

Fire Test Report

API Standard 6FB, Fourth Edition, 2019

Performed for

GPT Industries

www.GPTIndustries.com



**24 inch Class 300# Evolution® Isolation Gasket
with Reinforced PTFE ID Seal and
Fire-Safe Inconel 718 C-Ring
with DH SS Washers and G-11 Sleeves
Product Code: Evolution**

Project Number: 223094

Test Date: July 19, 2023



Performed by

YARMOUTH RESEARCH AND TECHNOLOGY, LLC

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Yarmouth Research and Technology, LLC

API 6FB FIRE TEST REPORT

Customer: GPT Industries

Project Number: 223094

Date: 7/19/2023

Product Description: 24 inch Class 300# Evolution Isolation Gasket with Reinforced PTFE ID Seal and Fire-Safe Inconel 718 C-Ring with DH SS Washers and G-11 Sleeves

Product Code: Evolution

Specification: API 6FB, Fourth Edition, 2019

Non-Bending, Type 1 Test

Gasket Thickness: 0.125 inches

Seal Area OD: 25.10 Seal Area ID: 24.85 inches

Mean Seal Diameter: 24.98 inches

Mean Circumference: 78.461 inches

Allowable Leakage: 78.5 ml/min

Nominal Test Pressure: 555 psig

Nut Torque: 1400 ft-lb

YRT Technician: Dean Frank

Version of YRT's FIRE-Control 6FB Software: B

Equipment Confirmed to be in Calibration to NIST Standards: Yes

Burn and Cool Down Test

Burn Start Time: 8:56:00

Burn / Cooldown Duration: 60 minutes

Average Pressure During Burn/Cooldown: 574 psig

Leak Rate During Burn/Cool Down: 0 ml/min

Allowable External Leak Rate: 78.5 ml/min

Amount of Time of Avg. Cal. Block > 1200 deg.: 20.3 minutes

Were Test Conditions Within Compliance? Yes

Was the Leakage Below the Allowable? Yes

Depressurization - Repressurization Test

Average Pressure During Test: 537 psig

Gasket Leak Rate: 0 ml/min

Allowable External Leak Rate: 78.5 ml/min

Was the Leakage Below the Allowable? Yes

Does the Gasket Pass or Fail API 6FB? PASS

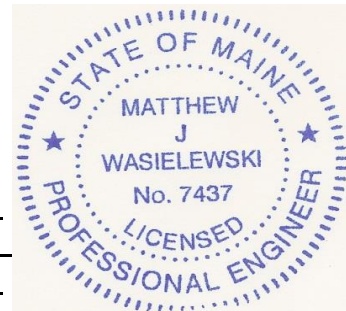
Certified By:



Matthew J. Wasielewski, PE

President and Manager

Yarmouth Research and Technology, LLC



Temperature verses Time Chart

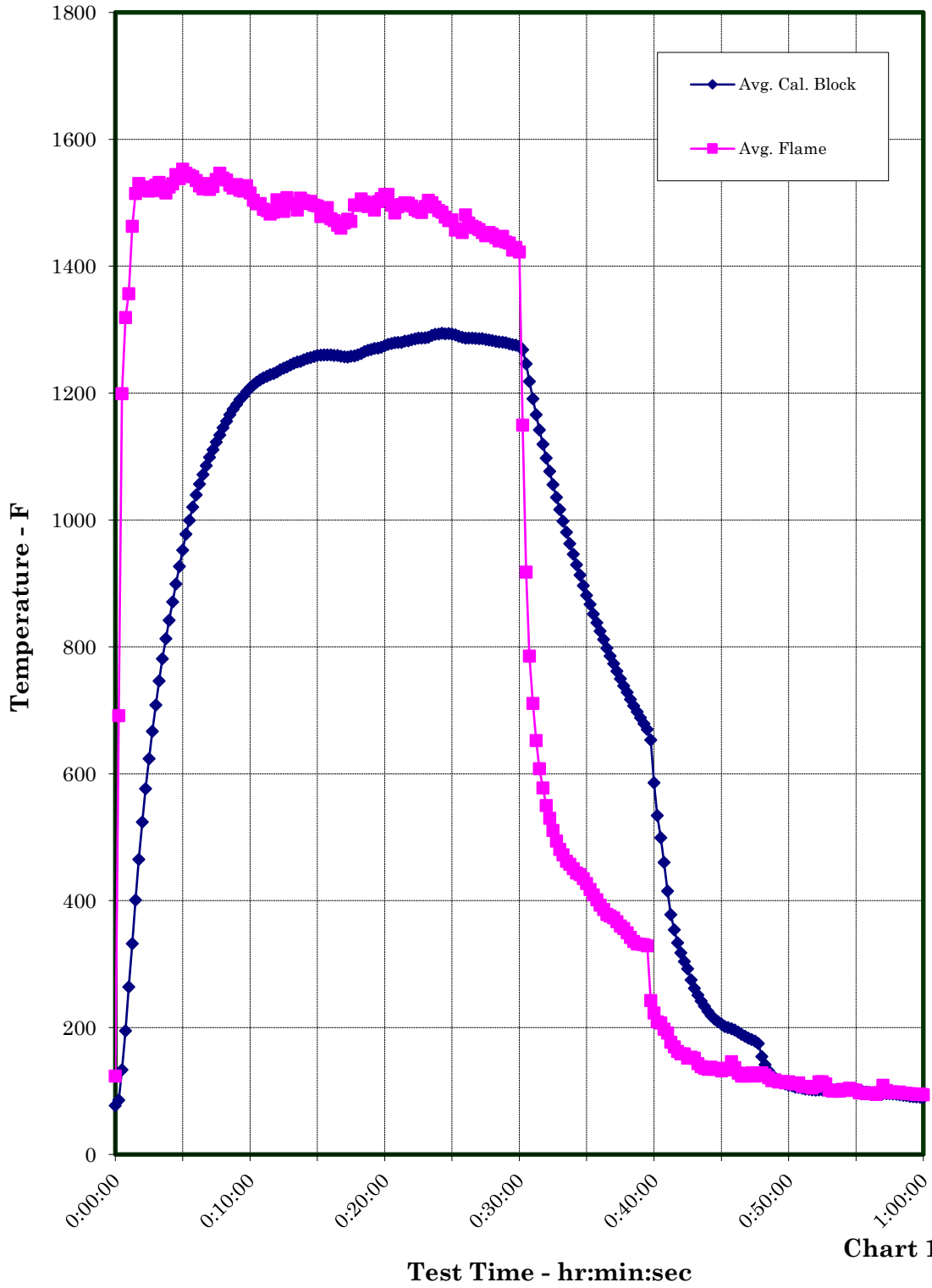
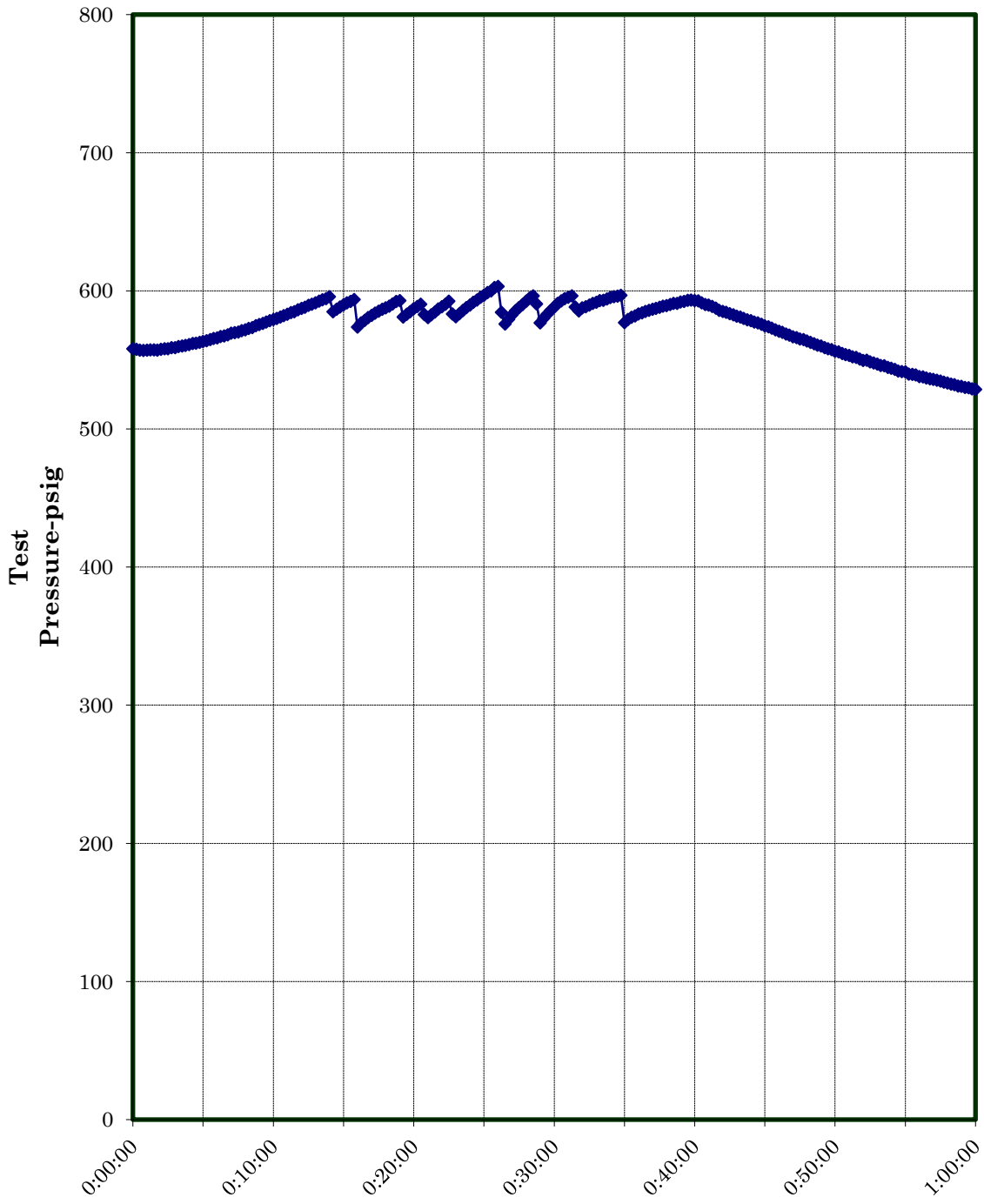


