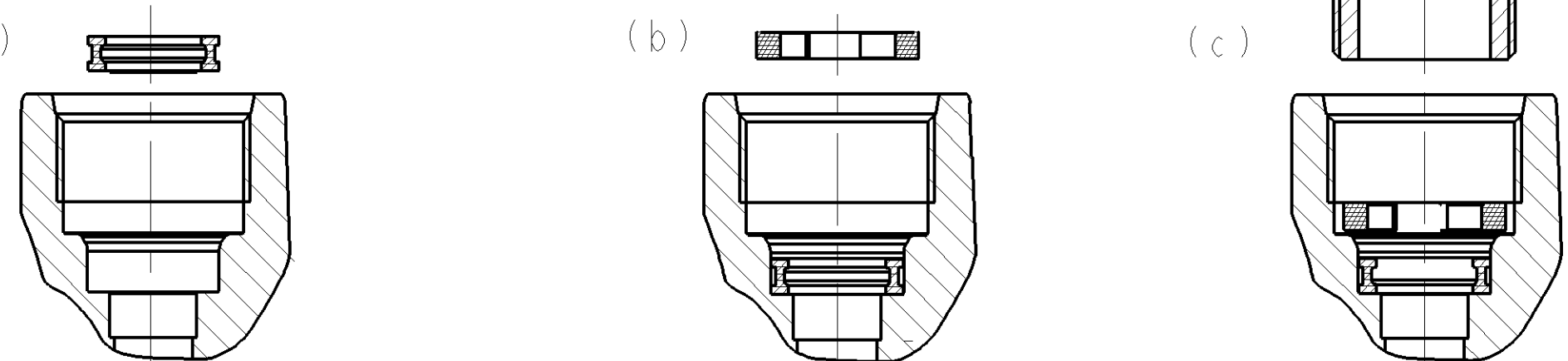
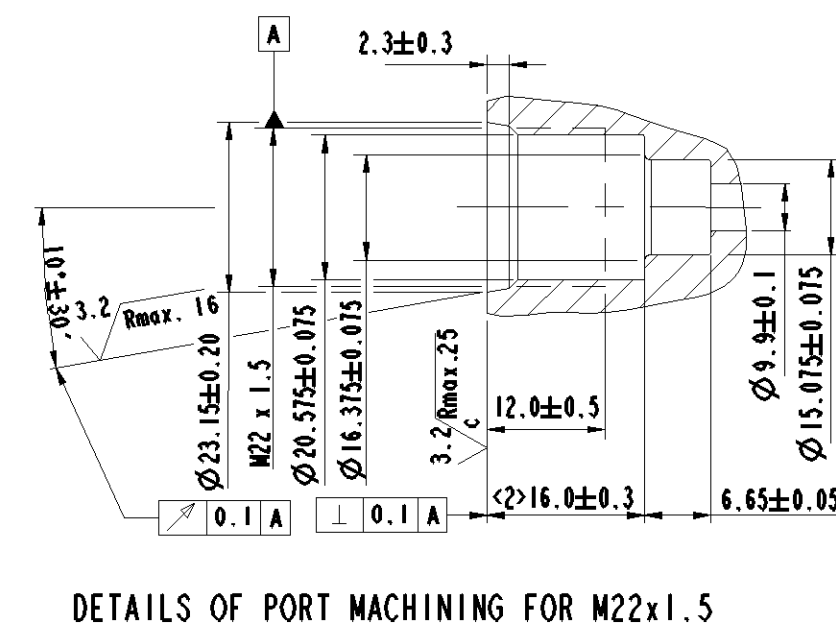
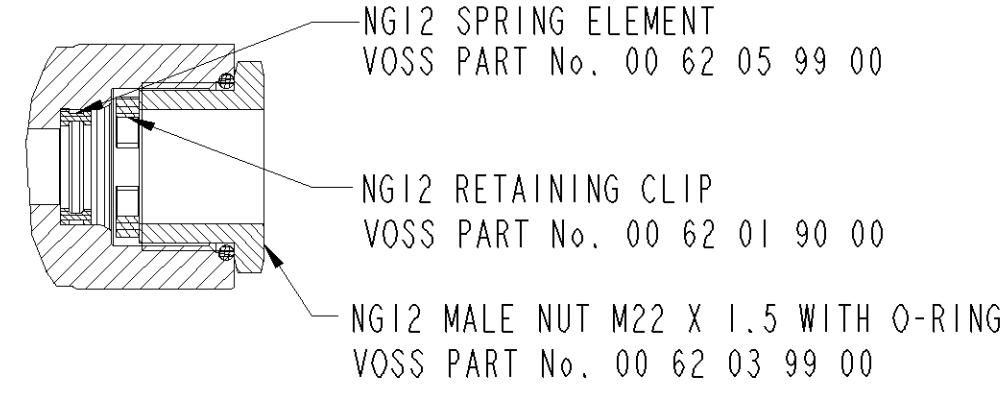


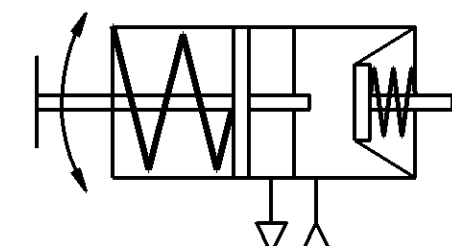
## ASSEMBLY PROCEDURE



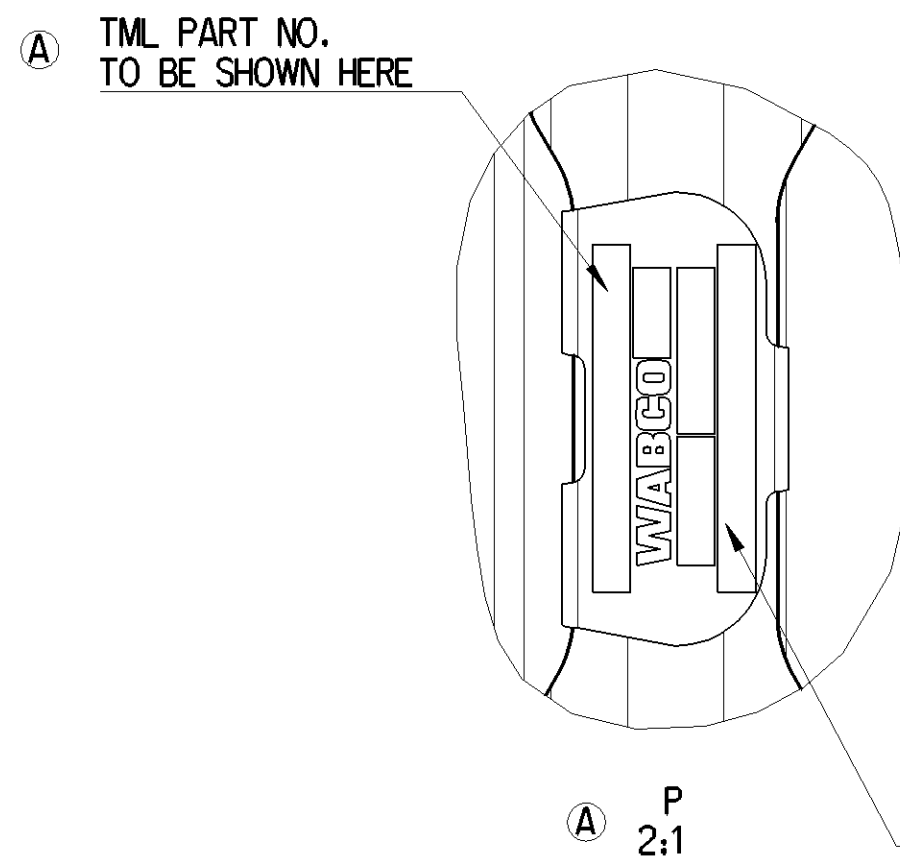
