

TPD1362

03539418

Form P7071

Edition 5

March, 1999



OPERATION AND MAINTENANCE MANUAL

for

MODELS 2934P2 AND 2940P2 SUPER DUTY IMPACTTOOLS

NOTICE

Models 2934P2 and 2940P2 Impacttools are designed for use in structural fabrication, machinery maintenance, railroad maintenance, pipe and valve flange applications and installation of lag screws.

Ingersoll-Rand is not responsible for customer modification of tools for applications on which Ingersoll-Rand was not consulted.

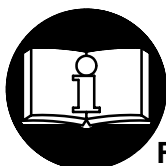
⚠ WARNING

IMPORTANT SAFETY INFORMATION ENCLOSED.

READ THIS MANUAL BEFORE OPERATING TOOL.

IT IS THE RESPONSIBILITY OF THE EMPLOYER TO PLACE THE INFORMATION IN THIS MANUAL INTO THE HANDS OF THE OPERATOR.

FAILURE TO OBSERVE THE FOLLOWING WARNINGS COULD RESULT IN INJURY.



PLACING TOOL IN SERVICE

- Always operate, inspect and maintain this tool in accordance with American National Standards Institute Safety Code for Portable Air Tools (ANSI B186.1).
- For safety, top performance, and maximum durability of parts, operate this tool at 90 psig (6.2 bar/620 kPa) maximum air pressure at the inlet with 3/4" (19 mm) inside diameter air supply hose.
- Always turn off the air supply and disconnect the air supply hose before installing, removing or adjusting any accessory on this tool, or before performing any maintenance on this tool.
- Do not use damaged, frayed or deteriorated air hoses and fittings.
- Be sure all hoses and fittings are the correct size and are tightly secured. See Dwg. TPD905-1 for a typical piping arrangement.
- Always use clean, dry air at 90 psig (6.2 bar/620 kPa) maximum air pressure. Dust, corrosive fumes and/or excessive moisture can ruin the motor of an air tool.
- Do not lubricate tools with flammable or volatile liquids such as kerosene, diesel or jet fuel.
- Do not remove any labels. Replace any damaged label.

USING THE TOOL

- Always wear eye protection when operating or performing maintenance on this tool.
- Always wear hearing protection when operating this tool.

- Keep hands, loose clothing and long hair away from rotating end of tool.
- Note the position of the reversing lever before operating the tool so as to be aware of the direction of rotation when operating the throttle.
- Anticipate and be alert for sudden changes in motion during start up and operation of any power tool.
- Keep body stance balanced and firm. Do not overreach when operating this tool. High reaction torques can occur at or below the recommended air pressure.
- Tool shaft may continue to rotate briefly after throttle is released.
- Air powered tools can vibrate in use. Vibration, repetitive motions or uncomfortable positions may be harmful to your hands and arms. Stop using any tool if discomfort, tingling feeling or pain occurs. Seek medical advice before resuming use.
- Use accessories recommended by Ingersoll-Rand.
- Use only impact sockets and accessories. Do not use hand (chrome) sockets or accessories.
- Impact wrenches are not torque wrenches. Connections requiring specific torque must be checked with a torque meter after fitting with an impact wrench.
- This tool is not designed for working in explosive atmospheres.
- This tool is not insulated against electric shock.

NOTICE

The use of other than genuine Ingersoll-Rand replacement parts may result in safety hazards, decreased tool performance, and increased maintenance, and may invalidate all warranties.

Repairs should be made only by authorized trained personnel. Consult your nearest Ingersoll-Rand Authorized Servicenter.

Refer All Communications to the Nearest Ingersoll-Rand Office or Distributor.

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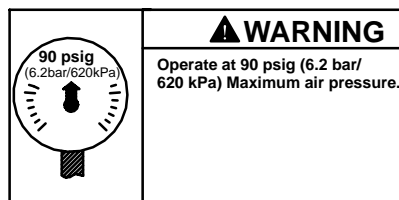
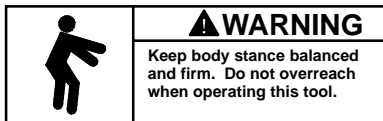
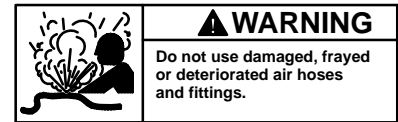
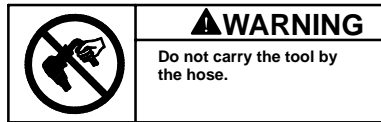
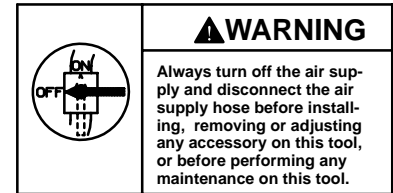
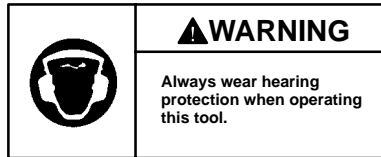
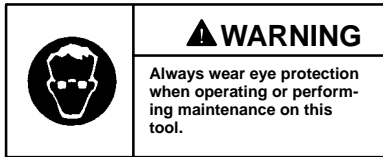
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INGERSOLL-RAND®
PROFESSIONAL TOOLS

WARNING LABEL IDENTIFICATION

⚠ WARNING

FAILURE TO OBSERVE THE FOLLOWING WARNINGS COULD RESULT IN INJURY.



ADJUSTMENTS

SETTING THE POWER REGULATOR

⚠ WARNING

Impact wrenches are not torque control devices. Fasteners with specific torque requirements must be checked with suitable torque measuring devices after installation with an impact wrench.

Models 2934P2/2940P2 Impacttools are equipped with a combination power regulator/reverse valve designed to provide power adjustment while maintaining full power in the reverse direction. Since the reverse direction is used primarily for loosening right-hand threaded fasteners and full power is required, no provision is made for power adjustment in this direction. The power output is calibrated by the numbers “1” through “5” stamped on the Housing Cover Assembly.

NOTICE

The numbers 1 thru 5 on the housing are only for reference and **DO NOT** denote a specific power output. One (1) designates the lowest power while five (5) denotes the highest.

Power Adjustment in the Forward Direction

1. While facing the back of the Impactool, push the Reverse Lever to the extreme right position.
2. Using a screwdriver, rotate the Power Regulator so that the slot aligns with the desired power calibration.
3. The power of the tool is now adjusted for the forward direction but will still have full power in the reverse direction. This adjustment will not change regardless of how many times you shift the Reverse Lever as long as you do not change the power selection.

PLACING TOOL IN SERVICE

LUBRICATION



Ingersoll-Rand No. 50



Ingersoll-Rand No. 100

Always use an air line lubricator with these tools.
We recommend the following Filter-Lubricator-Regulator Unit:

For USA – No. C31-06-G00

For Model 2934P2

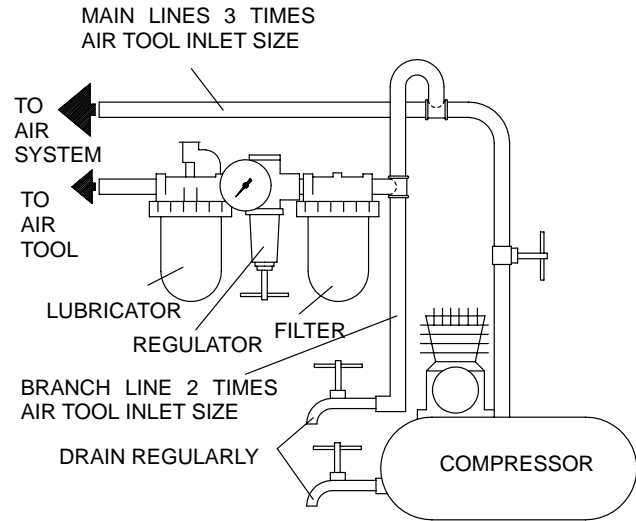
Before starting the tool and after each eight hours of operation, unless the air line lubricator is used, unscrew the Oil Chamber Plug and fill the chamber with Ingersoll-Rand No. 50 Oil.

After each forty-eight hours of operation, or as experience indicates, inject about 3 cc of Ingersoll-Rand No. 100 Grease (approximately 14 strokes from the No. R000A2-228 Grease Gun) into the Grease Fitting.

For Model 2940P2

Before starting the tool and after each two or three hours of operation, unless the air line lubricator is used, detach the air hose and inject about 3 cc of Ingersoll-Rand No. 50 Oil into the air inlet.

