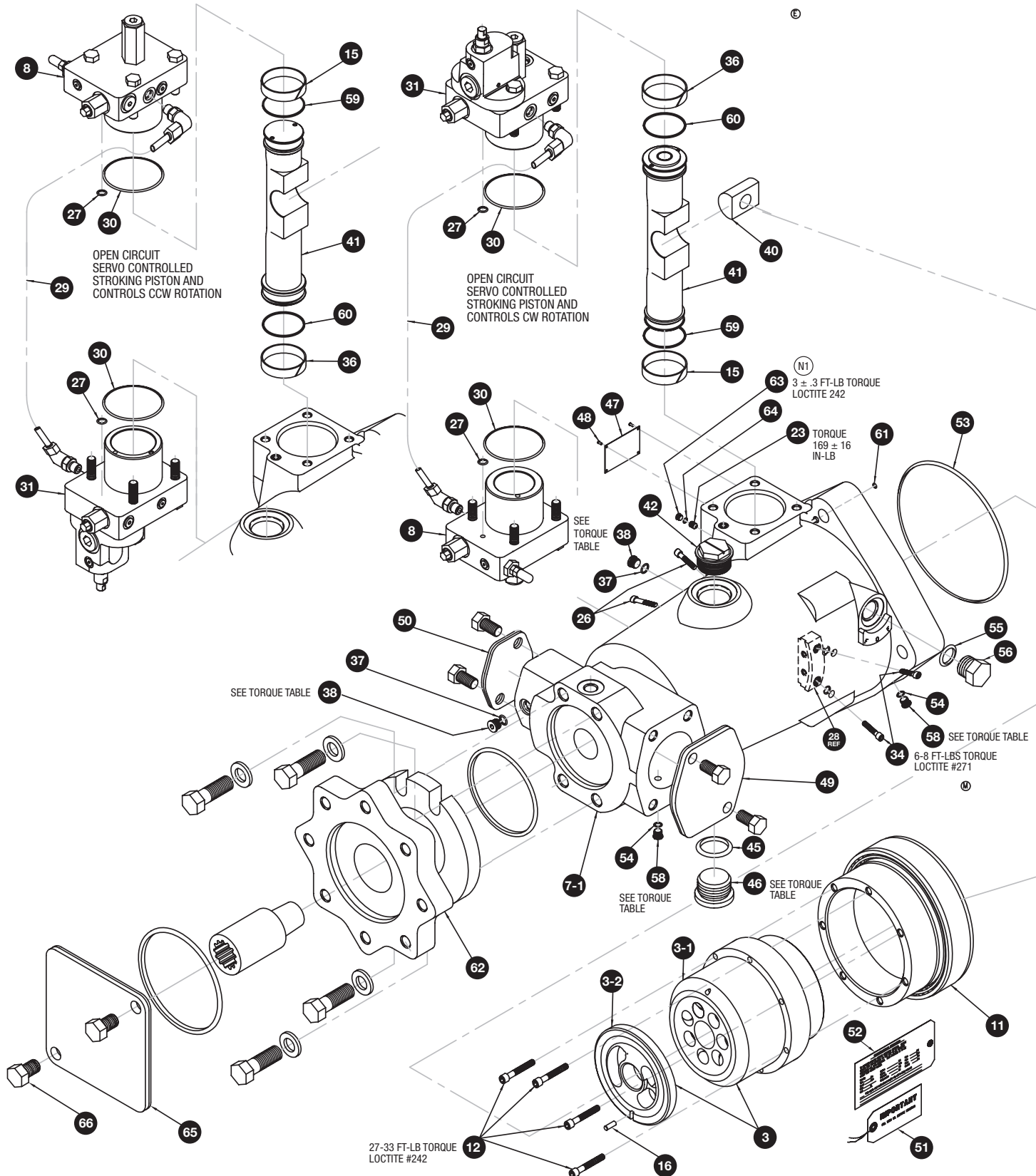
Balloon #	Pump Type	Item #	Description	Qty
8		S22-15653-0	Buck-Up Cap **0	1
9	P16	361-12229-0	Screw-SHC M12 x 30mm LG. (For Item 5-1, S22-18548-0 ONLY)	12
	P260	361-11224-0	Screw-SHC M10 x 30mm LG. (For Item 5-1, S22-18549-0 ONLY)	16
10		S22-18137-0	Rocker Cam and Pin Assembly	1
11		032-91077-0	Barrel Bearing	1
12		358-14226-0	Screw-SHC 5/16-18 x 13/4 LG.	7
13		620-82080-0	Seal-SAE Shaft (For Item 1, 032-91303-0, 032-91087-0, 032-91394-0 & 032-91398-0 ONLY)	1
		620-82099-0	Seal-ISO Shaft (For Item 1, 032-91319-0, 032-91320-0, 032-91365-0, 032-91400-0, 032-91399-0 & 032-92877-0 ONLY)	
		620-82051-0	Seal-DIN Shaft (For Item 1, 032-92224-0, 032-92225-0, 032-92222-0 & 032-92223-0 ONLY)	
14		230-82213-0	Bearing-SAE/ISO Shaft (For Item, 032-91303-0, 032-91087-0, 032-91394-0, 032-91398-0, 032-91319-0, 032-91320-0, 032-91365-0, 032-91400-0, 032-91399-0 & 032-92877-0 ONLY)	1
		230-82217-0	Bearing-DIN Shaft (For Item 1, 032-92224-0, 032-92225-0, 032-92222-0 & 032-92223-0 ONLY)	
15		363-12210-0	Screw-HHC M12 x 60mm	4
16		324-21610-0	Dowel Pin 1/4 DIA. x 5/8 LG.	1
17		S22-15271-0	Piston, Shoes and Retainer	1
18	P16/260	032-91083-0	Washer-Belleville (Style H or M)	3
	P16/260	032-94138-0	Washer-Belleville (Style Q or N)	3
19		032-91270-0	Stop-Barrel	1
20		032-91086-0	Ring-Retaining	1
21		032-92388-0	Retaining Ring (.062/.064 THK.)	1
		032-91792-0	Retaining Ring (.064/.066 THK.)	
		032-91793-0	Retaining Ring (.066/.068 THK.)	
		032-91794-0	Retaining Ring (.068/.070 THK.)	
		032-91795-0	Retaining Ring (.070/.072 THK.)	
		032-91796-0	Retaining Ring (.072/.074 THK.)	
22		032-91751-0	Creep Plate	1
23		032-93969-0	Orifice .062	1
24		032-91756-0	Thrust Washer	1
25		032-91412-0	Bearing-Clearance	1
26		361-08250-0	Screw-SHC M6 x 35mm LG.	4
27		691-00013-0	O-Ring	6
28		032-92708-0	Retainer-Cam Bearing	2
29			Not Used	
30		671-00152-0	O-Ring	2