Chart 1

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Pressure verses Time Chart



Test Time - hr:min:sec

Chart 2

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Gasket Kit Prior to Test



Gasket Prior to Test

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Gasket Prior to Test



Sleeves Prior to Test

Yarmouth Research and Technology, LLC



Washers Prior to Test



Test Setup Prior to Burn



Gasket During Burn



Post-Test Gasket

Yarmouth Research and Technology, LLC

API 6FB FIRE TEST REPORT

Customer: GPT Industries

Date: 7/19/2023

24 inch Class 300# Evolution Isolation Gasket with Reinforced PTFE ID Seal and Fire-Safe Inconel 718 C-Ring with

Product Code: DH SS Washers and G-11 Sleeves

Project Number: 223094

Fire Test Raw Data

| Time | Pressure (psig) | Water Volume (mls) | Cal. 1 Block Temp - F | Cal. 2 Block Temp - F | Cal. 3 Block Temp - F | Cal. 4 Block Temp - F | Average Block Temp - F | Flame 1 Temp - F | Flame 2 Temp - F | Flame 3 Temp - F | Flame 4 Temp - F | Average Flame Temp - F |
|---------|-----------------|--------------------|-----------------------|-----------------------|-----------------------|-----------------------|------------------------|------------------|------------------|------------------|------------------|------------------------|
| 8:56:00 | 558 | 22660 | 79 | 77 | 75 | 77 | 77 | 106 | 111 | 169 | 108 | 124 |
| 8:56:15 | 558 | 22689 | 88 | 86 | 82 | 86 | 86 | 685 | 513 | 829 | 739 | 692 |
| 8:56:30 | 557 | 22612 | 131 | 138 | 118 | 147 | 134 | 1164 | 831 | 1319 | 1483 | 1199 |
| 8:56:45 | 557 | 22579 | 181 | 199 | 176 | 223 | 195 | 1285 | 919 | 1434 | 1638 | 1319 |
| 8:57:00 | 557 | 22612 | 232 | 261 | 259 | 304 | 264 | 1341 | 959 | 1463 | 1663 | 1357 |
| 8:57:15 | 557 | 22572 | 282 | 324 | 345 | 379 | 333 | 1384 | 1386 | 1477 | 1605 | 1463 |
| 8:57:30 | 557 | 22654 | 334 | 388 | 432 | 450 | 401 | 1402 | 1548 | 1479 | 1630 | 1515 |
| 8:57:45 | 557 | 22631 | 387 | 453 | 509 | 511 | 465 | 1418 | 1578 | 1492 | 1634 | 1531 |
| 8:58:00 | 558 | 22646 | 435 | 513 | 579 | 568 | 524 | 1391 | 1578 | 1499 | 1612 | 1520 |
| 8:58:15 | 558 | 22692 | 480 | 568 | 640 | 617 | 576 | 1395 | 1584 | 1504 | 1616 | 1525 |
| 8:58:30 | 558 | 22748 | 520 | 621 | 693 | 662 | 624 | 1377 | 1584 | 1503 | 1609 | 1518 |
| 8:58:45 | 559 | 22708 | 556 | 669 | 739 | 703 | 667 | 1386 | 1582 | 1494 | 1620 | 1521 |
| 8:59:00 | 559 | 22801 | 594 | 716 | 781 | 743 | 709 | 1389 | 1585 | 1501 | 1636 | 1528 |
| 8:59:15 | 560 | 22791 | 628 | 759 | 820 | 779 | 747 | 1384 | 1591 | 1506 | 1647 | 1532 |
| 8:59:30 | 560 | 22812 | 657 | 799 | 856 | 813 | 781 | 1382 | 1589 | 1497 | 1607 | 1519 |
| 8:59:45 | 561 | 22872 | 685 | 835 | 889 | 842 | 813 | 1346 | 1603 | 1494 | 1618 | 1515 |
| 9:00:00 | 561 | 22861 | 709 | 869 | 921 | 869 | 842 | 1351 | 1611 | 1486 | 1652 | 1525 |
| 9:00:15 | 562 | 22861 | 732 | 901 | 954 | 896 | 871 | 1362 | 1609 | 1483 | 1665 | 1530 |
| 9:00:30 | 562 | 22983 | 757 | 932 | 982 | 925 | 899 | 1420 | 1598 | 1476 | 1684 | 1545 |
| 9:00:45 | 563 | 22873 | 786 | 961 | 1009 | 952 | 927 | 1405 | 1596 | 1465 | 1686 | 1538 |
| 9:01:00 | 563 | 22986 | 811 | 986 | 1036 | 977 | 953 | 1440 | 1594 | 1470 | 1708 | 1553 |
| 9:01:15 | 564 | 23035 | 837 | 1011 | 1062 | 1000 | 978 | 1431 | 1598 | 1461 | 1697 | 1547 |
| 9:01:30 | 565 | 23041 | 858 | 1033 | 1085 | 1022 | 1000 | 1427 | 1593 | 1461 | 1692 | 1543 |
| 9:01:45 | 566 | 23163 | 878 | 1054 | 1105 | 1044 | 1020 | 1409 | 1594 | 1461 | 1701 | 1541 |
| 9:02:00 | 566 | 23133 | 896 | 1074 | 1125 | 1063 | 1040 | 1400 | 1594 | 1454 | 1693 | 1535 |
| 9:02:15 | 567 | 23163 | 912 | 1092 | 1143 | 1080 | 1057 | 1384 | 1589 | 1458 | 1675 | 1527 |
| 9:02:30 | 567 | 23175 | 925 | 1108 | 1159 | 1094 | 1072 | 1380 | 1598 | 1432 | 1677 | 1522 |
| 9:02:45 | 568 | 23228 | 937 | 1123 | 1175 | 1107 | 1086 | 1405 | 1607 | 1423 | 1686 | 1530 |