After each twenty hours of operation, or as experience indicates, inject about 6 cc of Ingersoll-Rand No. 100 Grease (approximately 14 strokes from the No. R000A2-228 Grease Gun) into the Grease Fitting.



(Dwg. TPD905-1)

HOW TO ORDER AN IMPACT TOOL

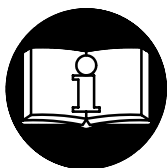
PISTOL GRIP WITH 1" SQUARE DRIVE

Model	Impacts/min.	Recommended Torque Range	
		ft-lb	Nm
2934P2	825	500 – 1,100	678 – 1,490
2940P2	810	1,000 – 1,600	1,360 – 2,170

MANUEL D'EXPLOITATION ET D'ENTRETIEN DES CLÉS À CHOCS À HAUTE PERFORMANCE MODÈLES 2934P2 ET 2940P2

NOTE

Les clés à chocs 2934P2 et 2940P2 sont destinées aux travaux de fabrication structurelle, à l'entretien des machines, à la maintenance des voies ferrées, aux applications de tuyauteries et de flasques et à l'installation des grosses vis à bois à tête carrée. Ingersoll-Rand ne peut être tenu responsable de la modification des outils par le client pour les adapter à des applications qui n'ont pas été approuvées par Ingersoll-Rand.



⚠ ATTENTION

**D'IMPORTANTES INFORMATIONS DE SECURITÉ SONT JOINTES.
LIRE CE MANUEL AVANT D'UTILISER L'OUTIL.
L'EMPLOYEUR EST TENU À COMMUNIQUER LES INFORMATIONS
DE CE MANUEL AUX EMPLOYÉS UTILISANT CET OUTIL.**

LE NON RESPECT DES AVERTISSEMENTS SUIVANTS PEUT CAUSER DES BLESSURES

MISE EN SERVICE DE L'OUTIL

- Toujours exploiter, inspecter et entretenir cet outil conformément au Code de sécurité des outils pneumatiques portatifs de l'American National Standards Institute (ANSI B186.1).
- Pour la sécurité, les performances optimales et la durabilité maximale des pièces, cet outil doit être connecté à une alimentation d'air comprimé de 6,2 bar (620 kPa) maximum à l'entrée, avec un flexible de 19 mm de diamètre intérieur.
- Couper toujours l'alimentation d'air comprimé et débrancher le flexible d'alimentation avant d'installer, déposer ou ajuster tout accessoire sur cet outil, ou d'entreprendre une opération d'entretien quelconque sur l'outil.
- Ne pas utiliser des flexibles ou des raccords endommagés, effilochés ou détériorés.
- S'assurer que tous les flexibles et les raccords sont correctement dimensionnés et bien serrés. Voir Plan TPD905-1 pour un exemple type d'agencement des tuyauteries.
- Utiliser toujours de l'air sec et propre à une pression maximum de 6,2 bar (620 kPa). La poussière, les fumées corrosives et/ou une humidité excessive peuvent endommager le moteur d'un outil pneumatique.
- Ne jamais lubrifier les outils avec des liquides inflammables ou volatils tels que le kérosène, le gasol ou le carburant d'aviation.
- Ne retirer aucune étiquette. Remplacer toute étiquette endommagée.

UTILISATION DE L'OUTIL

- Porter toujours des lunettes de protection pendant l'utilisation et l'entretien de cet outil.
- Porter toujours une protection acoustique pendant l'utilisation de cet outil.

- Tenir les mains, les vêtements fous et les cheveux longs, éloignés de l'extrémité rotative de l'outil.
- Noter la position du levier d'inversion avant de mettre l'outil en marche de manière à savoir dans quel sens il va tourner lorsque la commande est actionnée.
- Prévoir, et ne pas oublier, que tout outil motorisé est susceptible d'à-coups brusques lors de sa mise en marche et pendant son utilisation.
- Garder une position équilibrée et ferme. Ne pas se pencher trop en avant pendant l'utilisation de cet outil. Des couples de réaction élevés peuvent se produire à, ou en dessous, de la pression d'air recommandée.
- La rotation des accessoires de l'outil peut continuer pendant un certain temps après le relâchement de la gâchette.
- Les outils pneumatiques peuvent vibrer pendant l'exploitation. Les vibrations, les mouvements répétitifs et les positions inconfortables peuvent causer des douleurs dans les mains et les bras. N'utiliser plus d'outils en cas d'inconfort, de picotements ou de douleurs. Consulter un médecin avant de recommencer à utiliser l'outil.
- Utiliser les accessoires recommandés par Ingersoll-Rand.
- N'utiliser que les douilles et les accessoires pour clés à chocs. Ne pas utiliser les douilles et accessoires (chromés) de clés manuelles.
- Les clés à chocs ne sont pas des appareils dynamométriques. Les connexions nécessitant un couple de serrage spécifique doivent être vérifiées avec un mesureur de couple après avoir été assemblées avec un clé à chocs.
- Cet outil n'est pas conçu pour fonctionner dans des atmosphères explosives.
- Cet outil n'est pas isolé contre les chocs électriques.

NOTE

L'utilisation de rechanges autres que les pièces d'origine Ingersoll-Rand peut causer des risques d'insécurité, réduire les performances de l'outil et augmenter l'entretien, et peut annuler toutes les garanties.

Les réparations ne doivent être effectuées que par des réparateurs qualifiés autorisés. Consultez votre Centre de Service Ingersoll-Rand le plus proche.

Adressez toutes vos communications au Bureau Ingersoll-Rand ou distributeur le plus proche.

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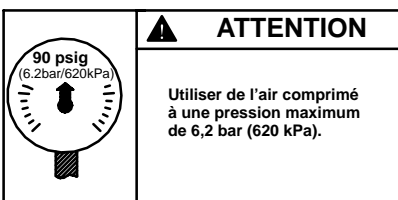
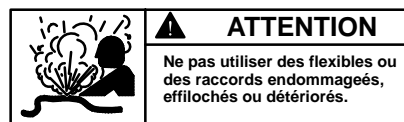
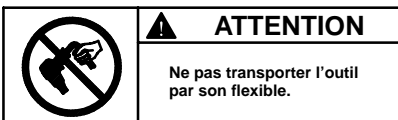
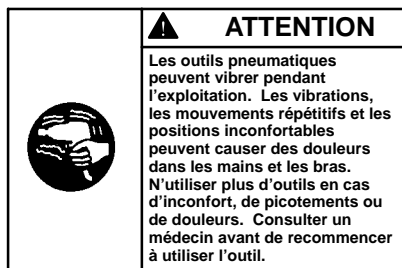
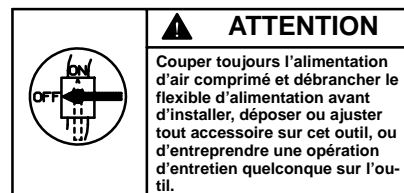
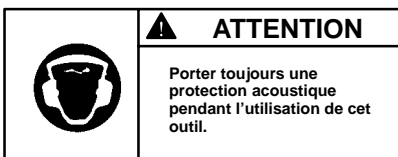
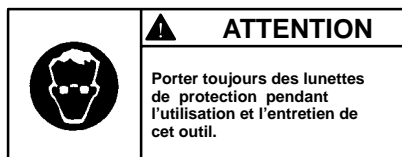
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INGERSOLL-RAND®
PROFESSIONAL TOOLS

SIGNIFICATION DES ETIQUETTES D'AVERTISSEMENT

ATTENTION

LE NON RESPECT DES AVERTISSEMENTS SUIVANTS PEUT CAUSER DES BLESSURES



RÉGLAGES

REGLAGE DU REGULATEUR DE PUISSANCE

ATTENTION

Les clés à chocs ne sont pas des appareils dynamométriques. Les fixations nécessitant un couple de serrage spécifique doivent être vérifiées avec des appareils de mesure de couple appropriés après avoir été assemblées avec une clé à chocs.

Les clés à chocs Modèles 2934P2 et 2940P2 sont équipées d'un ensemble combiné régulateur de puissance/soupape d'inversion destiné à permettre le réglage de puissance tout en maintenant la pleine puissance en marche arrière. Etant donné que la marche arrière est utilisée principalement pour desserrer les fixations ayant un pas à droite et que la pleine puissance est requise, aucun réglage de puissance n'a été prévu dans ce sens de marche. La puissance fournie est indiquée par les numéros 1 à 5 poinçonnés sur l'ensemble de couvercle de carter.