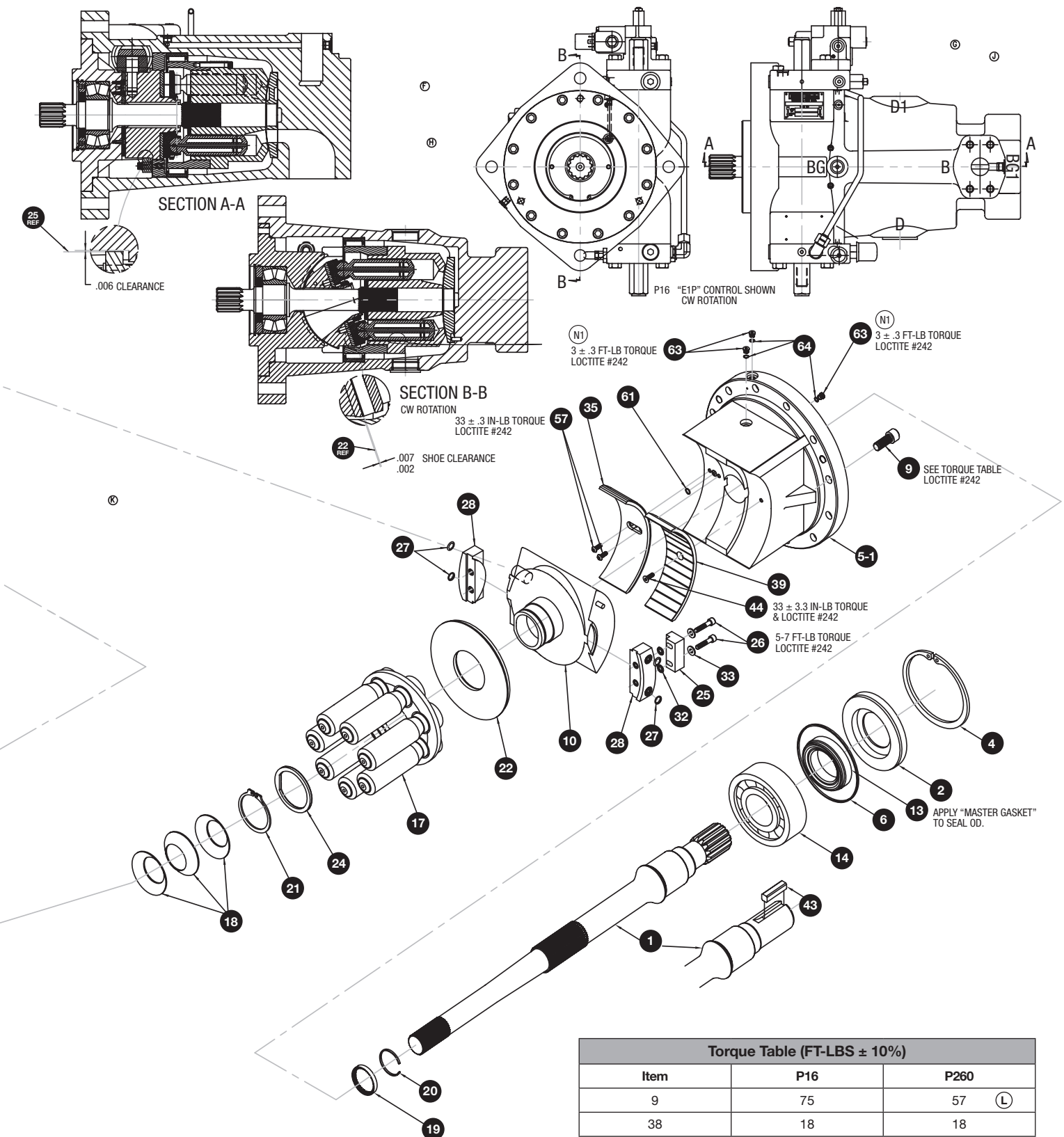
Compensator Controls (Primary) With Mounting Screws and Item 27 (QTY. 1) and Item 30 (QTY. 1)				
Balloon #	Pump Type	Item #	Description	Qty
31	P16	S22-15311-0	Compensator With Maximum Volume Adj. Screw C1*	1
	P260	S22-15312-0	Compensator With Maximum Volume Adj. Screw C1*	
	P16	Contact Tech Support	Compensator With Maximum Volume Handwheel Adj. C2*	
	P260	Contact Tech Support	Compensator With Maximum Volume Handwheel Adj. C2*	
	P16	S22-15313-0	Low Torque Limiter (TL) With Maximum Volume Screw J1*	
	P260	S22-15314-0	Low Torque Limiter (TL) With Maximum Volume Screw J1*	
	P16	Contact Tech Support	Low Torque Limiter (TL) With Maximum Volume Handwheel Adj. J2*	
	P260	Contact Tech Support	Low Torque Limiter (TL) With Maximum Volume Handwheel Adj. J2*	
	P16	S22-15315-0	High Torque Limiter (TL) With Maximum Volume Screw K1*	
	P260	S22-15314-0	High Torque Limiter (TL) With Maximum Volume Screw K1*	
	P16	Contact Tech Support	High Torque Limiter (TL) With Maximum Volume Handwheel Adj. K2*	
	P260	Contact Tech Support	High Torque Limiter (TL) With Maximum Volume Handwheel Adj. K2*	
	P16	S22-15536-0	Load Sensing 50 ΔP With Maximum Volume Screw L1*	
	P260	S22-15537-0	Load Sensing 50 ΔP With Maximum Volume Screw L1*	
	P16	Contact Tech Support	Load Sensing 50 ΔP With Maximum Volume Handwheel Adj. L2*	
	P260	Contact Tech Support	Load Sensing 50 ΔP With Maximum Volume Handwheel Adj. L2*	
	P16	S22-17866-0	Load Sensing 200 ΔP With Maximum Volume Screw M1*	
	P260	S22-17867-0	Load Sensing 200 ΔP With Maximum Volume Screw M1*	
	P16	Contact Tech Support	Load Sensing 200 ΔP With Maximum Volume Handwheel Adj. M2*	
	P260	Contact Tech Support	Load Sensing 200 ΔP WITH With Maximum Volume Handwheel Adj. M2*	
	P16	S22-15790-0	Low Torque Limiter (TL) With Load Sensing 50 ΔP & Maximum Volume Screw V1*	
	P260	S22-15802-0	Low Torque Limiter (TL) With Load Sensing 50 ΔP & Maximum Volume Screw V1*	
	P16	Contact Tech Support	Low Torque Limiter (TL) With Load Sensing 50 ΔP & Maximum Volume Handwheel Adj. V2*	
	P260	Contact Tech Support	Low Torque Limiter (TL) With Load Sensing 50 ΔP & Maximum Volume Handwheel Adj. V2*	
	P16	S22-16191-0	High Torque Limiter (TL) With Load Sensing 50 ΔP & Maximum Volume Screw W1*	
	P260	S22-16192-0	High Torque Limiter (TL) With Load Sensing 50 ΔP & Maximum Volume Screw W1*	
	P16	Contact Tech Support	High Torque Limiter (TL) With Load Sensing 50 ΔP & Maximum Volume Handwheel Adj. W2*	
	P260	Contact Tech Support	High Torque Limiter (TL) With Load Sensing 50 ΔP & Maximum Volume Handwheel Adj. W2*	
	P16	S22-17872-0	Low Torque Limiter (TL) With Load Sensing 200 ΔP & Maximum Volume Screw Y1*	
	P260	S22-17873-0	Low Torque Limiter (TL) With Load Sensing 200 ΔP & Maximum Volume Screw Y1*	
	P16	Contact Tech Support	Low Torque Limiter (TL) With Load Sensing 200 ΔP & Maximum Volume Handwheel Adj. Y2*	
	P260	Contact Tech Support	Low Torque Limiter (TL) With Load Sensing 200 ΔP & Maximum Volume Handwheel Adj. Y2*	
	P16	S22-17870-0	High Torque Limiter (TL) With Load Sensing 200 ΔP & Maximum Volume Screw Z1*	
	P260	S22-17871-0	High Torque Limiter (TL) With Load Sensing 200 ΔP & Maximum Volume Screw Z1*	
	P16	Contact Tech Support	High Torque Limiter (TL) With Load Sensing 200 ΔP & Maximum Volume Handwheel Adj. Z2*	
	P260	Contact Tech Support	High Torque Limiter (TL) With Load Sensing 200 ΔP & Maximum Volume Handwheel Adj. Z2*	