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|---------|-----|-------|------|------|------|------|------|------|------|------|------|------|
| 9:03:00 | 569 | 23349 | 948 | 1137 | 1191 | 1119 | 1099 | 1353 | 1616 | 1429 | 1686 | 1521 |
| 9:03:15 | 570 | 23267 | 957 | 1150 | 1206 | 1130 | 1111 | 1364 | 1611 | 1425 | 1702 | 1526 |
| 9:03:30 | 570 | 23395 | 968 | 1162 | 1218 | 1143 | 1123 | 1395 | 1616 | 1429 | 1708 | 1537 |
| 9:03:45 | 571 | 23430 | 977 | 1175 | 1229 | 1155 | 1134 | 1420 | 1616 | 1431 | 1720 | 1547 |
| 9:04:00 | 572 | 23388 | 990 | 1186 | 1238 | 1168 | 1146 | 1404 | 1612 | 1429 | 1711 | 1539 |
| 9:04:15 | 573 | 23481 | 999 | 1197 | 1247 | 1180 | 1156 | 1396 | 1605 | 1434 | 1708 | 1536 |
| 9:04:30 | 573 | 23533 | 1008 | 1206 | 1258 | 1191 | 1166 | 1380 | 1602 | 1414 | 1715 | 1528 |
| 9:04:45 | 575 | 23534 | 1015 | 1215 | 1265 | 1202 | 1174 | 1371 | 1605 | 1416 | 1701 | 1523 |
| 9:05:00 | 576 | 23655 | 1022 | 1222 | 1274 | 1211 | 1182 | 1373 | 1603 | 1418 | 1720 | 1529 |
| 9:05:15 | 576 | 23686 | 1027 | 1231 | 1281 | 1220 | 1190 | 1360 | 1602 | 1416 | 1701 | 1520 |
| 9:05:30 | 577 | 23721 | 1033 | 1236 | 1288 | 1225 | 1196 | 1359 | 1602 | 1405 | 1708 | 1519 |
| 9:05:45 | 578 | 23800 | 1036 | 1243 | 1296 | 1233 | 1202 | 1380 | 1609 | 1409 | 1710 | 1527 |
| 9:06:00 | 579 | 23843 | 1042 | 1249 | 1303 | 1238 | 1208 | 1366 | 1603 | 1396 | 1697 | 1516 |
| 9:06:15 | 580 | 23883 | 1045 | 1254 | 1310 | 1242 | 1213 | 1350 | 1603 | 1380 | 1683 | 1504 |
| 9:06:30 | 581 | 23987 | 1049 | 1260 | 1315 | 1245 | 1217 | 1351 | 1611 | 1375 | 1657 | 1499 |
| 9:06:45 | 582 | 24005 | 1053 | 1265 | 1319 | 1247 | 1221 | 1341 | 1612 | 1377 | 1665 | 1499 |
| 9:07:00 | 583 | 24041 | 1053 | 1269 | 1324 | 1249 | 1224 | 1324 | 1618 | 1362 | 1656 | 1490 |
| 9:07:15 | 584 | 24154 | 1053 | 1274 | 1330 | 1249 | 1227 | 1315 | 1618 | 1371 | 1647 | 1488 |
| 9:07:30 | 585 | 24100 | 1053 | 1278 | 1335 | 1251 | 1229 | 1285 | 1620 | 1369 | 1654 | 1482 |
| 9:07:45 | 586 | 24188 | 1051 | 1281 | 1339 | 1252 | 1231 | 1306 | 1616 | 1373 | 1645 | 1485 |
| 9:08:00 | 587 | 24296 | 1051 | 1285 | 1344 | 1254 | 1234 | 1317 | 1614 | 1377 | 1711 | 1505 |
| 9:08:15 | 588 | 24344 | 1051 | 1290 | 1346 | 1260 | 1237 | 1305 | 1611 | 1369 | 1708 | 1498 |
| 9:08:30 | 589 | 24333 | 1049 | 1294 | 1350 | 1265 | 1240 | 1276 | 1612 | 1369 | 1688 | 1486 |
| 9:08:45 | 590 | 24370 | 1049 | 1297 | 1353 | 1267 | 1242 | 1346 | 1618 | 1368 | 1701 | 1508 |
| 9:09:00 | 591 | 24578 | 1053 | 1299 | 1355 | 1270 | 1244 | 1373 | 1616 | 1373 | 1629 | 1498 |
| 9:09:15 | 593 | 24555 | 1058 | 1303 | 1357 | 1270 | 1247 | 1386 | 1618 | 1384 | 1609 | 1499 |
| 9:09:30 | 594 | 24665 | 1062 | 1305 | 1360 | 1270 | 1249 | 1357 | 1620 | 1387 | 1591 | 1489 |
| 9:09:45 | 594 | 24723 | 1063 | 1306 | 1364 | 1267 | 1250 | 1395 | 1627 | 1393 | 1614 | 1507 |
| 9:10:00 | 596 | 24795 | 1069 | 1306 | 1368 | 1267 | 1253 | 1411 | 1632 | 1387 | 1584 | 1504 |
| 9:10:15 | 585 | 24806 | 1072 | 1310 | 1371 | 1265 | 1255 | 1369 | 1632 | 1386 | 1609 | 1499 |
| 9:10:30 | 587 | 24988 | 1074 | 1310 | 1377 | 1263 | 1256 | 1387 | 1627 | 1386 | 1609 | 1502 |
| 9:10:45 | 588 | 25019 | 1076 | 1312 | 1380 | 1263 | 1258 | 1386 | 1630 | 1378 | 1591 | 1496 |
| 9:11:00 | 590 | 25014 | 1078 | 1314 | 1384 | 1261 | 1259 | 1395 | 1625 | 1373 | 1587 | 1495 |
| 9:11:15 | 591 | 25150 | 1080 | 1314 | 1387 | 1258 | 1260 | 1362 | 1634 | 1371 | 1546 | 1478 |
| 9:11:30 | 592 | 25280 | 1080 | 1315 | 1389 | 1256 | 1260 | 1362 | 1627 | 1373 | 1580 | 1486 |
| 9:11:45 | 594 | 25328 | 1078 | 1315 | 1393 | 1254 | 1260 | 1371 | 1627 | 1368 | 1603 | 1492 |
| 9:12:00 | 574 | 25330 | 1078 | 1315 | 1395 | 1252 | 1260 | 1323 | 1621 | 1362 | 1594 | 1475 |
| 9:12:15 | 577 | 25490 | 1076 | 1314 | 1396 | 1252 | 1260 | 1330 | 1629 | 1353 | 1576 | 1472 |
| 9:12:30 | 579 | 25546 | 1074 | 1314 | 1398 | 1251 | 1259 | 1332 | 1623 | 1353 | 1551 | 1465 |
| 9:12:45 | 581 | 25593 | 1074 | 1312 | 1400 | 1247 | 1258 | 1333 | 1630 | 1351 | 1526 | 1460 |