NOTE

Les numéros 5 à 1 du carter ne sont donnés qu'à titre de guide et NE dénotent PAS une puissance spécifique. Zéro (0) indique la puissance la plus faible tandis que cinq (5) indique la puissance la plus élevée.

Réglage de la puissance dans le sens avant

1. En faisant face à l'arrière de l'outil, pousser la soupape d'inversion à fond vers la droite.
2. A l'aide d'un tournevis, tourner le régulateur de puissance de manière à ce que la rainure soit alignée sur le numéro de calibrage de la puissance requise.
3. La puissance de l'outil est maintenant réglée pour le sens avant, mais la pleine puissance sera toujours disponible dans le sens arrière. La sélection du levier d'inversion ne modifie pas ce réglage, pour autant que la sélection de puissance ne soit pas modifiée.

MISE EN SERVICE DE L'OUTIL

LUBRIFICATION



Ingersoll-Rand No. 50



Ingersoll-Rand No. 100

Utiliser toujours un lubrificateur avec ces outils. Nous recommandons l'emploi du filtre-régulateur-lubrificateur suivant :

USA – No. C31-06-G00

Pour le Modèle 2934P2

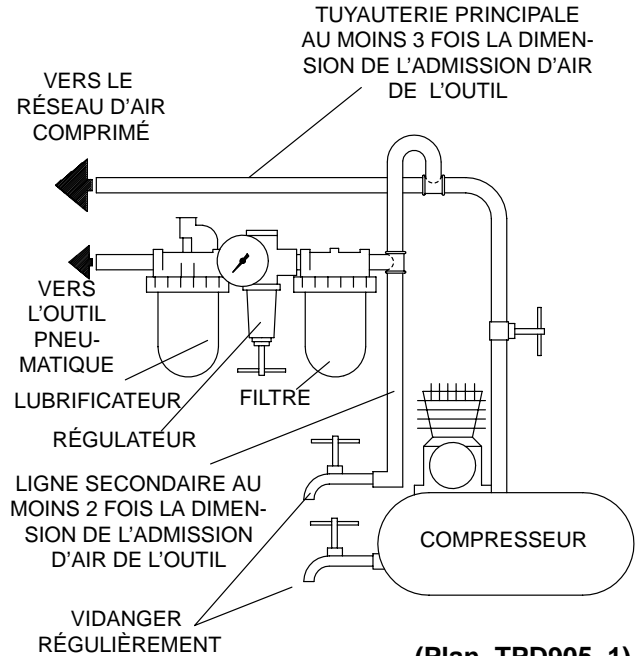
Avant de mettre l'outil en marche et toutes les huit heures de fonctionnement, si un lubrificateur de ligne n'est pas utilisé, déposer le bouchon de la chambre d'huile et remplir cette dernière avec de l'huile Ingersoll-Rand No. 50.

Toutes les quarante-huit heures de fonctionnement, ou en fonction de l'expérience, injecter environ 3 cm³ de graisse Ingersoll-Rand No. 100 (environ 14 coups du pistolet de graissage No. R000A2-228) dans le raccord de graissage.

Pour le Modèle 2940P2

Avant de mettre l'outil en marche et toutes les deux ou trois heures de fonctionnement, si un lubrificateur de ligne n'est pas utilisé, débrancher le flexible d'alimentation et verser environ 3 cm³ d'huile Ingersoll-Rand No. 50 dans le raccord d'admission de l'outil.

Toutes les vingt heures de fonctionnement, ou en fonction de l'expérience, injecter environ 6 cm³ de graisse Ingersoll-Rand No. 100 (environ 14 coups du pistolet de graissage No. R000A2-228) dans le raccord de graissage.



(Plan TPD905-1)

SPÉCIFICATIONS

Modèle	Type de poignée	Entraînement	Coups par minute
		in.	
2934P2	pistolet	1" carré	825
2940P2	pistolet	1" carré	810

MANUEL D'EXPLOITATION ET D'ENTRETIEN PARA LLAVES DE IMPACTO INDUSTRIALES MODELOS 2934P2 Y 2940P2

E

NOTA

Las Llaves de Impacto Serie 2934P2 y 2940P2 están diseñadas para usar en la fabricación de estructuras, mantenimiento de maquinaria, mantenimiento de ferrocarriles, aplicaciones de bridas de tubos y válvulas e instalación de tirafondos.

Ingersoll-Rand no aceptará responsabilidad alguna por la modificación de las herramientas efectuada por el cliente para las aplicaciones que no hayan sido consultadas con Ingersoll-Rand.

⚠ AVISO



**SE ADJUNTA INFORMACIÓN IMPORTANTE DE SEGURIDAD.
LEA ESTE MANUAL ANTES DE USAR LA HERRAMIENTA.**

**ES RESPONSABILIDAD DE LA EMPRESA ASEGURARSE DE QUE EL OPERARIO
ESTÉ AL TANTO DE LA INFORMACIÓN QUE CONTIENE ESTE MANUAL.**

EL HACER CASO OMISO DE LOS AVISOS SIGUIENTES PODRÍA OCASIONAR LESIONES.

PARA PONER LA HERRAMIENTA EN SERVICIO

- Utilice, examine y mantenga siempre esta herramienta conforme al código de seguridad para herramientas neumáticas portátiles de la American National Standards Institute (ANSI B186.1).
- Para seguridad, máximo rendimiento y vida de servicio de las piezas, use esta herramienta a una presión de aire máxima de 90 psig (6,2 bar/620 kPa) en la manguera de suministro de aire con diámetro interno de 19 mm.
- Corte siempre el suministro de aire y desconecte la manguera de suministro de aire antes de instalar, desmontar o ajustar cualquier accesorio de esta herramienta, o antes de realizar cualquier operación de mantenimiento de la misma.
- No utilice mangueras de aire y accesorios dañados, desgastados ni deteriorados.
- Asegúrese de que todas las mangueras y accesorios sean del tamaño correcto y estén bien apretados. Vea Esq. TPD905-1 para un típico arreglo de tuberías.
- Use siempre aire limpio y seco a una presión máxima de 90 psig. El polvo, los gases corrosivos y/o el exceso de humedad podrían estropear el motor de una herramienta neumática.
- No lubrique las herramientas con líquidos inflamables o volátiles tales como queroseno, gasoil o combustible para motores a reacción.
- No saque ninguna etiqueta. Sustituya toda etiqueta dañada.

USO DE LA HERRAMIENTA

- Use siempre protección ocular cuando maneje, o realice operaciones de mantenimiento en esta herramienta.

- Use siempre protección para los oídos cuando maneje esta herramienta.
- Mantenga las manos, la ropa suelta y el cabello largo alejados del extremo giratorio de la herramienta.
- Note la posición de la palanca de inversión antes de hacer funcionar la herramienta para ser consciente de su dirección giratoria cuando funcione el estrangulador.
- Anticipe y esté alerta sobre los cambios repentinos en el movimiento durante la puesta en marcha y el manejo de toda herramienta motorizada.
- Mantenga una postura de cuerpo equilibrada y firme. No estire demasiado los brazos al manejar la herramienta. Pueden ocurrir reacciones de alto par a, o a menos de, la recomendada presión de aire.
- El eje de la herramienta podría seguir girando brevemente después de haber soltado la palanca de estrangulación.
- Las herramientas neumáticas pueden vibrar durante el uso. La vibración, repetición o posiciones incómodas pueden dañarle los brazos y manos. En caso de incomodidad, sensación de hormigueo o dolor, deje de usar la herramienta. Consulte a un médico antes de volver a usarla otra vez.
- Utilice únicamente los accesorios Ingersoll-Rand recomendados.
- Utilice únicamente bocas y accesorios para llaves de impacto. No utilice bocas o accesorios manuales (cromados).
- Las llaves de impacto no son llaves de par. Las uniones que requieran pares específicos deberán ser comprobadas con un torsiómetro después de haberlas fijado con una llave de impacto.

NOTA

El uso de piezas de recambio que no sean las auténticas piezas Ingersoll-Rand podría poner en peligro la seguridad, reducir el rendimiento de la herramienta y aumentar los cuidados de mantenimiento necesarios, así como invalidar toda garantía.

Las reparaciones sólo serán realizadas por personal cualificado y autorizado. Consulte con el centro de servicio Ingersoll-Rand autorizado más próximo.