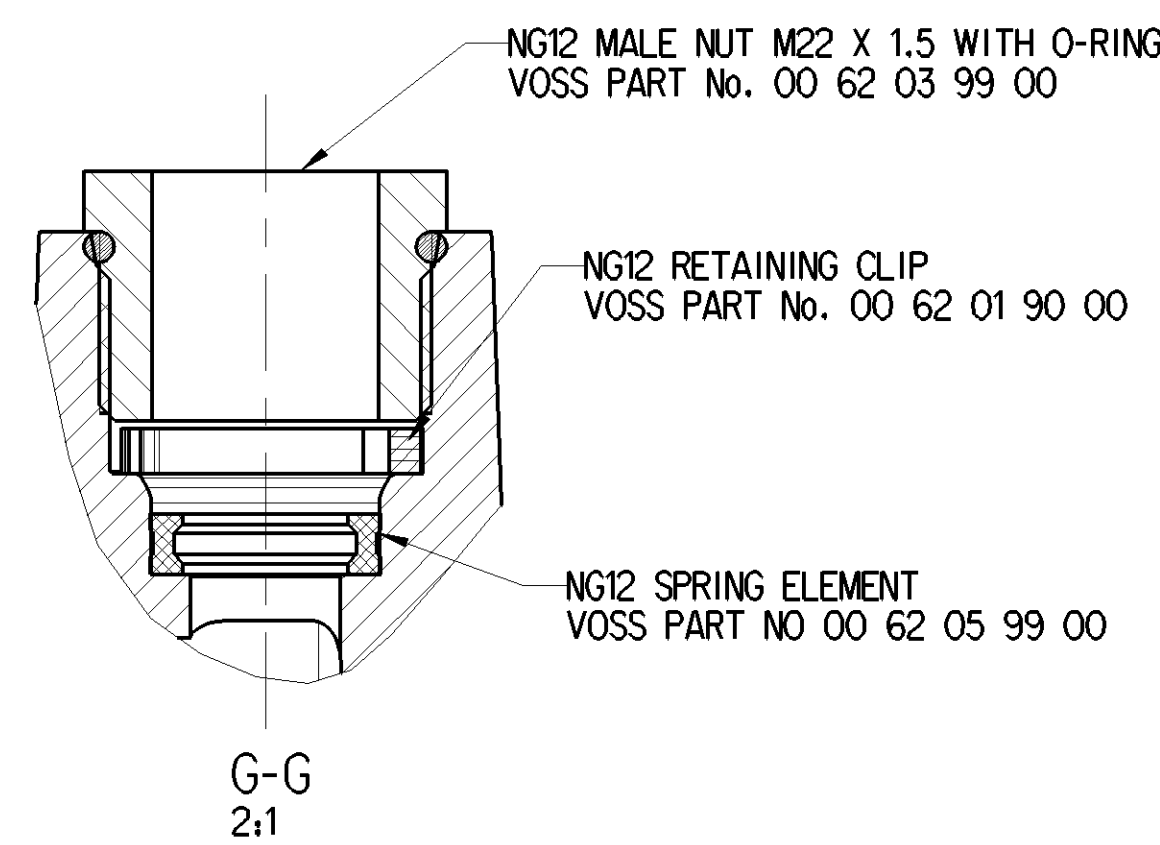
|                                                                                                      |                                                                                            |                                                                                                                                          |
|------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|
| THE SPRING ELEMENT IS INSERTED INTO THE CHAMBER UNDER THE THREAD ROOT OF THE CONNECTION BORE (a) AND | THE RETAINING CLIP IS INTRODUCED SO THAT IT RESTS FLAT ON THE (b) THREAD ROOT (b) AND (c). | THE MALE FITTING PRE-ASSEMBLED WITH THE PRE-GREASED O-RING TO SEAL THE THREAD IS SCREWED BY HAND INTO THE TAPPED BORE (c) AND TIGHTENED. |
|------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|



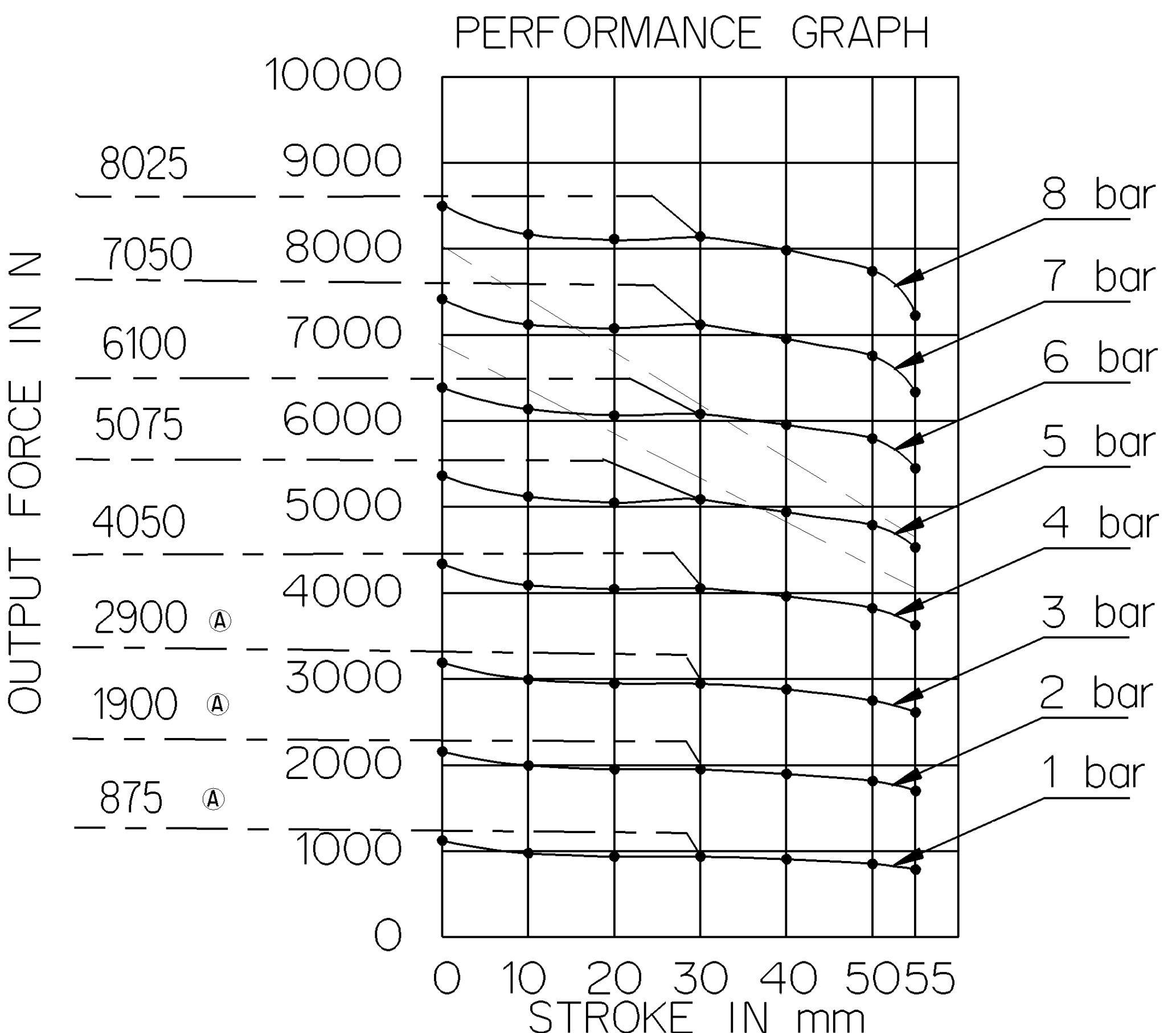