Compensator Controls (Primary) With Mounting Screws and Item 27 (QTY. 1) and Item 30 (QTY. 1) – Continued				
Balloon #	Pump Type	Item #	Description	Qty
32		348-10016-0	Washer-Internal Shakeproof	2
33		345-10012-0	Washer-Flat	2
34		361-08200-0	Screw-SHC M6 x 25mm LG.	2
35		032-92506-0	Bearing-Hydro Balance Cam	1
36		032-92856-0	Piston Ring	2
37	P16	691-00906-0	O-Ring (For Item 38, 488-35041-0 ONLY)	2
38	P16	488-35041-0	Plug SAE-6 (For Item 7-1, 032-93729-0 & 032-93730-0 ONLY)	2
	P260	447-01004-2	Plug With Gasket (For Item 7-1, 032-93732-0 & 032-93733-0 ONLY)	2
39		032-91345-0	Bearing-Cam	1
40		032-91259-0	Slide Link	1
41		032-92318-0	Piston Control	1
42	P16	449-00021-0	Plug-SAE (For Item 7-1, 032-93729-0 & 032-93730-0 ONLY)	1
	P260	449-00611-0	Plug-ISO (For Item 7-1, 032-93732-0 & 032-93733-0 ONLY)	1
43		033-71514-0	Key SAE (For Item 1, 032-91303-0 & 032-91394-0 ONLY)	1
		032-91429-0	Key ISO (For Item 1, 032-91319-0 & 032-91400-0 ONLY)	
		032-92246-0	Key DIN (For Item 1, 032-92224-0 & 032-92225-0 ONLY)	
44		316-50001-0	Screw-Flat HD Socket M5 x 16mm LG.	1
45	P16	691-00924-0	O-Ring (For Item 46, 488-35062-0 ONLY)	1
46	P16	488-35062-0	Plug SAE-24 (For Item 7-1, 032-93729-0 & 032-93730-0 ONLY)	1
	P260	447-00034-0	Plug With Gasket (For Item 7-1, 032-93732-0 & 032-93733-0 ONLY)	1
47		032-92430-0	Nameplate	1
48		320-10203-0	Screw-Drive	4
49	P16	S14-28136-0	Cover-Inlet (For Item 7-1, 032-93729-0 & 032-93730-0 ONLY)	1
	P260	S22-12822-0	Cover-Inlet (For Item 7-1, 032-93732-0 & 032-93733-0 ONLY)	
50	P16	S13-26133-0	Cover-Outlet (For Item 7-1, 032-93729-0 & 032-93730-0 ONLY)	1
	P260	S22-12823-0	Cover-Outlet (For Item 7-1, 032-93732-0 & 032-93733-0 ONLY)	
51		035-12747-0	Tag-Fill	1
52		035-14292-0	Tag-Inspection	1
53		671-00268-0	O-Ring	1
54	P16	691-00904-0	O-Ring (For Item 58, 488-35061-0 ONLY)	2
55		691-00914-0	O-Ring	1
56		488-35030-0	Plug-SAE-14	1
		S22-15943-0	Volume Indicator	
		S22-16711-0	Potentiometer – CW	
		S22-16712-0	Potentiometer – CCW	
		S22-17185-0	LVDT	
57		353-25079-0	Screw-Button HD. M5 x 1mm LG.	2
58	P16	488-35061-0	Plug-SAE-4 (For Item 7-1, 032-93729-0 & 032-93730-0 ONLY)	2
	P260	447-01004-2	Plug With Seal (For Item 7-1, 032-93732-0 & 032-93733-0 ONLY)	
59			Not Used	
60		671-10035-0	Ring-Square ARP-035	1
61		671-00010-0	O-Ring	2