Toda comunicación se deberá dirigir a la oficina o al distribuidor Ingersoll-Rand más próximo.

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PROFESSIONAL TOOLS

ETIQUETAS DE AVISO

⚠ AVISO

EL HACER CASO OMISO DE LOS AVISOS SIGUIENTES PODRÍA OCASIONAR LESIONES.


	<p>⚠ ADVERTENCIA</p> <p>Usar siempre protección ocular al manejar o realizar operaciones de mantenimiento en esta herramienta.</p>
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	<p>⚠ ADVERTENCIA</p> <p>Usar siempre protección para los oídos al manejar esta herramienta.</p>
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	<p>⚠ ADVERTENCIA</p> <p>Cortar siempre el suministro de aire y desconectar la manguera de suministro de aire antes de instalar, retirar o ajustar cualquier accesorio de esta herramienta, o antes de realizar cualquier operación de mantenimiento de la misma.</p>
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	<p>⚠ ADVERTENCIA</p> <p>Las herramientas neumáticas pueden vibrar durante el uso. La vibración, los movimientos repetitivos o las posiciones incómodas podrían dañarle los brazos y las manos. En caso de incomodidad, sensación de hormigueo o dolor, dejar de usar la herramienta. Consultar al médico antes de volver a utilizarla.</p>
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	<p>⚠ ADVERTENCIA</p> <p>No coger la herramienta por la manguera para levantarla.</p>
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	<p>⚠ ADVERTENCIA</p> <p>No utilizar mangueras de aire y accesorios dañados, desgastados ni deteriorados.</p>
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	<p>⚠ ADVERTENCIA</p> <p>Mantener una postura del cuerpo equilibrada y firme. No estirar demasiado los brazos al manejar la herramienta.</p>
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	<p>⚠ ADVERTENCIA</p> <p>Manejar la herramienta a una presión de aire máxima de 90 psig (6,2 bar/620 kPa).</p>
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AJUSTES

COLOCACION DE REGULADOR DE POTENCIA

⚠ AVISO

Las llaves de impacto no son llaves de par. Las fijaciones de específico requerimiento de par deberán ser comprobadas con un torsiómetro adecuado después de su fijación con una llave de impacto.

Las Llaves de Impacto Modelos 2934P2/2940P2 están equipadas con una válvula reguladora/invertidora de potencia combinada diseñada para proporcionar ajuste de potencia mientras se mantiene potencia completa en la dirección inversa. Puesto que la dirección inversa se utiliza fundamentalmente para aflojar fijadores roscados a la derecha y para ello se requiere potencia completa, no se han tomado medidas para ajuste de potencia en esta dirección. La potencia se calibra con los números del 1" al 5" estampados en el Conjunto de Tapa de Carcasa.

NOTA

Los números del 1 al 5 que hay en la carcasa son sólo para referencia y NO indican una potencia específica. Uno designa la potencia menor mientras que cinco denota la mayor.

Ajuste de potencia en dirección hacia delante

1. Mientras está de cara a la parte trasera de la Llave de Impacto, empuje la Palanca de Inversión completamente hacia la derecha.
2. Con un destornillador, gire el Regulador de Potencia de forma que la ranura se alinee con la calibración de potencia deseada.
3. La potencia de la herramienta está ahora ajustada para la dirección hacia delante pero tendrá potencia completa en la dirección inversa. Este ajuste no cambiará, independientemente de las veces se mueva la Palanca de Inversión, siempre que no se cambie la selección de potencia.

PARA PONER LA HERRAMIENTA EN SERVICIO

LUBRICACIÓN



Ingersoll-Rand N° 50



Ingersoll-Rand N° 100

Utilice siempre un lubricador de aire comprimido con estas herramientas. Recomendamos la siguiente unidad de Filtro-Lubricador-Regulador:

USA- N°. C31-06-G00

Para Modelo 2934P2

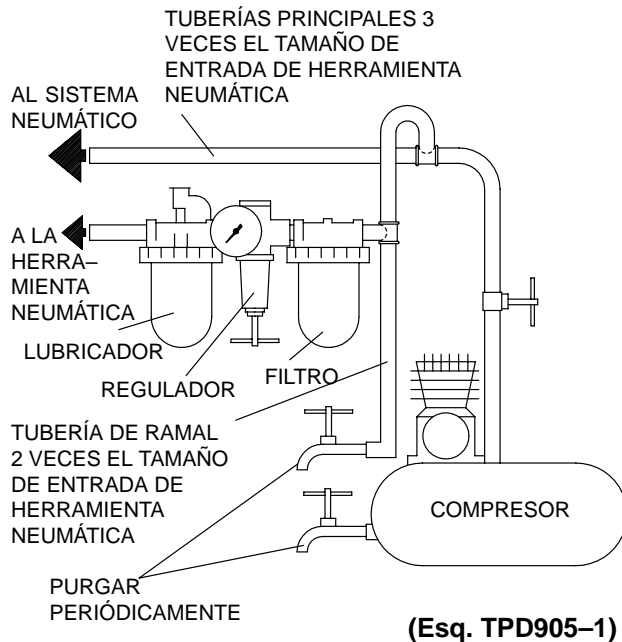
Antes de usar la Herramienta y después de cada ocho horas de uso, a menos que se use un lubricante de línea de aire, desenrosque el Tapón de Cámara de Aceite y llene dicha cámara de Aceite Ingersoll-Rand N° 50.

Después de cada cuarenta y ocho horas de uso, o como indique la experiencia, inyecte unos 3 cc de Grasa Ingersoll-Rand N° 100 en el Engrasador (aproximadamente 14 disparos de Pistola Engrasadora N° R000A2-228).

Para Modelo 2940P2

Antes de poner la herramienta en marcha y después de cada dos o tres horas de uso, a menos que se haya puesto lubricante de línea de aire comprimido, desconecte la manguera de aire e inyecte unos 3 cc de Aceite Ingersoll-Rand N° 50 en la admisión de aire.

Después de cada veinte horas de uso, o como indique la experiencia, inyecte unos 6 cc de Grasa Ingersoll-Rand N° 100 en el Engrasador (aproximadamente 14 disparos de Pistola Engrasadora N° R000A2-228).



ESPECIFICACIONES

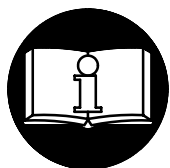
Modelo	Tipo de Empuñadura	Accionamiento	Impactos por minuto
		pulg.	
2934P2	pistola	1" cuadradillo	825
2940P2	pistola	1" cuadradillo	810

MANUAL DE FUNCIONAMENTO E MANUTENÇÃO PARA FERRAMENTAS PNEUMÁTICAS DE IMPACTO PARA TRABALHOS SUPER MODELOS 2934P2 E 2940P2

AVISO

As Ferramentas de Impacto Séries 2934P2 e 2940P2 são concebidas para uso em fabricas de estruturas, manutenção de maquinaria, manutenção de ferrovias, aplicações de flanges de tubos e válvulas e instalação de parafusos de madeira.

A Ingersoll–Rand não é responsável por modificações, feitas pelo cliente em ferramentas, nas quais a Ingersoll–Rand não tenha sido consultada.



⚠️ ADVERTÊNCIA

**INFORMAÇÃO DE SEGURANÇA IMPORTANTE EM ANEXO
LEIA ESTE MANUAL ANTES DE OPERAR A FERRAMENTA.
É DA RESPONSABILIDADE DO EMPREGADOR COLOCAR
A INFORMAÇÃO DESTE MANUAL NAS MÃOS DO OPERADOR.**

O NÃO CUMPRIMENTO DAS SEGUINTE ADVERTÊNCIAS PODE RESULTAR EM FERIMENTOS.