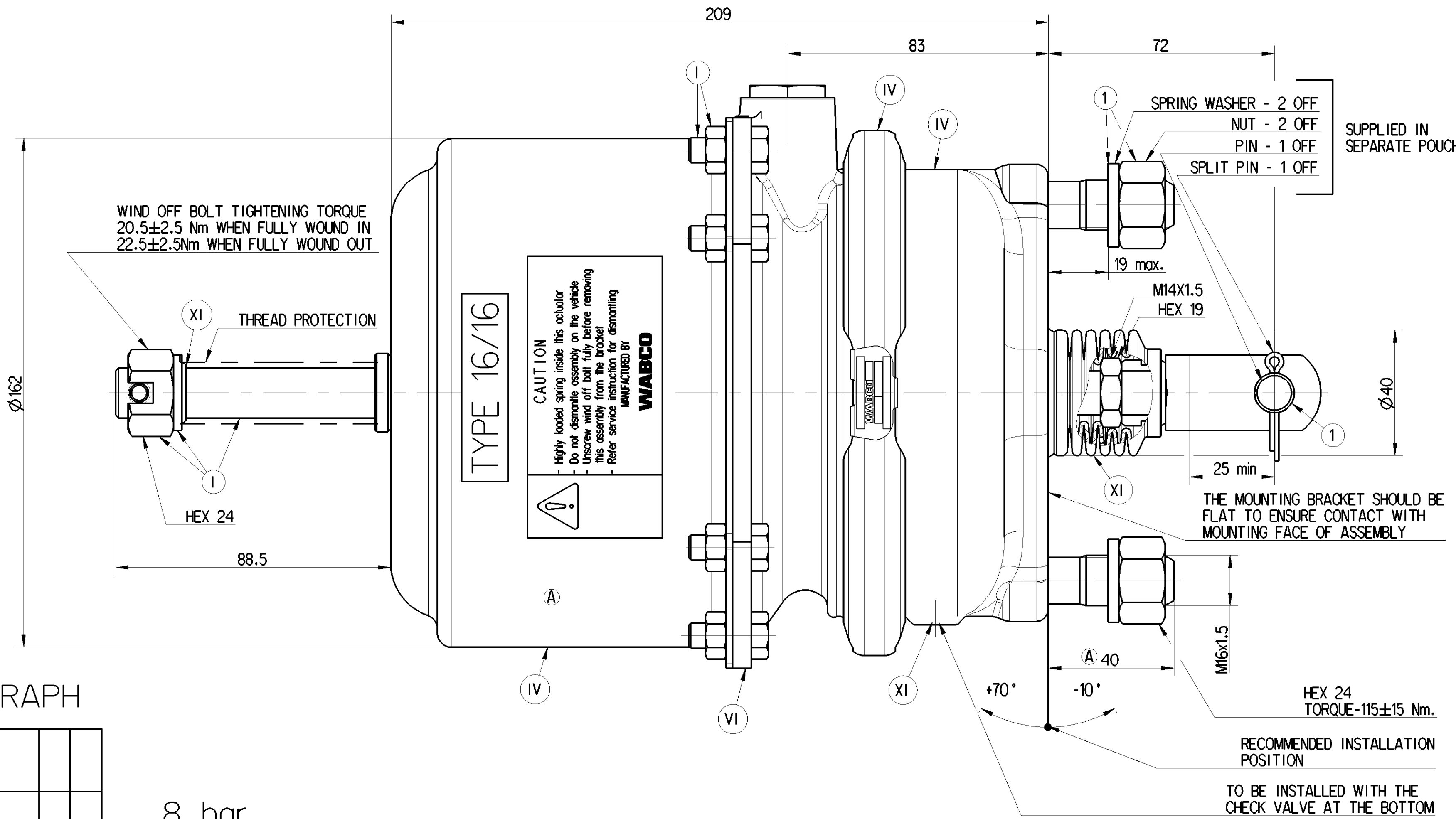
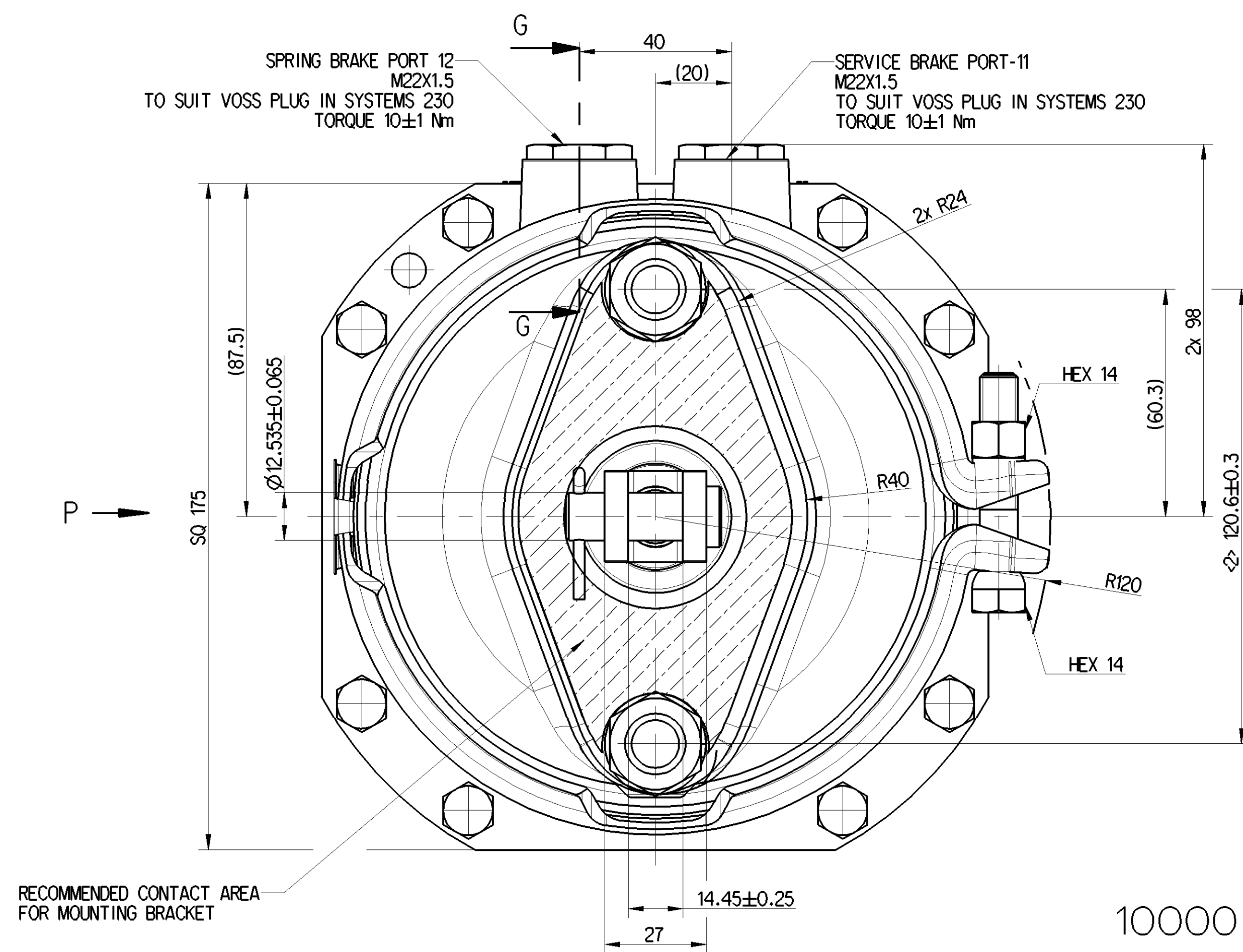
### DETAILS OF PORT MACHINING FOR M22x1.5



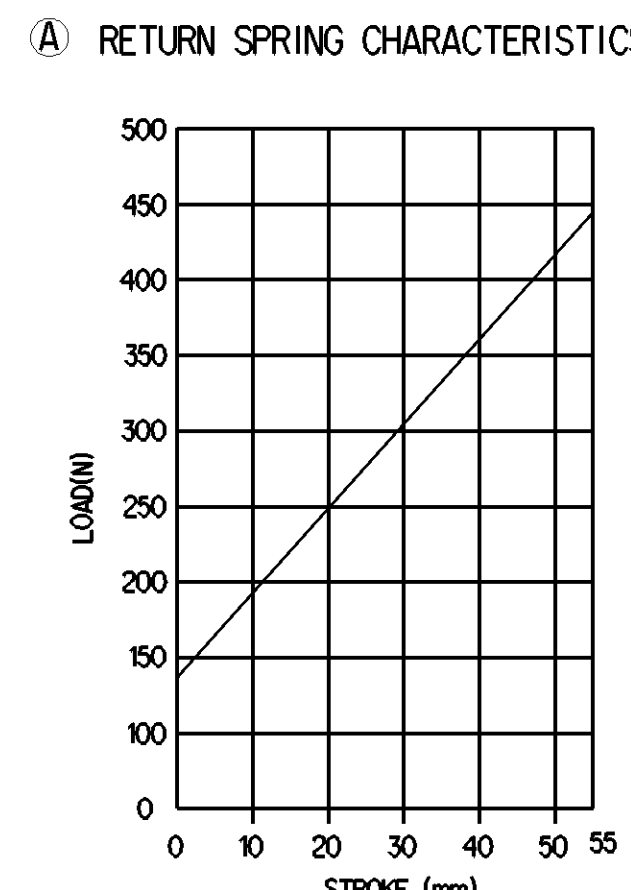
### CIRCUIT DIAGRAM



MASSY PART NO. AND BATCH NO.  