Rear Adapters				
Balloon #	Pump Type	Item #	Description	Qty
62		S22-15372-0	A – SAE 82-2 (A) Mtg. With SAE 16-4 (A) Coupling	1
		S22-12867-0	B – SAE 101-2 or SAE 101-4 (B) Mtg. With SAE 22-4 (B) Coupling	
		S22-12869-0	C – SAE 127-2 or SAE 127-4 (C) Mtg. With SAE 32-4 (C) Coupling	
		S22-12870-0	D – SAE 152-4 (D) Mtg. With SAE 44-4 (D) Coupling	
		S22-12871-0	E – SAE 164-4 (E) Mtg. With SAE 44-4 (D) Coupling	
		S22-15809-0	G – SAE 82-2 (A) Mtg. With SAE 22-4 (B) Coupling	
		S22-15933-0	L – ISO 3019/2-180B4HW Mtg. With DIN 5480 40-18 Coupling	
		S22-18140-0	M – Cover-Port Block Blanking	
		S22-12920-0	N – SAE 127-2 or SAE 127-4 (C) Mtg. With SAE 38-4 (C-C) Coupling	
		S22-15934-0	S – ISO 3019/2-180B4HW Mtg. With DIN 5480 50-24 Coupling	
		S22-15740-0	T – ISO 3019/2-180B4HW Mtg. With ISO 3019/2-K40N Coupling	
		S22-15570-0	U – ISO 3019/2-180B4HW Mtg. With ISO 3019/2-K50N Coupling	
		S22-12868-0	Q – SAE 101-2 or SAE 101-4 (B) Mtg. With SAE 25-4 (B-B) Coupling	
		S22-12876-0	V – ISO 3019/2-250B4HW Mtg. With ISO 3019/2-K50N Coupling	
		S22-12875-0	W – ISO 3019/2-200B4HW Mtg. With ISO 3019/2-K50N Coupling	
		S22-12874-0	X – ISO 3019/2-160B4HW Mtg. With ISO 3019/2-K40N Coupling	
		S22-12873-0	Y – ISO 3019/2-125B4HW Mtg. With ISO 3019/2-K32N Coupling	
		S2-12872-0	Z – ISO 3019/2-100B4HW Mtg. With ISO 3019/2-K25N Coupling	
63		488-35046-0	Plug-SAE-2	4
64		691-00902-0	O-Ring	4
65		034-59555-0	Cover-SAE-A Shipping (For Item 62, A & G)	1
		031-59564-0	Cover-SAE-B Shipping (For Item 62, B & Q)	
		031-57252-0	Cover-SAE-C Shipping (For Item 62, C & N)	
		031-57250-0	Cover-SAE-D Shipping (For Item 62, D)	
		032-91405-0	Cover-SAE-E Shipping (For Item 62, E & V)	
		032-92163-0	Cover-ISO 180 Shipping (For Item 62, L, S, T & U)	
		032-91406-0	Cover-ISO 200 Shipping (For Item 62, W)	
		032-91407-0	Cover-ISO 160 Shipping (For Item 62, X)	
		032-91408-0	Cover-ISO 125 Shipping (For Item 62, Y)	
		032-91409-0	Cover-ISO 100 Shipping (For Item 62, Z)	
66		306-16120-0	Screw-HHC 3/8-16 x .75 LG. (For Item 62, A, B & G)	2
		306-24160-0	Screw-HHC 5/8-11 x 1.00 LG. (For Item 62, C & N)	2
		306-26160-0	Screw-HHC 3/4-10 x 1.00 LG. (For Item 62, D & E)	2
		363-14212-8	Screw-HHC M16 x 25mm LG. (For Item 62, L, S, T, U & X)	4
		363-16210-8	Screw-HHC M20 x 25mm LG. (For Item 62, M)	4
		306-20120-0	Screw-HHC 1/2-13 x .75 LG. (For Item 62, Q)	2
		363-18210-8	Screw-HHC M24 x 25mm LG. (For Item 62, V & W)	2
		363-12193-0	Screw-HHC M12 x 20mm LG. (For Item 62, Y)	2
		363-11120-8	Screw-HHC M10 x 12mm LG. (For Item 62, Z)	2

[illegible]