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| 9:13:00 | 582 | 25727 | 1072 | 1312 | 1402 | 1243 | 1257 | 1341 | 1643 | 1350 | 1539 | 1468 |
| 9:13:15 | 584 | 25791 | 1072 | 1312 | 1404 | 1240 | 1257 | 1321 | 1645 | 1346 | 1584 | 1474 |
| 9:13:30 | 585 | 25843 | 1071 | 1314 | 1407 | 1240 | 1258 | 1310 | 1643 | 1348 | 1582 | 1471 |
| 9:13:45 | 587 | 25923 | 1071 | 1314 | 1409 | 1240 | 1259 | 1350 | 1643 | 1353 | 1641 | 1497 |
| 9:14:00 | 588 | 26070 | 1072 | 1315 | 1411 | 1242 | 1260 | 1378 | 1634 | 1353 | 1618 | 1496 |
| 9:14:15 | 589 | 26108 | 1074 | 1317 | 1413 | 1245 | 1262 | 1393 | 1629 | 1353 | 1650 | 1506 |
| 9:14:30 | 591 | 26177 | 1080 | 1319 | 1414 | 1249 | 1266 | 1384 | 1636 | 1348 | 1638 | 1502 |
| 9:14:45 | 592 | 26246 | 1081 | 1321 | 1418 | 1249 | 1267 | 1375 | 1630 | 1346 | 1625 | 1494 |
| 9:15:00 | 593 | 26349 | 1081 | 1323 | 1420 | 1251 | 1269 | 1377 | 1629 | 1348 | 1643 | 1499 |
| 9:15:15 | 581 | 26455 | 1083 | 1323 | 1423 | 1252 | 1270 | 1360 | 1618 | 1357 | 1620 | 1489 |
| 9:15:30 | 583 | 26574 | 1083 | 1323 | 1425 | 1252 | 1271 | 1384 | 1627 | 1359 | 1638 | 1502 |
| 9:15:45 | 585 | 26652 | 1085 | 1321 | 1427 | 1256 | 1272 | 1387 | 1623 | 1362 | 1654 | 1507 |
| 9:16:00 | 587 | 26745 | 1089 | 1323 | 1429 | 1258 | 1275 | 1420 | 1620 | 1357 | 1657 | 1514 |
| 9:16:15 | 589 | 26937 | 1092 | 1323 | 1432 | 1261 | 1277 | 1411 | 1625 | 1360 | 1657 | 1513 |
| 9:16:30 | 590 | 26990 | 1092 | 1324 | 1434 | 1263 | 1278 | 1382 | 1627 | 1362 | 1614 | 1496 |
| 9:16:45 | 583 | 26909 | 1092 | 1324 | 1438 | 1263 | 1279 | 1353 | 1612 | 1366 | 1605 | 1484 |
| 9:17:00 | 581 | 27157 | 1092 | 1324 | 1440 | 1263 | 1280 | 1369 | 1618 | 1368 | 1620 | 1494 |
| 9:17:15 | 583 | 27180 | 1092 | 1323 | 1441 | 1263 | 1280 | 1369 | 1629 | 1371 | 1620 | 1497 |
| 9:17:30 | 585 | 27320 | 1094 | 1324 | 1445 | 1265 | 1282 | 1389 | 1627 | 1369 | 1616 | 1500 |
| 9:17:45 | 587 | 27437 | 1096 | 1324 | 1447 | 1263 | 1283 | 1384 | 1629 | 1359 | 1625 | 1499 |
| 9:18:00 | 588 | 27582 | 1098 | 1326 | 1450 | 1263 | 1284 | 1386 | 1623 | 1359 | 1611 | 1495 |
| 9:18:15 | 590 | 27715 | 1099 | 1328 | 1452 | 1263 | 1286 | 1378 | 1611 | 1357 | 1612 | 1490 |
| 9:18:30 | 593 | 27787 | 1099 | 1330 | 1454 | 1263 | 1287 | 1368 | 1612 | 1360 | 1607 | 1487 |
| 9:18:45 | 583 | 27816 | 1098 | 1330 | 1456 | 1263 | 1287 | 1366 | 1620 | 1360 | 1593 | 1485 |
| 9:19:00 | 581 | 28251 | 1098 | 1332 | 1458 | 1261 | 1287 | 1389 | 1605 | 1366 | 1616 | 1494 |
| 9:19:15 | 584 | 28129 | 1099 | 1332 | 1459 | 1261 | 1288 | 1402 | 1611 | 1364 | 1639 | 1504 |
| 9:19:30 | 586 | 28255 | 1105 | 1333 | 1463 | 1263 | 1291 | 1396 | 1605 | 1366 | 1634 | 1500 |
| 9:19:45 | 588 | 28367 | 1107 | 1335 | 1465 | 1263 | 1293 | 1398 | 1600 | 1364 | 1611 | 1493 |
| 9:20:00 | 590 | 28495 | 1108 | 1335 | 1467 | 1263 | 1293 | 1398 | 1596 | 1366 | 1591 | 1488 |
| 9:20:15 | 592 | 28599 | 1110 | 1337 | 1468 | 1263 | 1295 | 1389 | 1614 | 1360 | 1578 | 1485 |
| 9:20:30 | 593 | 28747 | 1108 | 1337 | 1468 | 1261 | 1294 | 1391 | 1620 | 1353 | 1546 | 1478 |
| 9:20:45 | 595 | 28822 | 1110 | 1339 | 1470 | 1256 | 1294 | 1393 | 1621 | 1350 | 1524 | 1472 |
| 9:21:00 | 597 | 28903 | 1112 | 1339 | 1470 | 1251 | 1293 | 1368 | 1625 | 1351 | 1548 | 1473 |
| 9:21:15 | 599 | 29054 | 1110 | 1339 | 1472 | 1247 | 1292 | 1326 | 1614 | 1360 | 1528 | 1457 |
| 9:21:30 | 600 | 29221 | 1105 | 1337 | 1472 | 1245 | 1290 | 1296 | 1627 | 1359 | 1555 | 1459 |
| 9:21:45 | 602 | 29323 | 1101 | 1335 | 1472 | 1243 | 1288 | 1308 | 1634 | 1362 | 1508 | 1453 |
| 9:22:00 | 603 | 29467 | 1099 | 1333 | 1472 | 1242 | 1287 | 1402 | 1627 | 1368 | 1526 | 1481 |
| 9:22:15 | 584 | 29373 | 1099 | 1335 | 1472 | 1240 | 1287 | 1366 | 1623 | 1371 | 1512 | 1468 |
| 9:22:30 | 576 | 29685 | 1099 | 1337 | 1472 | 1238 | 1287 | 1384 | 1609 | 1375 | 1483 | 1463 |
| 9:22:45 | 579 | 29784 | 1101 | 1339 | 1472 | 1233 | 1286 | 1391 | 1618 | 1380 | 1454 | 1461 |