COLOCANDO A FERRAMENTA EM FUNCIONAMENTO

- Sempre opere, inspeccione e mantenha esta ferramenta de acordo com o Código de Segurança do Instituto Americano de Padrões Nacionais para Ferramentas Pneumáticas Portáteis (ANSI B186.1).
- Para segurança, máximo desempenho e máxima durabilidade das peças, opere esta ferramenta com uma pressão de ar máxima de 6,2 bar/620 kPa (90 psig) na entrada da mangueira de alimentação de ar com diâmetro interno de 19 mm (3/4”).
- Desligue sempre a alimentação de ar e desconecte a mangueira de alimentação de ar antes de instalar, remover ou ajustar qualquer acessório nesta ferramenta, ou antes de executar qualquer serviço de manutenção nesta ferramenta.
- Não use mangueiras de ar ou adaptadores danificados, gastos ou deteriorados.
- Certifique-se de que todas as mangueiras e adaptadores sejam do tamanho correcto e estejam apertados com firmeza. Veja o Desenho TPD905–1 para um arranjo típico de tubagem.
- Use sempre ar seco e limpo com pressão máxima de 6,2 bar/620 kPa (90 psig). Pó, fumos corrosivos e/ou humidade excessiva podem arruinar o motor de uma ferramenta pneumática.
- Não lubrifique as ferramentas com líquidos inflamáveis ou voláteis tais como querosene, diesel ou combustível de jactos.
- Não remova nenhum rótulo. Reponha qualquer rótulo danificado.

USANDO A FERRAMENTA

- Use sempre óculos de protecção quando estiver operando ou executando serviço de manutenção nesta ferramenta.

- Use sempre protecção contra ruído ao operar esta ferramenta.
- Mantenha as mãos, partes do vestuário soltas e cabelos compridos afastados da extremidade em rotação.
- Observe qual é a posição da alavanca que reverte o sentido de rotação antes de operar esta ferramenta de modo a estar atento ao sentido de rotação quando operar o regulador de pressão.
- Antecipe e esteja alerta a mudanças repentinas no movimento quando ligar e operar qualquer ferramenta motorizada.
- Mantenha a posição do corpo equilibrada e firme. Não exagere quando operar esta ferramenta. Torques de reacção elevados podem ocorrer na ou abaixo da pressão de ar recomendada.
- O eixo da ferramenta pode continuar a girar brevemente após a pressão tenha sido aliviada.
- Ferramentas accionadas pneumáticamente podem vibrar em uso. Vibração, movimentos repetitivos ou posições desconfortáveis podem ser prejudiciais às mãos e aos braços. Pare de usar a ferramenta caso ocorra algum desconforto, sensação de formigueiro ou dor. Procure assistência médica antes de retornar ao trabalho.
- Use acessórios recomendados pela Ingersoll–Rand.
- Use somente soquetes e acessórios de impacto. Não use soquetes ou acessórios de mão (cromo).
- Ferramentas Pneumáticas de impacto não são chaves dinamométricas de torque. As conexões que requerem um torque específico devem ser verificadas com um torquímetro depois de adaptadas a uma chave dinamométrica de impacto.
- Esta Ferramenta não foi concebida para trabalhos em atmosferas explosivas.
- Esta Ferramenta não está isolada contra choques eléctricos.

AVISO

O uso de peças de substituição que não sejam genuinamente da Ingersoll–Rand podem resultar em riscos de segurança, diminuição do desempenho da ferramenta, aumento da necessidade de manutenção e pode invalidar todas as garantias. As reparações devem ser feitas somente por pessoal treinado autorizado. Consulte o Centro de Serviços da Ingersoll–Rand mais próximo.

Envie Todos os Comunicados Para o Distribuidor ou Escritório da Ingersoll–Rand Mais Próximo.

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PROFESSIONAL TOOLS

IDENTIFICAÇÃO DO RÓTULO DE ADVERTÊNCIA


⚠️ ADVERTÊNCIA


O NÃO CUMPRIMENTO DAS SEGUINTE ADVERTÊNCIAS PODE RESULTAR EM FERIMENTO.


	⚠️ ADVERTÊNCIA Use sempre óculos de protecção quando estiver operando ou executando algum serviço de manutenção nesta ferramenta.
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	⚠️ ADVERTÊNCIA Use sempre protecção contra o ruído ao operar esta ferramenta.
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	⚠️ ADVERTÊNCIA Desligue sempre a alimentação de ar e desconecte a mangueira de alimentação de ar antes de instalar, remover ou ajustar qualquer acessório nesta ferramenta, ou antes de executar algum serviço de manutenção nesta ferramenta.
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	⚠️ ADVERTÊNCIA Ferramentas accionadas pneumáticamente podem vibrar em uso. Vibração, movimentos repetitivos ou posições desconfortáveis podem ser prejudiciais às mãos e aos braços. Pare de usar a ferramenta caso ocorra algum desconforto, sensação de formigamento ou dor. Procure assistência médica antes de retornar ao trabalho.
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	⚠️ ADVERTÊNCIA Não carregue a ferramenta segurando na mangueira.
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	⚠️ ADVERTÊNCIA Não use mangueiras de ar ou adaptadores danificados, gastos ou deteriorados.
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	⚠️ ADVERTÊNCIA Mantenha a posição do corpo equilibrada e firme. Não exagere quando operar esta ferramenta. Torques de reacção elevados podem ocorrer sob a pressão de ar recomendada.
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	⚠️ ADVERTÊNCIA Opere com pressão do ar Máxima de 90–100 psig (6,2–6,9 bar).
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AJUSTES

AJUSTANDO O REGULADOR DE POTÊNCIA

⚠️ ADVERTÊNCIA

As Ferramentas pneumáticas de impacto não são aparelhos de controlo de binário. Apertos com requisitos de torque específicos devem ser verificados com aparelhos de medição de torque adequados depois da instalação, com uma chave dinamométrica.

As Ferramentas de Impacto Modelos 2934P2/2940P2 são equipadas com uma combinação de válvulas de reversão/reguladora de potência projectadas para fornecer ajuste de potência enquanto se mantém a potência máxima no sentido inverso. Já que o sentido inverso é usado primariamente para afrouxar apertos à direita e a potência máxima é necessária, nenhuma posição é feita para ajuste de potência neste sentido. A saída de potência é calibrada pelos números “1” a “5” impressos no Corpo da Máquina.

AVISO

Os números de 0 a 5 no corpo da máquina são somente uma referência e NÃO indicam uma potência de saída específica. Zero (0) não designa a potência mais baixa enquanto quatro (5) não denota a mais alta.

Ajuste de Potência no Sentido Frontal

1. De frente para a traseira da Ferramenta de Impacto, empurre a Alavanca de Reversão para a posição, na extrema direita.
2. Usando uma chave de fendas, gire o Regulador de Potência de modo a que o orifício fique alinhado com o calibre de potência desejada.
3. A potência da ferramenta está ajustada agora para o sentido frontal, mas terá potência ainda para trás. Este ajuste não mudará, não importando o número de vezes que se mude para o sentido traseiro desde que não se altere a seleção de potência.

COLOCANDO A FERRAMENTA EM FUNCIONAMENTO

LUBRIFICAÇÃO



Ingersoll-Rand No. 50



Ingersoll-Rand No. 100

Use sempre um lubrificador de ar de linha com estas ferramentas. Nós recomendamos a seguinte Unidade Filtro-Lubrificador-Regulador:

USA – C31-06-G00

Para o Model 2934P2

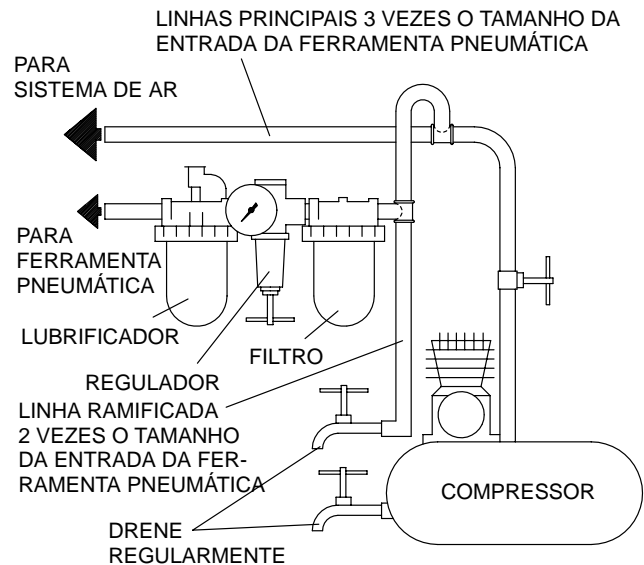
Antes de operar a Ferramenta e depois de oito horas de operação, ao menos que esteja usando um lubrificador de ar de linha, remova o Bujão da Câmara de Óleo e preencha a câmara com Óleo Ingersoll-Rand No. 50.

Depois de cada quarenta e oito horas de operação, ou como indicar a experiência, injecte 3 cc de Massa Lubrificadora Ingersoll-Rand No. 100 (aproximadamente 14 medidas do Canhão da Massa de Lubrificação No. R000A2-228) no Adaptador.