AS SHOWN HERE



——— SERVICE SIDE  
 - - - SPRING SIDE  
 TOLERANCE BAND  $\pm 5\%$  FOR STROKE 10 mm TO 40 mm



① 1 SEAL AND BEARING DESIGN CHANGED

▲ KEY INSTRUCTION

| A) REPAIR KIT MSP 25/123 (1 OFF): TML PART No. 2867 4370 99 0IN |                  |              |                      |     |
|-----------------------------------------------------------------|------------------|--------------|----------------------|-----|
| SLNo                                                            | TML PART No.     | WIN PART No. | DESCRIPTION          | QTY |
| 1                                                               | 5042 4370 67 0IN | 8920100094   | KNURL PIN            | 1   |
| 2                                                               | 2752 4370 92 0IN | 8951800034   | SPECIAL WASHER       | 1   |
| 3                                                               | 2867 4370 33 0IN | 9253040104   | BEARING              | 1   |
| 4                                                               | 2867 4370 77 0IN | 9253041024   | INTEGRAL SEAL        | 1   |
| 5                                                               | 5042 4370 77 04N | 8979802084   | SEALING RING         | 1   |
| 6                                                               | 2707 4230 77 02N | M2750040     | GAITER               | 1   |
| 7                                                               | 2707 4230 90 0IN | M275530      | CHECK VALVE          | 1   |
| 8                                                               | 5042 4370 77 02N | 8971200154   | DIAPHRAGM            | 1   |
| 9                                                               | 2752 4370 77 02N | 897500834    | LIPSEAL              | 1   |
| 10                                                              | 5042 4370 77 05N | 8979801734   | SEALING RING         | 2   |
| 11                                                              | 5042 4370 77 05N | 8951000214   | SPECIAL WASHER       | 2   |
| 12                                                              | 5008 4370 77 0IN | 8979802014   | O-RING               | 1   |
| 13                                                              | 2846 4370 77 05N | 9259051404   | WALVE SEAT           | 1   |
| 14                                                              | 2846 4370 87 0IN | M339990      | SPRING               | 1   |
| 15                                                              | 2846 4370 87 03N | 9254912514   | DIAPHRAGM            | 1   |
| 16                                                              | 2846 4370 77 04N | 9254912624   | RING                 | 1   |
| 17                                                              | 2190 4370 87 0IN | 9259206554   | DUST SEAL            | 1   |
| 18                                                              | 2153 4230 32 1IN | M270130      | BEARING              | 1   |
| 19                                                              | 2642 4370 67 0IN | 895100274    | SPILT PIN            | 1   |
| 20                                                              | 5042 4370 90 0IN | 8995000074   | LAVAGE               | 1   |
| 21                                                              | 2632 4370 99 14N | M91990       | GREASE SACHET        | 4   |
| REPAIR KIT MSP 3/130 (2 OFF): TML PART No.5042 4399 01 02N      |                  |              |                      |     |
| SLNo                                                            | TML PART No.     | WIN PART No. | DESCRIPTION          | QTY |
| 22                                                              | 5042 4370 80 0IN | 8932204272   | PRESSURE NOREW       | 1   |
| 23                                                              | 2846 3399 87 04N | 8952266974   | RETAINER NG-12       | 1   |
| 24                                                              | 5042 4370 87 0IN | 8953700044   | SPRING ELEMENT NG-12 | 1   |
| 25                                                              | 2846 3399 53 22N | 8979801534   | O-RING               | 1   |
| 26                                                              | 2846 3399 53 22N | 8979801464   | O-RING               | 1   |
| REPAIR KIT 30000324 (MSP 3/124) CONSISTS OF ITEM SHOWN          |                  |              |                      |     |
| TML PART No. 2641 4370 01 65N                                   |                  |              |                      |     |
| SLNo                                                            | TML PART No.     | WIN PART No. | DESCRIPTION          | QTY |
| 23                                                              | 2846 3399 87 04N | 8952266974   | RETAINER NG-12       | 1   |
| 24                                                              | 5042 4370 87 0IN | 8953700044   | SPRING ELEMENT NG-12 | 1   |
| 25                                                              | 2846 3399 53 23N | 8979801534   | O-RING               | 1   |