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|---------|-----|-------|------|------|------|------|------|------|------|------|------|------|
| 9:23:00 | 583 | 29902 | 1103 | 1341 | 1472 | 1227 | 1286 | 1411 | 1605 | 1371 | 1445 | 1458 |
| 9:23:15 | 586 | 30077 | 1107 | 1342 | 1472 | 1222 | 1286 | 1395 | 1609 | 1384 | 1425 | 1453 |
| 9:23:30 | 588 | 30143 | 1108 | 1344 | 1470 | 1216 | 1285 | 1387 | 1607 | 1400 | 1398 | 1448 |
| 9:23:45 | 590 | 30337 | 1110 | 1344 | 1470 | 1211 | 1284 | 1387 | 1609 | 1402 | 1414 | 1453 |
| 9:24:00 | 592 | 30437 | 1110 | 1346 | 1470 | 1206 | 1283 | 1373 | 1603 | 1395 | 1431 | 1451 |
| 9:24:15 | 595 | 30643 | 1110 | 1348 | 1468 | 1200 | 1282 | 1387 | 1602 | 1387 | 1404 | 1445 |
| 9:24:30 | 596 | 30757 | 1112 | 1348 | 1468 | 1195 | 1281 | 1389 | 1602 | 1387 | 1382 | 1440 |
| 9:24:45 | 591 | 30824 | 1112 | 1350 | 1470 | 1189 | 1280 | 1380 | 1614 | 1393 | 1402 | 1447 |
| 9:25:00 | 577 | 30996 | 1114 | 1350 | 1470 | 1184 | 1280 | 1378 | 1605 | 1391 | 1378 | 1438 |
| 9:25:15 | 580 | 31142 | 1114 | 1350 | 1468 | 1179 | 1278 | 1371 | 1598 | 1393 | 1384 | 1437 |
| 9:25:30 | 583 | 31335 | 1114 | 1351 | 1468 | 1173 | 1277 | 1373 | 1598 | 1396 | 1335 | 1426 |
| 9:25:45 | 586 | 31408 | 1116 | 1351 | 1468 | 1168 | 1276 | 1362 | 1614 | 1396 | 1346 | 1430 |
| 9:26:00 | 588 | 31542 | 1114 | 1351 | 1468 | 1162 | 1274 | 1359 | 1600 | 1398 | 1333 | 1423 |
| 9:26:15 | 591 | 31736 | 1108 | 1350 | 1463 | 1153 | 1269 | 1031 | 1218 | 1337 | 1013 | 1150 |
| 9:26:30 | 593 | 31770 | 1090 | 1333 | 1427 | 1134 | 1246 | 799 | 963 | 1135 | 774 | 918 |
| 9:26:45 | 594 | 31877 | 1069 | 1306 | 1386 | 1112 | 1218 | 666 | 824 | 1000 | 653 | 786 |
| 9:27:00 | 595 | 31871 | 1045 | 1279 | 1351 | 1089 | 1191 | 585 | 763 | 910 | 585 | 711 |
| 9:27:15 | 596 | 32044 | 1024 | 1252 | 1319 | 1069 | 1166 | 531 | 698 | 847 | 534 | 653 |
| 9:27:30 | 588 | 31989 | 1004 | 1227 | 1290 | 1047 | 1142 | 487 | 648 | 799 | 498 | 608 |
| 9:27:45 | 585 | 32176 | 984 | 1206 | 1260 | 1027 | 1119 | 455 | 624 | 763 | 469 | 578 |
| 9:28:00 | 588 | 32260 | 964 | 1186 | 1233 | 1008 | 1098 | 433 | 585 | 732 | 450 | 550 |
| 9:28:15 | 588 | 32342 | 946 | 1164 | 1206 | 990 | 1077 | 414 | 565 | 707 | 433 | 530 |
| 9:28:30 | 590 | 32284 | 928 | 1143 | 1180 | 972 | 1056 | 397 | 540 | 685 | 421 | 511 |
| 9:28:45 | 591 | 32465 | 912 | 1119 | 1157 | 954 | 1036 | 385 | 520 | 664 | 408 | 494 |
| 9:29:00 | 592 | 32510 | 896 | 1098 | 1135 | 937 | 1017 | 372 | 507 | 648 | 397 | 481 |
| 9:29:15 | 593 | 32445 | 880 | 1076 | 1116 | 921 | 998 | 365 | 504 | 633 | 388 | 473 |
| 9:29:30 | 593 | 32513 | 864 | 1056 | 1096 | 907 | 981 | 354 | 482 | 619 | 394 | 462 |
| 9:29:45 | 594 | 32526 | 849 | 1035 | 1076 | 891 | 963 | 345 | 468 | 604 | 412 | 457 |
| 9:30:00 | 595 | 32668 | 837 | 1015 | 1056 | 876 | 946 | 338 | 451 | 590 | 423 | 451 |
| 9:30:15 | 596 | 32702 | 822 | 997 | 1036 | 862 | 929 | 333 | 441 | 576 | 424 | 444 |
| 9:30:30 | 596 | 32711 | 810 | 979 | 1017 | 847 | 913 | 324 | 451 | 567 | 423 | 441 |
| 9:30:45 | 597 | 32750 | 795 | 959 | 999 | 833 | 897 | 316 | 444 | 558 | 421 | 435 |
| 9:31:00 | 577 | 32793 | 783 | 943 | 979 | 820 | 881 | 313 | 432 | 547 | 417 | 427 |
| 9:31:15 | 579 | 32932 | 772 | 927 | 961 | 808 | 867 | 306 | 419 | 536 | 410 | 418 |
| 9:31:30 | 581 | 32977 | 759 | 910 | 943 | 795 | 852 | 298 | 408 | 525 | 405 | 409 |
| 9:31:45 | 582 | 32968 | 748 | 894 | 927 | 783 | 838 | 293 | 401 | 514 | 397 | 401 |
| 9:32:00 | 583 | 33031 | 738 | 880 | 910 | 772 | 825 | 291 | 385 | 504 | 392 | 393 |
| 9:32:15 | 584 | 33079 | 727 | 864 | 894 | 761 | 812 | 286 | 378 | 495 | 385 | 386 |
| 9:32:30 | 585 | 33219 | 716 | 849 | 878 | 748 | 798 | 280 | 369 | 486 | 378 | 378 |
| 9:32:45 | 586 | 33177 | 705 | 837 | 862 | 738 | 786 | 277 | 378 | 478 | 370 | 376 |