Balloon #	Pump Type	Item #	Description	Qty
1	P16 (SAE)	032-92877-0	Shaft, Hi-Torque Spline (Shaft Code 5) SAE 50-4 (F)	1
	P16 (SAE)	032-91365-0	Shaft, Hi-Torque Spline Rear Drive (Shaft Code 5) SAE 50-4 (F)	
	P16 (SAE)	032-91087-0	Shaft, Spline (Shaft Code 3) SAE 44-4 (E)	
	P16 (SAE)	032-91398-0	Shaft, Spline Rear Drive (Shaft Code 3) SAE 44-4 (E)	
	P260 (ISO)	032-91320-0	Shaft, Spline (Shaft Code 3)	
	P260 (ISO)	032-91399-0	Shaft, Spline Rear Drive (Shaft Code 3)	
	P16 (SAE)	032-91303-0	Shaft, Keyed (Shaft Code 2) SAE 44-1 (D & E)	
	P16 (SAE)	032-91394-0	Shaft, Keyed Rear Drive (Shaft Code 2) SAE 44-1 (D & E)	
	P260 (ISO)	032-91319-0	Shaft, Keyed (Shaft Code 2)	
	P260 (ISO)	032-91400-0	Shaft, Keyed Rear Drive (Shaft Code 2)	
	P260 (DIN)	032-92223-0	Shaft, Spline Rear Drive (Shaft Code 7) DIN 60mm	
	P260 (DIN)	032-92222-0	Shaft, Spline (Shaft Code 7) DIN 60mm	
	P260 (DIN)	032-92225-0	Shaft, Keyed Rear Drive (Shaft Code 6) DIN 60mm	
	P260 (DIN)	032-92224-0	Shaft, Keyed (Shaft Code 6) DIN 60mm	
2		032-91269-0	Seal Retainer (For Item 1, 032-92877-0, 032-91365-0, 032-91087-0, 032-91398-0, 032-91303-0, 032-91319-0, 032-91320-0, 032-91400-0, 032-91399-0, & 032-91394-0 ONLY)	1
		032-92235-0	Seal Retainer (For Item 1, 032-92224-0, 032-92225-0, 032-92222-0 & 032-92223-0 ONLY)	
3	P16/260	S22-18138-0	Barrel and Port Plate – CW (R) (Style H or Q)	1
3		S22-16100-0	Barrel and Port Plate – CW (Style M)	
3		S22-16123-0	Barrel and Port Plate – CW (Style N)	
3-1		S22-12725-0	Barrel and Sleeve Assembly	1
3-2		032-94132-0	Port Plate – CW (Style H or Q)	1
3-2		032-91280-0	Port Plate – CW (Style M)	
3-2		032-92201-0	Port Plate – CW (Style N)	
3	P16/260	S22-18139-0	Barrel and Port Plate – CCW (L) (Style H or Q)	1
3		S22-15672-0	Barrel and Port Plate – CCW (Style M)	
3		S22-16125-0	Barrel and Port Plate – CCW (Style N)	
3-1		S22-12725-0	Barrel and Sleeve Assembly	1
3-2		032-94133-0	Port Plate – CCW (Style H or Q)	1
3-2		032-91279-0	Port Plate – CCW (Style M)	
3-2		032-92393-0	Port Plate – CCW (Style N)	
4		356-65130-0	Snap-Ring	1
5	P16	S22-17764-0	Cradle SAE (For Item 7-1, 032-93729-0 & 032-93730-0 ONLY) NOTE: Assembly Contains Items 5-1, 35, 39, 44, 53, 57, 61, 63 & 64	1
5-1		S22-18548-0	Rocker Cradle Assembly	
5	P260	S22-17840-0	Cradle ISO/DIN (For Item 7-1, 032-93732-0 & 032-93733-0 ONLY) NOTE: Assembly Contains Items 5-1, 35, 39, 44, 53, 57, 61, 63 & 64	1
5-1		S22-18549-0	Rocker Cradle Assembly	
6		605-00915-8	Quad Ring	1
7	P16	S22-17765-0	HSG/Port Block SAE NRD (For Item 5-1, S22-18548-0 ONLY) Assembly Contains Items 7-1, 23, 37, 38, 42, 45, 46, 49, 50, 54, 58, 63 & 64	1
7-1		032-93729-0	HSG/Port Block NRD	
7	P16	S22-17843-0	HSG/Port Block SAE RD (For Item 5-1, S22-18548-0 ONLY) NOTE: Assembly Contains Items 7-1, 23, 37, 38, 42, 45, 46, 49, 50, 54, 58, 63 & 64	1
7-1		032-93730-0	HSG/Port Block RD	
7	P260	S22-18081-0	HSG/Port Block ISO/DIN NRD (For Item 5-1, S22-18549-0 ONLY) NOTE: Assembly Contains Items 7-1, 23, 38, 42, 46, 49, 50, 58, 63 & 64	1
7-1		032-93732-0	HSG/Port Block NRD	
7	P260	S22-17839-0	HSG/Port Block ISO/DIN RD (For Item 5-1, S22-18549-0 ONLY) NOTE: Assembly Contains Items 7-1, 23, 38, 42, 46, 49, 50, 58, 63 & 64	1
7-1		032-93733-0	HSG/Port Block NRD	

Override Controls (Secondary) With Adjacent Maximum Volume Screw and Mounting Screws				
Balloon #	Pump Type	Item #	Description	Qty
8	P16	S22-15983-0	Compensator *1P	1
	P260	S22-15984-0	Compensator *1P	
	P16	S22-15985-0	Low Torque Limiter *1J	
	P260	S22-15986-0	Low Torque Limiter *1J	
	P16	S22-15987-0	High Torque Limiter *1K	
	P260	S22-15988-0	High Torque Limiter *1K	
	P16	S22-15256-0	None *10	
	P260	S22-15272-0	None *10	
9	P16	361-12229-0	Screw-SHC M12 x 30mm LG. (For Item 5-1, S22-18548-0 ONLY)	12
	P260	361-11224-0	Screw-SHC M10 x 30mm LG. (For Item 5-1, S22-18549-0 ONLY)	16
10		S22-18137-0	Rocker Cam and Pin Assembly	1
11		032-91077-0	Barrel Bearing	1
12		358-14226-0	Screw-SHC 5/16-18 x 13/4 LG.	7
13		620-82080-0	Seal-SAE Shaft (For Item 1, 032-91303-0, 032-91087-0, 032-91394-0 & 032-91398-0 ONLY)	1
		620-82099-0	Seal-ISO Shaft (For Item 1, 032-91319-0, 032-91320-0, 032-91365-0, 032-91400-0, 032-91399-0 & 032-92877-0 ONLY)	
		620-82051-0	Seal-DIN Shaft (For Item 1, 032-92224-0, 032-92225-0, 032-92222-0 & 032-92223-0 ONLY)	
14		230-82213-0	Bearing-SAE/ISO Shaft (For Item 1, 032-91303-0, 032-91087-0, 032-91394-0, 032-91398-0, 032-91319-0, 032-91320-0, 032-91365-0, 032-91400-0, 032-91399-0 & 032-92877-0 ONLY)	1
		230-82217-0	Bearing-DIN Shaft (For Item 1, 032-92224-0, 032-92225-0, 032-92222-0 & 032-92223-0 ONLY)	
15		032-92855-0	Piston Ring	1
16		324-21610-0	Dowel Pin 1/4 DIA. x 5/8 LG.	1
17		S22-15271-0	Piston, Shoes and Retainer	1
18	P16/260	032-91083-0	Washer-Belleville (Style H or M)	3
	P16/260	032-94138-0	Washer-Belleville (Style Q or N)	3
19		032-91270-0	Stop-Barrel	1
20		032-91086-0	Ring-Retaining	1
21		032-92388-0	Retaining Ring (.062/.064 THK.)	1
		032-91792-0	Retaining Ring (.064/.066 THK.)	
		032-91793-0	Retaining Ring (.066/.068 THK.)	
		032-91794-0	Retaining Ring (.068/.070 THK.)	
		032-91795-0	Retaining Ring (.070/.072 THK.)	
		032-91796-0	Retaining Ring (.072/.074 THK.)	
22		032-91751-0	Creep Plate	1
23		032-93969-0	Orifice .062	1
24		032-91756-0	Thrust Washer	1
25		032-91412-0	Bearing-Clearance	1
26		361-08250-0	Screw-SHC M6 x 35mm LG.	4
27		691-00013-0	O-Ring	6
28		032-91749-0	Retainer-Cam Bearing	2
29	P16	S22-15981-0	Tube Servo	1
	P260	S22-15998-0	Tube Servo	
30		671-00152-0	O-Ring	2