| 26                                                              | 2846 3399 53 22N | 8979801464   | O-RING               | 1   |
| 27                                                              | 2809 4370 78 07N | 8979803224   | O RING               | 1   |
| REPAIR KIT REQUIRED IS MAXIMUM 2 IN QTY                         |                  |              |                      |     |

| Sl. No | NOTES                                                                                                                                    |
|--------|------------------------------------------------------------------------------------------------------------------------------------------|
| 1      | PRODUCT FUNCTION AND RELIABILITY                                                                                                         |
| 1.1    | WORKING MEDIUM                                                                                                                           |
| 1.2    | PORT 11, SERVICE BRAKE SYSTEM, WORKING PRESSURE                                                                                          |
| 1.3    | PORT 12, SPRING BRAKE CYLINDER, WORKING PRESSURE                                                                                         |
| 1.4    | PORT 11, MAXIMUM WORKING PRESSURE(TEMPORARILY)                                                                                           |
| 1.5    | PORT 12, MAXIMUM WORKING PRESSURE(TEMPORARILY)                                                                                           |
|        | UNIT DRAWN WITH PRESSURE APPLIED AT PORT 12                                                                                              |
| 1.6    | SERVICE BRAKE STROKE                                                                                                                     |
| 1.7    | INNER DIAMETER OF SERVICE BRAKE                                                                                                          |
| 1.8    | SPRING BRAKE STROKE                                                                                                                      |
| 1.9    | INNER DIAMETER OF SPRING CHAMBER                                                                                                         |
| 1.10   | HOLD OFF PRESSURE                                                                                                                        |
| 1.11   | RELEASE PRESSURE                                                                                                                         |
| 1.12   | THERMAL RANGE OF APPLICATION                                                                                                             |
| 1.13   | PRESSURE AT WHICH PUSH ROD STARTS MOVING<br>(LIFT-OFF PRESSURE AT 0 mm STROKE)                                                           |
| 1.14   | PRESSURE AT WHICH PUSH ROD IS FULLY OUT<br>(LIFT-OFF PRESSURE AT 57 mm STROKE)                                                           |
| 1.15   | ARTICULATION FOR PUSH ROD IN ANY DIRECTION<br>(AT ZERO STROKE)                                                                           |
| 1.16   | ARTICULATION FOR PUSH ROD IN ANY DIRECTION<br>(AT FULL STROKE)                                                                           |
| 1.17   | CORROSION RESISTANCE                                                                                                                     |
| 2      | QUALITY COMPLIANCE TESTS ARE CONDUCTED REGULARLY<br>AS PER CLAUSE NO. 16 OF PS925304010                                                  |
| 3      | SERVICE LIFE TO FIRST OVERHAUL, IF FITTED AS PER RECOMMENDED LAYOUT<br>3 YEARS/3,00,000 KM WHICHEVER IS EARLIER FOR CITY BUS APPLICATION |
| 4      | ASSEMBLY WILL BE SUPPLIED WITH SPRING SIDE IN FULLY WOUND OUT<br>CONDITION SPRING SIDE TO BE WOUND IN AFTER INSTALLATION                 |
| 5      | OPEN PORTS ARE FITTED WITH CLOSURE PLUGS FOR STORAGE<br>AND TRANSIT PURPOSE                                                              |

[illegible]

|      |                 |                    |
|------|-----------------|--------------------|
| XVII | STEEL           | NO TREATMENT       |
| XVI  | CAST IRON       | PLATED             |
| XV   | CAST IRON       | NO TREATMENT       |
| XIV  | STEEL           | ZINC IRON PLATED   |
| XIII | ZINC ALLOY      | ANODISED           |
| XII  | PLASTIC         | NO TREATMENT       |
| XI   | RUBBER          | NO TREATMENT       |
| X    | STAINLESS STEEL | NO TREATMENT       |
| IX   | BRASS           | NO TREATMENT       |
| VIII | ZINC ALLOY      | CHROMATED          |
| VII  | ALUMINUM ALLOY  | ANODISED           |
| VI   | ALUMINUM ALLOY  | CHROMATED          |
| V    | CAST IRON       | PAINTED            |
| IV   | STEEL           | POWDER COATED      |
| III  | STEEL           | PAINTED            |
| II   | STEEL           | PHOSPHATED         |
| I    | STEEL           | ZINC PLATED        |
| PART | MATERIAL        | SURFACE PROTECTION |