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|---------|-----|-------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 9:33:00 | 587 | 33134 | 696 | 822 | 847 | 729 | 774 | 273 | 381 | 471 | 367 | 373 |
| 9:33:15 | 587 | 33267 | 685 | 810 | 833 | 718 | 762 | 271 | 372 | 464 | 361 | 367 |
| 9:33:30 | 588 | 33291 | 676 | 797 | 819 | 707 | 750 | 268 | 360 | 457 | 356 | 360 |
| 9:33:45 | 589 | 33346 | 667 | 784 | 806 | 698 | 739 | 264 | 358 | 450 | 352 | 356 |
| 9:34:00 | 589 | 33303 | 658 | 774 | 793 | 689 | 729 | 261 | 347 | 442 | 347 | 349 |
| 9:34:15 | 590 | 33378 | 651 | 761 | 779 | 678 | 717 | 257 | 336 | 433 | 342 | 342 |
| 9:34:30 | 591 | 33427 | 642 | 750 | 768 | 669 | 707 | 253 | 327 | 426 | 336 | 336 |
| 9:34:45 | 591 | 33515 | 635 | 739 | 756 | 660 | 698 | 248 | 325 | 421 | 333 | 332 |
| 9:35:00 | 592 | 33503 | 626 | 729 | 745 | 653 | 688 | 248 | 329 | 417 | 331 | 331 |
| 9:35:15 | 592 | 33563 | 619 | 718 | 734 | 644 | 679 | 243 | 334 | 415 | 331 | 331 |
| 9:35:30 | 593 | 33512 | 612 | 707 | 723 | 637 | 670 | 241 | 329 | 414 | 331 | 329 |
| 9:35:45 | 593 | 33595 | 579 | 694 | 712 | 628 | 653 | 203 | 185 | 405 | 178 | 243 |
| 9:36:00 | 593 | 33619 | 374 | 658 | 702 | 610 | 586 | 135 | 205 | 394 | 158 | 223 |
| 9:36:15 | 593 | 33551 | 243 | 615 | 691 | 588 | 534 | 102 | 199 | 381 | 153 | 209 |
| 9:36:30 | 591 | 33555 | 190 | 561 | 678 | 567 | 499 | 106 | 201 | 369 | 153 | 207 |
| 9:36:45 | 590 | 33403 | 162 | 466 | 667 | 547 | 461 | 95 | 187 | 356 | 151 | 197 |
| 9:37:00 | 590 | 33396 | 140 | 336 | 655 | 529 | 415 | 82 | 189 | 343 | 151 | 191 |
| 9:37:15 | 589 | 33330 | 124 | 237 | 644 | 507 | 378 | 73 | 162 | 333 | 140 | 177 |
| 9:37:30 | 588 | 33226 | 111 | 187 | 633 | 486 | 354 | 73 | 145 | 325 | 135 | 170 |
| 9:37:45 | 586 | 33193 | 104 | 153 | 624 | 453 | 334 | 72 | 124 | 320 | 133 | 162 |
| 9:38:00 | 585 | 33084 | 97 | 133 | 613 | 428 | 318 | 73 | 117 | 316 | 129 | 159 |
| 9:38:15 | 585 | 32973 | 93 | 118 | 604 | 401 | 304 | 75 | 117 | 313 | 129 | 159 |
| 9:38:30 | 584 | 32962 | 90 | 109 | 595 | 376 | 293 | 72 | 102 | 307 | 126 | 152 |
| 9:38:45 | 583 | 32942 | 88 | 102 | 586 | 324 | 275 | 72 | 100 | 306 | 136 | 154 |
| 9:39:00 | 582 | 32854 | 84 | 99 | 577 | 288 | 262 | 72 | 102 | 304 | 129 | 152 |
| 9:39:15 | 581 | 32701 | 82 | 95 | 568 | 259 | 251 | 64 | 90 | 297 | 122 | 143 |
| 9:39:30 | 580 | 32659 | 79 | 91 | 559 | 239 | 242 | 64 | 84 | 288 | 118 | 139 |
| 9:39:45 | 579 | 32626 | 75 | 88 | 550 | 221 | 234 | 64 | 81 | 279 | 120 | 136 |
| 9:40:00 | 578 | 32551 | 73 | 86 | 541 | 203 | 226 | 63 | 81 | 273 | 120 | 134 |
| 9:40:15 | 577 | 32463 | 72 | 84 | 532 | 187 | 219 | 63 | 81 | 273 | 133 | 138 |
| 9:40:30 | 577 | 32331 | 72 | 84 | 525 | 172 | 213 | 66 | 79 | 270 | 122 | 134 |
| 9:40:45 | 576 | 32369 | 72 | 84 | 518 | 163 | 209 | 66 | 81 | 268 | 127 | 136 |
| 9:41:00 | 575 | 32198 | 73 | 84 | 511 | 154 | 206 | 63 | 79 | 264 | 120 | 132 |
| 9:41:15 | 574 | 32157 | 72 | 84 | 502 | 149 | 202 | 64 | 79 | 261 | 140 | 136 |
| 9:41:30 | 573 | 32007 | 72 | 82 | 495 | 151 | 200 | 64 | 79 | 255 | 136 | 134 |
| 9:41:45 | 572 | 31905 | 72 | 86 | 486 | 149 | 198 | 64 | 79 | 255 | 187 | 146 |
| 9:42:00 | 571 | 31902 | 72 | 84 | 477 | 151 | 196 | 64 | 77 | 257 | 149 | 137 |
| 9:42:15 | 570 | 31804 | 72 | 86 | 468 | 145 | 193 | 63 | 75 | 253 | 122 | 128 |
| 9:42:30 | 569 | 31702 | 72 | 82 | 460 | 144 | 190 | 64 | 72 | 248 | 111 | 124 |
| 9:42:45 | 568 | 31686 | 72 | 81 | 453 | 140 | 187 | 66 | 73 | 243 | 113 | 124 |