Servo Controls (Primary) With Mounting Screws				
Balloon #	Pump Type	Item #	Description	Qty
31	P16	S22-15898-0	Electro Hydraulic Stoker E**	1
	P260	S22-15899-0	Electro Hydraulic Stoker E**	
	P16	S22-15896-0	Hydraulic Stoker H**	
	P260	S22-15897-0	Hydraulic Stoker H**	
	P16	S22-15894-0	Rotary Servo R**	
	P260	S22-15895-0	Rotary Servo R**	
32		348-10016-0	Washer-Internal Shakeproof	2
33		345-10012-0	Washer-Flat	2
34		361-08200-0	Screw-SHC M6 x 25mm LG.	2
35		032-92506-0	Bearing-Hydro Balance Cam	1
36		032-92856-0	Piston Ring	1
37	P16	691-00906-0	O-Ring (For Item 38, 488-35041-0 ONLY)	2
38	P16	488-35041-0	Plug SAE-6 (For Item 7-1, 032-93729-0 & 032-93730-0 ONLY)	2
	P260	447-01004-2	Plug With Gasket (For Item 7-1, 032-93732-0 & 032-93733-0 ONLY)	
39		032-91345-0	Bearing-Cam	1
40		032-91259-0	Slide Link	1
41		S22-17829-0	Piston With Dowel	1
42	P16	449-00021-0	Plug-SAE (For Item 7-1, 032-93729-0 & 032-93730-0 ONLY)	1
	P260	449-00611-0	Plug-ISO (For Item 7-1, 032-93732-0 & 032-93733-0 ONLY)	
43		033-71514-0	Key SAE (For Item 1, 032-91303-0 & 032-91394-0 ONLY)	1
		032-91429-0	Key ISO (For Item 1, 032-91319-0 & 032-91400-0 ONLY)	
		032-92246-0	Key DIN (For Item 1, 032-92224-0 & 032-92225-0 ONLY)	
44		316-50001-0	Screw-Flat HD Socket M5 x 16mm LG.	1
45	P16	691-00924-0	O-Ring (For Item 46, 488-35062-0 ONLY)	1
46	P16	488-35062-0	Plug SAE-24 (For Item 7-1, 032-93729-0 & 032-93730-0 ONLY)	1
	P260	447-00034-0	Plug With Gasket (For Item 7-1, 032-93732-0 & 032-93733-0 ONLY)	1
47		032-92430-0	Nameplate	1
48		320-10203-0	Screw-Drive	4
49	P16	S14-28136-0	Cover-Inlet (For Item 7-1, 032-93729-0 & 032-93730-0 ONLY)	1
	P260	S22-12822-0	Cover-Inlet (For Item 7-1, 032-93732-0 & 032-93733-0 ONLY)	
50	P16	S13-26133-0	Cover-Outlet (For Item 7-1, 032-93729-0 & 032-93730-0 ONLY)	1
	P260	S22-12823-0	Cover-Outlet (For Item 7-1, 032-93732-0 & 032-93733-0 ONLY)	
51		035-12747-0	Tag-Fill	1
52		035-14292-0	Tag-Inspection	1
53		671-00268-0	O-Ring	1
54	P16	691-00904-0	O-Ring (For Items 58, 488-35061-0 ONLY)	2
55		691-00914-0	O-Ring	1
56		488-35030	Plug-SAE-14	1
		S22-15943-0	Volume Indicator	
		S22-16711-0	Potentiometer – CW	
		S22-16712-0	Potentiometer – CCW	
		S22-17185-0	LVDT	
57		353-25079-0	Screw-Button HD. M5 x 1mm LG.	2
58	P16	488-35061-0	Plug-SAE-4 (For Item 7-1, 032-93729-0 & 032-93730-0 ONLY)	2
	P260	447-01004-2	Plug With Seal (For Item 7-1, 032-93732-0 & 032-93733-0 ONLY)	2
59		671-10033-0	Ring-Square ARP-033	1
60		671-10035-0	Ring-Square ARP-035	1
61		671-00010-0	O-Ring	2

Rear Adapters				
62		S22-15372-0	A – SAE 82-2 (A) Mtg. With SAE 16-4 (A) Coupling	1
		S22-12867-0	B – SAE 101-2 or SAE 101-4 (B) Mtg. With SAE 22-4 (B) Coupling	
		S22-12869-0	C – SAE 127-2 or SAE 127-4 (C) Mtg. With SAE 32-4 (C) Coupling	
		S22-12870-0	D – SAE 152-4 (D) Mtg. With SAE 44-4 (D) Coupling	
		S22-12871-0	E – SAE 164-4 (E) Mtg. With SAE 44-4 (D) Coupling	
		S22-15809-0	G – SAE 82-2 (A) Mtg. With SAE 22-4 (B) Coupling	
		S22-15933-0	L – ISO 3019/2-180B4HW Mtg. With DIN 5480 40-18 Coupling	
		S22-18140-0	M – Cover-Port Block Blanking	
		S22-12920-0	N – SAE 127-2 or SAE 127-4 (C) Mtg. With SAE 38-4 (C-C) Coupling	
		S22-15934-0	S – ISO 3019/2-180B4HW Mtg. With DIN 5480 50-24 Coupling	
		S22-15740-0	T – ISO 3019/2-180B4HW Mtg. With ISO 3019/2-K40N Coupling	
		S22-15570-0	U – ISO 3019/2-180B4HW Mtg. With ISO 3019/2-K50N Coupling	
		S22-12868-0	Q – SAE 101-2 or SAE 101-4 (B) Mtg. With SAE 25-4 (B-B) Coupling	
		S22-12876-0	V – ISO 3019/2-250B4HW Mtg. With ISO 3019/2-K50N Coupling	
		S22-12875-0	W – ISO 3019/2-200B4HW Mtg. With ISO 3019/2-K50N Coupling	
		S22-12874-0	X – ISO 3019/2-160B4HW Mtg. With ISO 3019/2-K40N Coupling	
		S22-12873-0	Y – ISO 3019/2-125B4HW Mtg. With ISO 3019/2-K32N Coupling	
		S2-12872-0	Z – ISO 3019/2-100B4HW Mtg. With ISO 3019/2-K25N Coupling	
63		488-35046-0	Plug-SAE-2	4
64		691-00902-0	O-Ring	4
65		034-59555-0	Cover-SAE-A Shipping (For Item 62, A & G)	1
		031-59564-0	Cover-SAE-B Shipping (For Item 62, B & Q)	
		031-57252-0	Cover-SAE-C Shipping (For Item 62, C & N)	
		031-57250-0	Cover-SAE-D Shipping (For Item 62, D)	
		032-91405-0	Cover-SAE-E Shipping (For Item 62, E & V)	
		032-92163-0	Cover-ISO 180 Shipping (For Item 62, L, S, T & U)	
		032-91406-0	Cover-ISO 200 Shipping (For Item 62, W)	
		032-91407-0	Cover-ISO 160 Shipping (For Item 62, X)	
		032-91408-0	Cover-ISO 125 Shipping (For Item 62, Y)	
		032-91409-0	Cover-ISO 100 Shipping (For Item 62, Z)	
66		306-16120-0	Screw-HHC 3/8-16 x .75 LG. (For Item 62, A, B & G)	2
		306-24160-0	Screw-HHC 5/8-11 x 1.00 LG. (For Item 62, C & N)	2
		306-26160-0	Screw-HHC 3/4-10 x 1.00 LG. (For Item 62, D & E)	2
		363-14212-8	Screw-HHC M16 x 25mm LG. (For Item 62, L, S, T, U & X)	4
		363-16210-8	Screw-HHC M20 x 25mm LG. (For Item 62, M)	4
		306-20120-0	Screw-HHC 1/2-13 x .75 LG. (For Item 62, Q)	2
		363-18210-8	Screw-HHC M24 x 25mm LG. (For Item 62, V & W)	2
		363-12193-0	Screw-HHC M12 x 20mm LG. (For Item 62, Y)	2
		363-11120-8	Screw-HHC M10 x 12mm LG. (For Item 62, Z)	2