Para o Model 2940P2

Antes de operar a Ferramenta e depois de oito horas de operação, ao menos que esteja usando um lubrificador de ar de linha, injecte aproximadamente 3cc de Óleo Ingersoll-Rand No. 50 na entrada de ar.

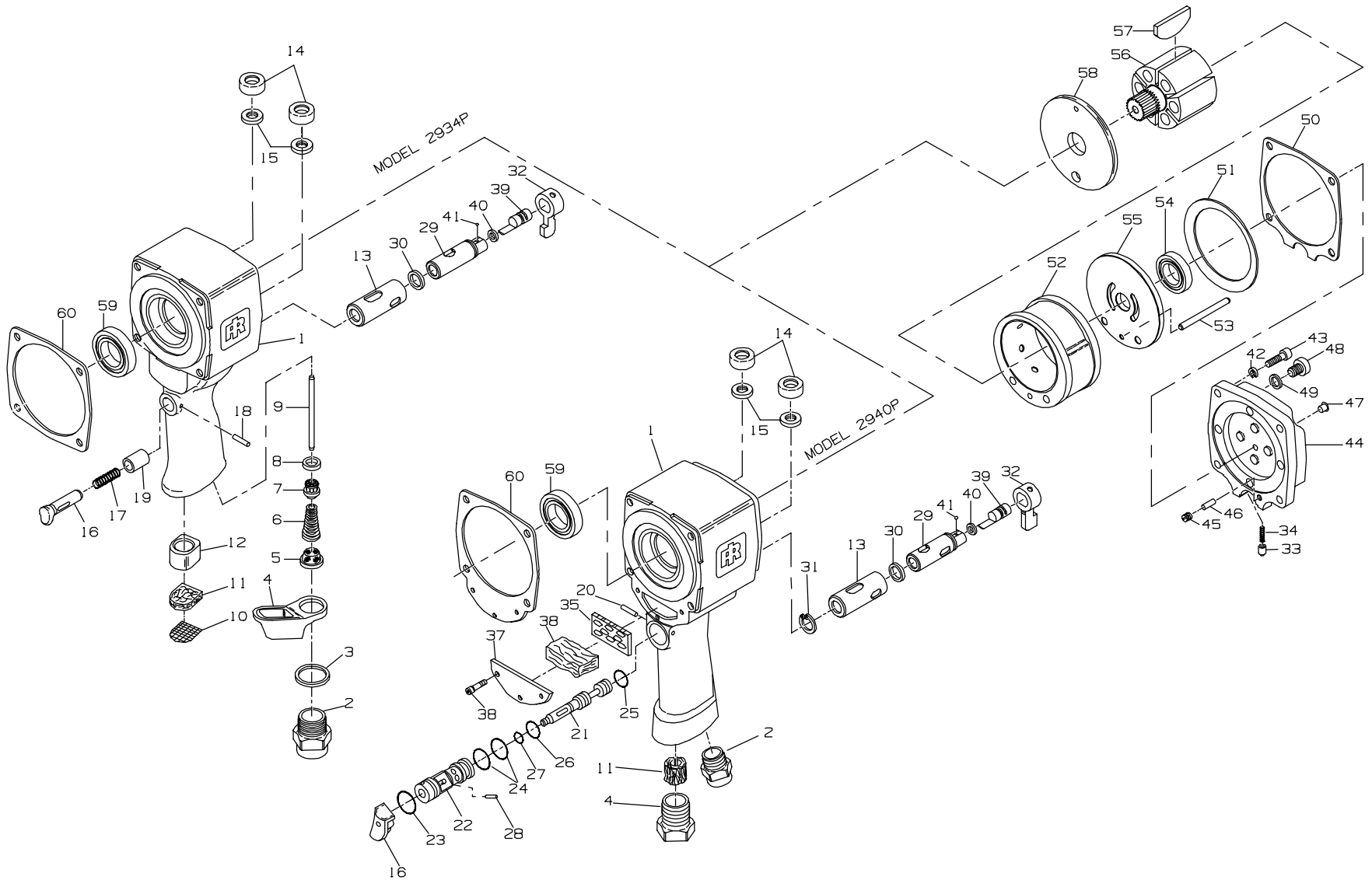
Depois de vinte e quatro horas de operação, ou como indicar a experiência, injecte 6 cc de Massa Lubrificadora Ingersoll-Rand No. 100 (aproximadamente 14 medidas do Canhão da Massa Lubrificadora No. R000A2-228) no Adaptador.



(Desenho TPD905-1)

ESPECIFICAÇÕES

Modelo	Tipo de Punho	Encabadouro Quadrado pol.	Impactos por min.
2934P2	pistola	1	825
2940P2	pistola	1	810





PART NUMBER FOR ORDERING



PART NUMBER FOR ORDERING



1	Motor Housing Assembly	2934P-A40A	2940P-A40	◆	21	Throttle Valve Assembly	—	293-A302
2	Inlet Bushing	2934P-465	2940P-A565		22	Throttle Valve Bushing		
3	Washer	2934P-788	—			Assembly	—	293-A503
4	Exhaust Deflector	2934P-123	2940P-23	◆•	23	Throttle Valve Bushing		
◆•	5 Air Strainer Screen	434-61	—			O-Ring (Large)	—	AD100-18
◆	6 Throttle Valve Spring	834-51	—	◆•	24	Throttle Valve Bushing		
7	Throttle Valve	2934P-50	—			O-Ring (Small) (2)	—	AFH120A-358
◆•	8 Throttle Valve Face	2934-159	—	◆•	25	Throttle Valve Face		
9	Throttle Valve Plunger	2934P-302	—			O-Ring	—	PS3-67
10	Exhaust Screen	2934P-310	—	•	26	Throttle Valve O-Ring	—	293-134
◆	11 Exhaust Silencer	2934P-311	2940P-311	•	27	Throttle Valve Stem		
12	Exhaust Deflector Seal	2934P-789	—			O-Ring	—	293-669
13	Reverse Valve Bushing	2934P-330S	2940P-330S	◆•	28	Trigger Retaining Pin	—	AF120-322
◆•	14 Air Port Gasket (2)	R44H-210A	R44H-210A		29	Reverse Valve Assembly	2934P-A329	2940P-A329
◆•	15 Gasket Retainer (2)	2940-200	2940-200	◆•	30	Reverse Valve Seal	85H-167	85H-167
16	Trigger	2934P-93	5RA-93		31	Reverse Valve Stop	—	RXA21-343
◆	17 Trigger Spring	2934P-51	—		32	Reverse Lever	2934-658A	2934-658A
18	Trigger Retaining Pin	R1AF-524	—	◆	33	Reverse Lock Plunger	4U-663B	4U-663B
19	Trigger Bushing	2905-91S	—	◆	34	Reverse Lock Spring	4U-664	4U-664
◆•	20 Throttle Valve Assembly				35	Exhaust Diffuser	—	2940P-123
	Retaining Pin	—	2940P-757	◆	36	Exhaust Silencer	—	2940P-311

- ◆ Indicates Tune-up Kit part.
- To keep downtime to a minimum, it is desirable to have on hand certain repair parts. We recommend that you stock one (pair or set) of each part indicated by a bullet (•) for every four tools in service.