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|---------|-----|-------|----|----|-----|-----|-----|----|----|-----|-----|-----|
| 9:43:00 | 567 | 31504 | 72 | 81 | 446 | 135 | 184 | 64 | 72 | 239 | 133 | 127 |
| 9:43:15 | 566 | 31464 | 72 | 81 | 439 | 133 | 181 | 63 | 72 | 235 | 145 | 129 |
| 9:43:30 | 565 | 31407 | 72 | 79 | 432 | 131 | 179 | 66 | 72 | 232 | 124 | 124 |
| 9:43:45 | 565 | 31299 | 72 | 79 | 417 | 131 | 175 | 63 | 72 | 203 | 171 | 127 |
| 9:44:00 | 564 | 31250 | 70 | 79 | 336 | 133 | 155 | 64 | 73 | 208 | 169 | 129 |
| 9:44:15 | 563 | 31149 | 72 | 79 | 280 | 135 | 142 | 63 | 73 | 208 | 158 | 126 |
| 9:44:30 | 562 | 31048 | 72 | 79 | 243 | 133 | 132 | 63 | 73 | 208 | 140 | 121 |
| 9:44:45 | 561 | 31001 | 70 | 79 | 219 | 133 | 125 | 64 | 72 | 205 | 124 | 116 |
| 9:45:00 | 560 | 30817 | 70 | 79 | 201 | 131 | 120 | 64 | 70 | 205 | 131 | 118 |
| 9:45:15 | 559 | 30859 | 70 | 79 | 189 | 129 | 117 | 63 | 70 | 201 | 122 | 114 |
| 9:45:30 | 558 | 30735 | 70 | 77 | 178 | 127 | 113 | 64 | 70 | 201 | 126 | 115 |
| 9:45:45 | 558 | 30651 | 70 | 77 | 171 | 126 | 111 | 63 | 70 | 199 | 120 | 113 |
| 9:46:00 | 556 | 30608 | 70 | 77 | 165 | 124 | 109 | 64 | 70 | 198 | 126 | 115 |
| 9:46:15 | 556 | 30614 | 70 | 77 | 162 | 124 | 108 | 64 | 70 | 189 | 124 | 112 |
| 9:46:30 | 555 | 30454 | 70 | 77 | 156 | 122 | 106 | 64 | 70 | 189 | 122 | 111 |
| 9:46:45 | 554 | 30370 | 70 | 77 | 153 | 122 | 106 | 63 | 68 | 194 | 126 | 113 |
| 9:47:00 | 553 | 30325 | 70 | 77 | 151 | 120 | 105 | 63 | 68 | 181 | 117 | 107 |
| 9:47:15 | 552 | 30215 | 70 | 77 | 147 | 118 | 103 | 63 | 68 | 176 | 120 | 107 |
| 9:47:30 | 552 | 30128 | 70 | 77 | 145 | 118 | 103 | 64 | 68 | 176 | 120 | 107 |
| 9:47:45 | 551 | 30148 | 70 | 77 | 144 | 117 | 102 | 63 | 68 | 172 | 117 | 105 |
| 9:48:00 | 550 | 30069 | 70 | 77 | 142 | 117 | 102 | 64 | 68 | 176 | 122 | 108 |
| 9:48:15 | 550 | 30130 | 70 | 77 | 144 | 117 | 102 | 63 | 70 | 194 | 131 | 115 |
| 9:48:30 | 549 | 29832 | 70 | 77 | 145 | 115 | 102 | 63 | 70 | 189 | 136 | 115 |
| 9:48:45 | 548 | 29731 | 70 | 77 | 147 | 115 | 102 | 63 | 70 | 185 | 127 | 111 |
| 9:49:00 | 547 | 29738 | 70 | 77 | 149 | 115 | 103 | 63 | 68 | 160 | 115 | 102 |
| 9:49:15 | 546 | 29745 | 70 | 77 | 147 | 113 | 102 | 63 | 68 | 154 | 113 | 100 |
| 9:49:30 | 546 | 29555 | 70 | 77 | 147 | 113 | 102 | 64 | 68 | 154 | 115 | 100 |
| 9:49:45 | 544 | 29510 | 70 | 77 | 147 | 113 | 102 | 64 | 68 | 149 | 117 | 100 |
| 9:50:00 | 544 | 29521 | 70 | 75 | 147 | 111 | 101 | 63 | 68 | 169 | 111 | 103 |
| 9:50:15 | 543 | 29470 | 70 | 75 | 147 | 111 | 101 | 64 | 68 | 158 | 113 | 101 |
| 9:50:30 | 542 | 29365 | 70 | 75 | 147 | 111 | 101 | 64 | 68 | 163 | 122 | 104 |
| 9:50:45 | 542 | 29262 | 70 | 75 | 147 | 111 | 101 | 63 | 68 | 165 | 113 | 102 |
| 9:51:00 | 541 | 29374 | 70 | 75 | 145 | 111 | 100 | 63 | 68 | 160 | 115 | 102 |
| 9:51:15 | 540 | 28923 | 70 | 75 | 144 | 109 | 100 | 63 | 66 | 149 | 111 | 97 |
| 9:51:30 | 539 | 29030 | 70 | 75 | 142 | 109 | 99 | 63 | 68 | 147 | 111 | 97 |
| 9:51:45 | 539 | 28964 | 70 | 75 | 140 | 109 | 99 | 63 | 66 | 142 | 113 | 96 |
| 9:52:00 | 538 | 28930 | 70 | 75 | 138 | 109 | 98 | 63 | 66 | 147 | 113 | 97 |
| 9:52:15 | 538 | 28890 | 70 | 75 | 136 | 108 | 97 | 63 | 68 | 142 | 111 | 96 |
| 9:52:30 | 537 | 28786 | 70 | 75 | 133 | 108 | 97 | 63 | 66 | 144 | 106 | 95 |
| 9:52:45 | 536 | 28787 | 70 | 75 | 131 | 108 | 96 | 63 | 66 | 151 | 111 | 98 |