Premier pumps		Model number sheet											
Example model code:		Revised 5/10/16											
	P	16	H	-02	R	1	*	-C	0	0	-C	0	
Pump	P												
Displacement													
4.9 cu.in./rev.		05											
80.3 cc/rev.		080											
6.7 cu.in./rev.		07											
109.8 cc/rev.		110											
8.6 cu.in./rev.		09											
140.9 cc/rev.		140											
12.2 cu.in./rev.		12											
200.0 cc/rev.		200											
16.0 cu.in./rev.		16											
262.2 cc/rev.		260											
Style													
High speed (>1800 RPM)(P16, P260, P12, P200, P09 & P140 only)		H											
Low Speed (= < 1800 rpm)(P16, P260, P12, P200, P09 & P140 only)		Q											
High Speed Stand-By Option (>1800 rpm)(P16, P260, P12, P200, P09 & P140 only)		M											
Low Speed Stand-By Option (= < 1800 rpm)(P16, P260, P12, P200, P09 & P140 only)		N											
P07, P110, P05 & P080		leave blank											
Shaft													
Keyed - SAE or ISO		2											
Splined - SAE or ISO		3											
Splined - SAE high torque (P16 only)		5											
Keyed - DIN (metric pumps only) (DIN 40mm for sizes 080 & 110, DIN 50mm for sizes 140 & 200)													
DIN 60mm for size 260)		6											
Splined - DIN (metric pumps only) (DIN 40mm for sizes 080 & 110, DIN 50mm for sizes 140 & 200)													
DIN 60mm for size 260)		7											
Keyed - DIN (DIN 60mm for size 200 only)		8											
Splined - DIN (DIN 60mm for size 200 only)		9											
Rotation													
Clockwise		R											
Counter-clockwise		L											
Seals													
Nitrile (Buna-N)		1											
EPR (pump will be unpainted unless otherwise specified)*		4											
Fluorocarbon (Viton)		5											
Design letter (assigned by manufacturer)							*						
Primary controls													
Compensator								-C					
Load sensing compensator (50 PSI pressure drop)								-L					
Load sensing compensator (200 PSI pressure drop)								-M					
Rotary servo								-R					
Hydraulic servo								-H					
Electro-hydraulic servo**								-E					
Low torque limiter								-J					
High torque limiter								-K					
Load sensing (L) + low torque limiter (J)								-V					
Load sensing (L) + high torque limiter (K)								-W					
Load sensing (M) + low torque limiter (J)								-Y					
Load sensing (M) + high torque limiter (K)								-Z					
Primary control options													
Max. volume screw without indicator		1											
Handwheel max. volume control without indicator (not available w/ R, H & E primary controls)		2											
Max. volume screw with LVDT**		4											
Max. volume screw with mechanical cam angle indicator		5											
Handwheel max. volume control with LVDT (not available w/ R, H & E primary controls)**		7											
Handwheel max. volume control with mechanical cam angle indicator (not available w/ R, H & E primary controls)		8											
Secondary controls													
None		0											
Compensator override (for E, H & R primary controls only)		P											
Low torque limiter override (for E, H & R primary controls only)		J											
High torque limiter override (for E, H & R primary controls only)		K											
External drive													
None		-0											
Rear blanking plate		-M											
SAE-A (SAE 82-2) with SAE-A (SAE 16-4) coupling		-A											
SAE-A (SAE 82-2) with SAE-B (SAE 22-4) coupling		-G											
SAE-B (SAE 101-2 & SAE 101-4) with SAE-B (SAE 22-4) coupling		-B											
SAE-B (SAE 101-2 & SAE 101-4) with SAE-BB (SAE 25-4) coupling		-Q											
SAE-C (SAE 127-2 & SAE 127-4) with SAE-C (SAE 32-4) coupling		-C											
SAE-C (SAE 127-2 & SAE 127-4) with SAE-CC (SAE 38-4) coupling		-N											
SAE-D (SAE 152-2 & SAE 152-4) with SAE-D & SAE-E (SAE 44-4) coupling		-D											
SAE-E (SAE 165-2 & SAE 165-4) with SAE-D & SAE-E (SAE 44-4) coupling (P12/200 and P16/260 only)		-E											
ISO 180 B4HW Flange, K40N coupling		-T											
ISO 180 B4HW Flange, K50N coupling		-U											
ISO 180 B4HW Flange, DIN 40-18 coupling (P16/260 only)		-L											
ISO 180 B4HW Flange, DIN 50-24 coupling (P16/260 only)		-S											
ISO 224 B4HW Flange, K50N coupling (P12/200 and P16/260 only)		-R											
ISO 250 B4HW Flange, K50N coupling (P16/260 only)		-V											
ISO 200 B4HW Flange, K50N coupling (P12/200 and P16/260 only)		-W											
ISO 160 B4HW Flange, K40N coupling		-X											
ISO 125 B4HW Flange, K32N coupling		-Y											
ISO 100 B4HW Flange, K25N coupling		-Z											
External mounting													
No external pump mounted		0											
External pump mounted (requires special modification "-M2")(must be separately specified)		1											
Special modification													
No paint*		-NP											
Painted black		-PB											
ATEX APPROVED PUMP		-EX											
Other special modification (examples: bronze caged barrel bearing for low viscosity fluids, mechanical shaft seal, hydrostatic cam, tandem pumps, etc.)*		-M2											
Allowable controls**													
C10, C20, C40, C50, C70, C80, E10, E40, E50, E1P, E4P, E5P, E1J, E4J, E5J, E1K, E4K, E5K, H10, H40, H50, H1P, H4P, H5P, H1J, H4J, H5J, H1K, H4K, H5K, J10, J20, J40, J50, J70, J80, K10, K20, K40, K50, K70, K80, L10, L20, L40, L50, L70, L80, M10, M20, M40, M50, M70, M80, R10, R40, R50, R1P, R4P, R5P, R1J, R4J, R5J, R1K, R4K, R5K, V10, V20, V40, V50, V70, V80, W10, W20, W40, W50, W70, W80, Y10, Y20, Y40, Y50, Y70, Y80, Z10, Z20, Z40, Z50, Z70, Z80													