PART NUMBER FOR ORDERING

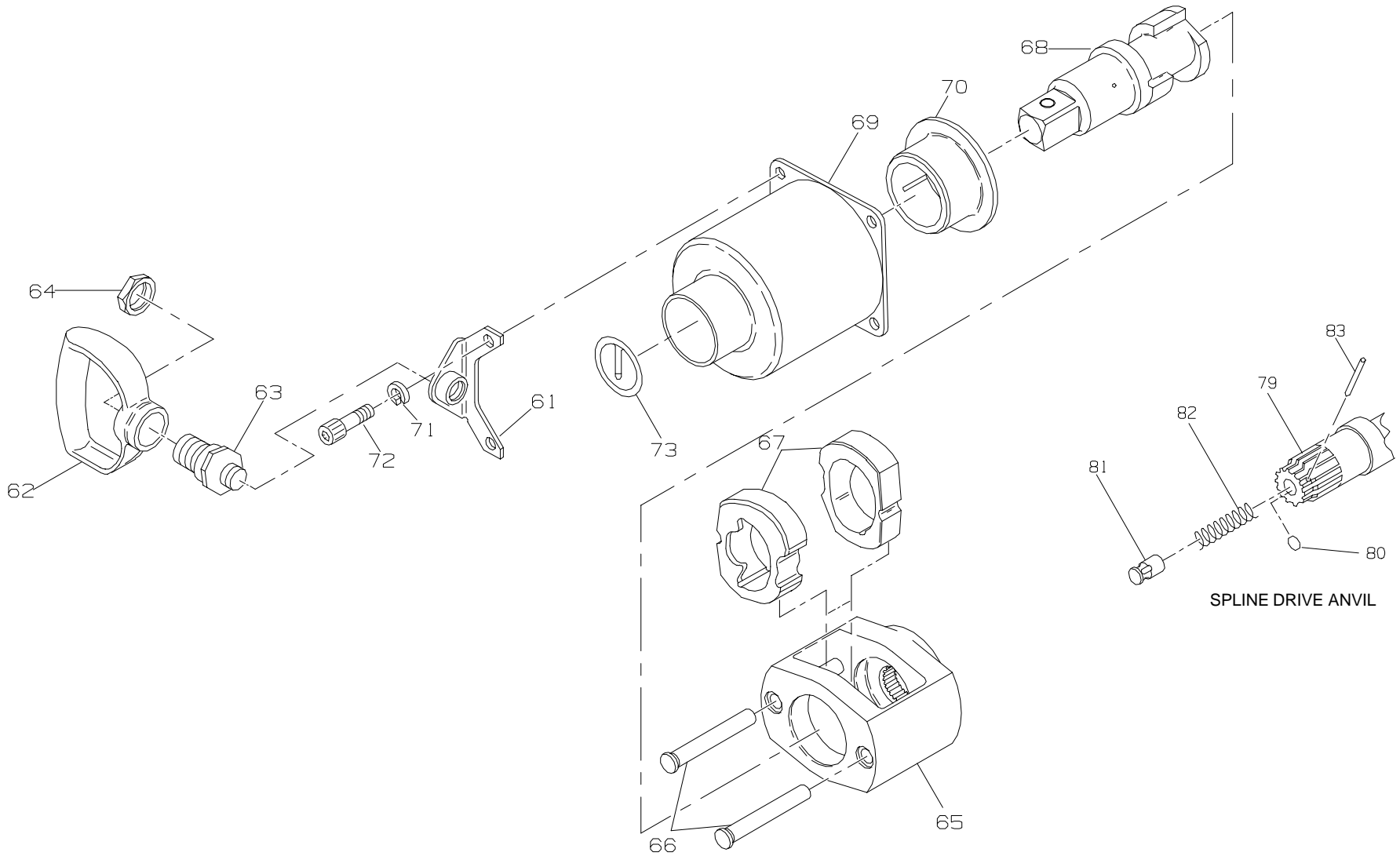


PART NUMBER FOR ORDERING



37	Silencer Cover	—	2940P-240	◆• 50	Housing Cover Gasket	2934-283	2934-283
38	Silencer Cover Screws (3)	—	401-638	51	Motor Clamp Washer	2934-207	2934-207
39	Power Regulator Assembly	2934P-A249	2940P-A249	52	Cylinder	2934-3	2940-3
◆• 40	Power Regulator Seal	R1A-159	R1A-159	53	Cylinder Dowel	2934-98	2940-98
41	Power Regulator Retaining Ball	AV1-255	AV1-255	◆ 54	Rear Motor Bearing	508-97	508-97
42	Housing Cover Lock Washer (4)	8U-58-10	AV1-255	55	Rear End Plate	2934-12	2934-12
43	Housing Cover Capscrew (4) ...	510-638	510-638	◆• 56	Rotor	2934-53	2940-53
44	Housing Cover Assembly	2934P-A102A	2934P-A102A	◆• 57	Vane Packet (Set of 6 Vanes) ...	2934-42-6	2940-42-6
45	Oiler Adjusting Screw	R2-71	R2-71	58	Front End Plate	2934-11	2934-11
◆• 46	Oiler Felt	R2-75	R2-75	◆ 59	Front Rotor Bearing	810-97	810-97
◆• 47	Grease Fitting	130SR-188	130SR-188	◆• 60	Hammer Case Gasket	2934-36	2940P-36
48	Oil Chamber Plug	R4-227	R4-227				
◆ 49	Oil Chamber Plug Gasket ...	R4-92	R4-92				

- ◆ Indicates Tune-up Kit part.
- To keep downtime to a minimum, it is desirable to have on hand certain repair parts. We recommend that you stock one (pair or set) of each part indicated by a bullet (•) for every four tools in service.





PART NUMBER FOR ORDERING →

PART NUMBER FOR ORDERING →

61	Side Spade Handle Bracket	2934-364	73	Socket Retainer	RR10015S
62	Side Spade Handle	T15-41	79	Spline Drive Anvil Assembly	
63	Side Spade Handle Stud	534-448		for 2934P	2934-A526
64	Side Spade Handle Nut	107-73A		for 2940P	2940-A526
65	Hammer Frame Assembly		80	Socket Retaining Ball	D04-280
	for 2934P	2934-A703	81	Retaining Ball Plunger	845-230
	for 2940P	2940-A703	82	Retaining Plunger Spring	2940-231
• 66	Hammer Pins		83	Plunger Retaining Pin	845-128
	for 2934P	2934-704	*	Dead Handle (for 2940P only)	834-48
	for 2940P	2940-704	*	Horizontal Hanger	2934-366
• 67	Hammers (2)		*	Horizontal Hanger Spacer (2) (required only	
	for 2934P	2934-724		when the 2934-366 Hanger is used in	
	for 2940P	2940-724		conjunction with the No. 2934-364 Side	
68	1" Square Drive Anvil			Spade Handle Bracket)	2934-140
	for 2934P	2934-726	*	Nameplate	
	for 2940P	2940-726		for 2934P	2934P-301
69	Hammer Case Assembly			for 2934P-EU	2934P-EU-301
	for 2934P	2934-A727		for 2940P	2940P-301
	for 2934P-EU	2934P-EU-A727		for 2940P-EU	2940P-EU-301
	for 2940P	2940-A727	*	Nameplate Screws (3)	C32-302
	for 2940P-EU	2940P-EU-A727	*	Exhaust Deflector Kit for 2934P only	
*	Hammer Case Label			(includes illustrated items 2, 3, 4, 10, 11,	
	for 2934P and 2940P	WARNING-2-99		and 12)	2934P-K23
	for 2934P-EU and 2940P-EU	EU-99	*	Tune-up Kit	
70	Hammer Case Bushing	2934-641		for 2934P only (includes	
*	Hammer Case Label	WARNING-2-99		illustrated items 5, 6, 8, 11, 14[2],	
*	Oversize Hammer Case Bushing			17, 30, 33. 34. 40, 46, 50, 54, 57,	
	(for 2940P only)			59 and 60)	2934-TK3
	0.005" oversize	2934-641-5		for 2940P only (includes	
	0.010" oversize	2934-641-10		illustrated items 11, 14 [2], 15 [2],	
	0.015" oversize	2934-641-15		23, 24 [2], 25, 28, 30, 33, 34, 36,	
71	Hammer Case Cap Screw Lock Washer (4)	34U-58		40, 46, 49, 50, 54, 57, 59 and 60)	2940-TK3
72	Hammer Case Cap Screw (4)	834-638			

MAINTENANCE SECTION

* Not illustrated.

• To keep downtime to a minimum, it is desirable to have on hand certain repair parts. We recommend that you stock one (pair or set) of each part indicated by a bullet (•) for every four tools in service.

SETTING THE POWER REGULATOR

Models 2934P/2940P Impacttools are equipped with a combination power regulator/reverse valve designed to provide power adjustment while maintaining full power in the reverse direction. Since the reverse direction is used primarily for loosening right-hand threaded fasteners and full power is required, no provision is made for power adjustment in this direction. The power output is calibrated by the numbers “1” through “5” stamped on the Housing Cover Assembly (44).

NOTICE

The numbers 1 thru 5 on the housing are only for reference and DO NOT denote a specific power output. One (1) designates the lowest power while five (5) denotes the highest.

MAINTENANCE SECTION

⚠ WARNING

Always wear eye protection when operating or performing maintenance on this tool.

Always turn off air supply and disconnect air supply hose before installing, removing or adjusting any accessory on this tool, or before performing any maintenance on this tool.