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|---------|-----|-------|----|----|-----|-----|----|----|----|-----|-----|-----|
| 9:53:00 | 536 | 28674 | 70 | 75 | 131 | 108 | 96 | 63 | 68 | 176 | 129 | 109 |
| 9:53:15 | 535 | 28700 | 68 | 75 | 133 | 108 | 96 | 63 | 66 | 162 | 113 | 101 |
| 9:53:30 | 535 | 28617 | 70 | 75 | 133 | 106 | 96 | 63 | 66 | 156 | 106 | 98 |
| 9:53:45 | 534 | 28487 | 70 | 73 | 133 | 106 | 96 | 63 | 66 | 160 | 106 | 99 |
| 9:54:00 | 533 | 28404 | 70 | 73 | 131 | 106 | 95 | 63 | 66 | 158 | 104 | 98 |
| 9:54:15 | 532 | 28375 | 70 | 73 | 129 | 104 | 94 | 63 | 66 | 162 | 102 | 98 |
| 9:54:30 | 532 | 28270 | 70 | 73 | 126 | 104 | 93 | 63 | 66 | 158 | 100 | 97 |
| 9:54:45 | 531 | 28295 | 70 | 73 | 124 | 104 | 93 | 63 | 66 | 156 | 100 | 96 |
| 9:55:00 | 531 | 28195 | 68 | 73 | 124 | 102 | 92 | 63 | 66 | 154 | 100 | 96 |
| 9:55:15 | 530 | 25325 | 68 | 73 | 122 | 102 | 91 | 63 | 66 | 153 | 100 | 96 |
| 9:55:30 | 530 | 25084 | 68 | 73 | 120 | 102 | 91 | 63 | 66 | 151 | 99 | 95 |
| 9:55:45 | 529 | 25027 | 68 | 73 | 118 | 102 | 90 | 63 | 66 | 153 | 99 | 95 |
| 9:56:00 | 529 | 25057 | 68 | 73 | 118 | 100 | 90 | 63 | 66 | 149 | 99 | 94 |

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Leakage Summary for Burn and Cool Down Periods

All pressure transducers and thermocouples are in calibration per YRT's QA program.

External leakage was collected electronically.

| | | |
|--------------------------------|-------|---------|
| Test Duration: | 60 | minutes |
| Tank Water Loss: | -2397 | mls |
| System Relief Water Collected: | 0 | mls |
| Calculated Water Loss: | 0 | mls |
| Average Leak Rate: | 0 | ml/min |
| Average Seal Circumference | 78.5 | inches |
| Allowable Leak Rate: | 78.5 | ml/min |

| | |
|---|------------|
| Was the Leakage Below the Allowable? | Yes |
|---|------------|

Summary of Test Parameters During Burn and Cool Down Periods

| | | |
|---|------|---------|
| Amount of Time of Average Cal. Block > 1200 deg.: | 20.3 | minutes |
| Minimum Allowable Time at Temperature: | 15 | minutes |
| Average Cal. Block Temperature During Burn: | 1119 | deg. F |
| Maximum Average Cal. Block Temperature During Burn: | 1295 | deg. F |
| Minimum Average Cal. Block Temperature During Burn: | 77 | deg. F |
| Average Flame Temperature During Burn: | 1473 | deg. F |
| Maximum Average Flame Temperature During Burn: | 1553 | deg. F |
| Minimum Average Flame Temperature During Burn: | 124 | deg. F |

Notes

| | |
|--|------------|
| Were Test Conditions Within Compliance? | Yes |
|--|------------|

Yarmouth Research and Technology, LLC

Customer: GPT Industries

Date: 7/19/2023

Product Code: 24 inch Class 300# Evolution Isolation Gasket with Reinforced PTFE ID Seal and Fire-Safe Inconel 718 C-Ring with DH SS Washers and G-11 Sleeves

Project Number: 223094

System pressure was lowered to 0 and then repressurized.

Operational Test Raw Data

| Time | Pressure (psig) | Average Block Temp-F |
|----------|-----------------|----------------------|
| 10:00:19 | 520 | 72 |
| 10:00:34 | 519 | 72 |
| 10:00:49 | 519 | 72 |
| 10:01:04 | 519 | 72 |
| 10:01:19 | 518 | 72 |
| 10:01:34 | 518 | 72 |
| 10:01:49 | 518 | 72 |
| 10:02:04 | 554 | 72 |
| 10:02:19 | 551 | 72 |
| 10:02:34 | 549 | 72 |
| 10:02:49 | 548 | 72 |
| 10:03:04 | 547 | 72 |
| 10:03:19 | 546 | 72 |
| 10:03:34 | 546 | 72 |
| 10:03:49 | 545 | 72 |
| 10:04:04 | 545 | 72 |
| 10:04:19 | 544 | 72 |
| 10:04:34 | 544 | 72 |
| 10:04:49 | 544 | 72 |
| 10:05:04 | 543 | 72 |
| 10:05:19 | 544 | 72 |

Leakage was collected manually.

| | | |
|--|------|--------|
| Total External Leakage Collected Over 5 Minute Duration: | 0 | ml |
| Average Leak Rate Over 5 Minute Duration: | 0 | ml/min |
| Allowable Leak Rate: | 78.5 | ml/min |

| | |
|---|------------|
| Was the Leakage Below the Allowable? | Yes |
|---|------------|