* ATEX NOTES:
THESE OPTIONS ARE NOT
APPROVED FOR ATEX
APPLICATIONS

**THE FOLLOWING
CONTROL OPTIONS ARE
NOT AVAILABLE FOR ATEX
94/9EC:
Electro-Hydraulic
Servo(E**), and use of
LVDT position feedback
(*4* or *7*)



North America

Industrial

USA

Chicago Region

Naperville, IL
Tel: (630) 964 0796

Great Lakes Region

Fairlawn, OH
Tel: (330) 670 2680

Northeast Region

Lebanon, NJ
Tel: (908) 236 4121

Pacific Region

Buena Park, CA
Tel: (714) 228 2509

Southern Region

Alpharetta, GA
Tel: (770) 619 9767

Canada

Milton, Ontario
Tel: (905) 693 3000

México

Toluca, Edo. de México
Tel: (52) 72 2275 4200

Mobile

USA

Global Mobile

Lincolnshire, IL
Tel: (847) 821 1500

Central Region

Lincolnshire, IL
Tel: (847) 821 1500

Eastern Region

North Canton, OH
Tel: (330) 284 3355

Midwest Region

Hiawatha, IA
Tel: (319) 393 1221

Southern Region

Aledo, TX
Tel: (817) 441 1794

Western Region

Buena Park, CA
Tel: (714) 228 2509

Canada

Milton, Ontario
Tel: (905) 693 3000

México

Apodaca, N.L.
Tel: (52) 81 8156 6000

Truck

USA

Eastern Region

Cleveland, OH
Tel: (440) 519 1125

Western Region

San Ramon, CA
Tel: (925) 735 9573

Canada

Milton, Ontario
Tel: (905) 693 3000

México

Apodaca, N.L.
Tel: (52) 81 8156 6000

Europe

Austria

Wiener Neustadt
Tel: (43) 2622 23501 0

Belgium

Nivelles
Tel: (32) 67 280 900

Czech Republic and Slovakia

Klecany
Tel: (420) 284 083 111

Denmark

Ballerup
Tel: (45) 4356 0400

Finland

Vantaa
Tel: (358) 20 753 2500

France

Contamine-sur-Arve
Tel: (33) 4 50 25 80 25

Germany

Kaarst
Tel: (49) 2131 4016 0

Greece

Athens
Tel: (30) 210 933 6450

Hungary

Budapest
Tel: (36) 1 220 4155

Ireland

County Dublin, Baldonnell
Tel: (353) 1 466 6370

Italy

Corsico, Milano
Tel: (39) 02 45 19 21

The Netherlands

Oldenzaal
Tel: (31) 541 585000

Norway

Ski
Tel: (47) 64 91 10 00

Poland

Warsaw
Tel: (48) 22 57 32400

Portugal

Leca da Palmeira
Tel: (351) 22 999 7360

Romania

Bucharest
Tel: (40) 21 252 1382

Russia

Moscow
Tel: (7) 495 580 9145

Slovenia

Novo Mesto
Tel: (386) 7 337 6650

Spain

Madrid
Tel: (34) 91 675 7300

Sweden

Spanga
Tel: (46) 8 597 95000

Ukraine

Kiev
Tel: (380) 44 494 2731

United Kingdom

Warwick,
Tel: (44) 1926 317878

Asia Pacific

Australia

Castle Hill
Tel: (61) 2 9634 7777

China

Beijing
Tel: (86) 10 6561 0520

Shanghai

Tel: (86) 21 5031 2525

Hong Kong

Tel: (852) 2428 8008

India

Mahape, Navi Mumbai
Tel: (91) 22 5613 7081

Korea

Seoul
Tel: (82) 2 559 0400

Malaysia

Subang Jaya
Tel: (60) 3 5638 1476

New Zealand

Mt. Wellington
Tel: (64) 9 574 1744

Japan

Tokyo
Tel: (81) 3 6408 3900

Singapore

Jurong Town
Tel: (65) 6 887 6300

Taiwan

Taipei
Tel: (886) 2 2298 8987

Thailand

Bangkok
Tel: (662) 717 8140

Middle East

United Arab Emirates

Abu Dhabi
Tel: (971) 2 678 8587

Latin America

Pan American Division

Miami, FL
Tel: (305) 470 8800

Argentina

Buenos Aires
Tel: (54) 33 2744 4129

Brazil

Cachoeirinha RS
Tel: (55) 51 3470 9144

Venezuela

Caracas
Tel: (58) 212 238 5422

Africa

South Africa

Kempton Park
Tel: (27) 11 961 0700