LUBRICATION

Each time the Models 2934P and 2940P Impacttools are disassembled for maintenance and repair or replacement of parts, lubricate the tool as follows:

1. Work approximately 6 cc of Ingersoll-Rand Grease No. 100 into the impact mechanism. Coat the Anvil (68) lightly with grease around the Hammer Case Bushing (47). Inject approximately 6 cc of grease into the Grease Fitting.
2. Fill the oil reservoir in the handle with Ingersoll-Rand No. 50 Oil. Inject approximately 3 cc of oil into the air inlet before attaching the air hose. Remove the Oil Chamber Plug (48) and fill the oil chamber.

DISASSEMBLY

General Instructions

1. Do not disassemble the tool any further than necessary to replace or repair damaged parts.
2. Whenever grasping a tool or part in a vise, always use leather-covered or copper-covered vise jaws to protect the surface of the part and help prevent distortion. This is particularly true of threaded members and housings.
3. Do not remove any part which is a press fit in or on a subassembly unless the removal of that part is necessary for repairs or replacement.

Power Adjustment in the Forward Direction

1. While facing the back of the Impacttool, push the Reverse Lever (32) to the extreme right position.
2. Using a screwdriver, rotate the Power Regulator (39) so that the slot aligns with the desired power calibration.
3. The power of the 2934P/2940P is now adjusted for the forward direction but will still have full power in the reverse direction. This adjustment will not change regardless of how many times you shift the Reverse Lever as long as you do not change the power selection.

4. Do not disassemble the tool unless you have a complete set of new gaskets and O-rings for replacement.

Disassembly of the Impactool

1. Clamp the handle of the Impactool in a vise with the square drive upward.
2. Unscrew and remove the four Hammer Case Cap Screws (72).
3. While lightly tapping on the end of the Anvil (68 or 79) with a plastic hammer, lift off the Hammer Case Assembly (69).
4. Grasp Hammer Frame (65) and carefully lift off entire impact mechanism, making certain not to drop the two Hammer Pins (66).

Disassembly of the Impact Mechanism

1. Set the mechanism, driver end up, on the workbench.

NOTICE

Note the twin Hammers (67) within the Hammer Frame Assembly (65). These are identical but must be placed in the Hammer Frame Assembly in a certain relationship. Using a felt-tipped pen, mark the top Hammer “T↑” and the bottom Hammer “B↑” with the arrows pointing upward. Mark both hammers on the same end.

2. With the mechanism sitting upright on the workbench, slowly rotate the Anvil (68 or 79) in a clockwise direction until it comes up solid.

NOTICE

If you continue to rotate the Anvil, it will cam the Hammers out of engagement. Do not allow this to happen; merely rotate the Anvil until it comes up solid.

MAINTENANCE SECTION

3. Hold the Hammer Frame firmly and, without disturbing the Hammers, gently lift the Anvil, simultaneously rotating it counterclockwise about 1/8 of a turn, from the Hammer Frame.

NOTICE

The twin Hammers will be free to slide from the Hammer Frame when the Hammer Pins (66) are removed. Do not to drop the Hammers.

4. With the Anvil removed, lift out the two Hammer Pins (66).
5. Remove the twin Hammers.

Disassembly of the Reverse Valve

1. Grasp the Reverse Lever (32) and withdraw the Reverse Valve Assembly (29) from the Reverse Valve Bushing (13).
2. Tap out the Power Regulator Retaining Ball (41) to release the Power Regulator Assembly (39).

Disassembly of the Motor

1. Unscrew the four Housing Cover Cap Screws (43) and remove the Housing Cover Assembly (44), Housing Cover Gasket (50), and Motor Clamp Washer (51).
2. **While holding the Impactool over the workbench,** turn Impactool to bring the square drive upward. This will allow the motor parts to slide out of the Motor Housing Assembly (1). If the motor parts do not slide out freely, gently tap the side of the Motor Housing Assembly with a plastic hammer to jar them loose. Often all of the motor parts except the Front End Plate (58) and Cylinder (52) will slide out easily. Tap the Motor Housing to remove the Front End Plate and Cylinder.
3. Inspect the Vanes (57) for wear. If a Vane is chipped or otherwise damaged, replace the complete set.
4. Check the bore of the Cylinder and the faces of the End Plates for scoring. Replace any scored parts.

Disassembly of the Throttle Mechanism

For Model 2934P

1. Removal of the Inlet Bushing (2) and Washer (3) allows the Exhaust Deflector (4), Air Strainer Screen (5), Throttle Valve Spring (6), Throttle Valve (7), and Throttle Valve Plunger (9) to fall free of the Handle.
2. Remove Exhaust Screen (10), Exhaust Silencer (11), and Exhaust Deflector Seal (12).
3. Use a Hooked Tool to remove the Throttle Valve Face (8) from the Handle.

NOTICE

Trigger is under tension from the Trigger Spring (17) and will fly out unrestrained if Retaining Pin is removed abruptly.

4. With the Impactool turned toward you, and the Trigger (16) secured by an alternate means, use a Pin Punch to drive out the Trigger Retaining Pin (18).
5. Remove Trigger Bushing (19).

For Model 2940P

1. Remove Exhaust Deflector (4) and Silencer (11).
2. Removal of Silencer Cover Screws (38) allows removal of Silencer Cover (37), Exhaust Diffuser (36), and Exhaust Silencer (35).
3. Place the tool on the workbench with the handle pointing toward you and the square drive upward. Use a punch to tap out the Throttle Valve Assembly Retaining Pin (20) from the **right** to the **left** hand side of the handle. Pull upward on the Trigger (27A) to remove the complete Throttle Valve Assembly (21).
4. Punch out the Trigger Retaining Pin (28) from the Throttle Valve Bushing Assembly (22) to separate Throttle Valve Assembly (21) from the Throttle Valve Bushing Assembly.

ASSEMBLY

General Instructions

1. Always press on the **inner** ring of a ball-type bearing when installing the bearing on a shaft.
2. Always press on the **outer** ring of a ball-type bearing when pressing the bearing into a bearing recess.
3. Whenever grasping a tool or part in a vise, always use leather-covered or cooper-covered vise jaws. Take extra care with threaded parts and housing.
4. Always clean every part and wipe every part with a thin film of oil before installation.
5. Apply a film of o-ring lubricant to all O-rings before final assembly.

Assembly of the Throttle Mechanism

For Model 2934P

1. With the Motor Housing Assembly on the workbench and the handle to the left, press in the Trigger Bushing (19) aligning the Trigger Retaining Pin hole in the Bushing with the hole in the Handle.
2. Place the Trigger Spring (17) on the Trigger (16).
3. Push the Trigger/Spring into the Bushing, aligning the slot in the Trigger with the Retaining Pin hole in the handle and the bevel on the Trigger facing down the Handle.
4. Holding the Trigger in the Handle, drive the Trigger Retaining Pin into the hole.
5. Turn the Motor Housing Assembly handle up.
6. Press the Throttle Valve Face (8) into the intake opening in the Handle using a wooden dowel to seat the Valve Face squarely and without damage.
7. Put the Throttle Valve Plunger (9) into the intake opening.

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8. Follow the Plunger with the Throttle Valve (7) spring seat end facing up.
9. Place the Throttle Valve Spring (6), small end first on the Throttle Valve.
10. Place the Air Strainer Screen (5), concave end up on the Spring.
11. Insert Exhaust Deflector Seal (12), Exhaust Silencer (11), and Exhaust Screen (10) in the exhaust port in the Handle.
12. Install the Exhaust Deflector and retain with the Washer (3) and Inlet Bushing (2).
13. Torque Inlet Bushing to 20–25 ft–lb (27–34 Nm).

For Model 2940P

1. Apply O–ring lubricant to the O–rings and place them on the Throttle Valve Bushing (22), large ring on the large diameter grooves, the two smaller rings in the smaller grooves.
2. Insert the Throttle Valve Assembly (21), small end first, into the small diameter of the Throttle Valve Bushing.
3. Align the slot in the Throttle Valve Assembly with the slot in the Throttle Valve Bushing and replace the Trigger Retaining Pin (28). Press on the Trigger (27A).
4. Place the Impactool on the workbench with the handle pointing toward you and the square drive upward. Align the hole in the Throttle Valve Bushing Assembly with the hole in the Housing and drive in the Throttle Valve Assembly Retaining Pin (20) from **left to right**.
5. Place and secure the Exhaust Diffuser (35), Exhaust Silencer (36), and Silencer Cover (37) with the Silencer Cover Screws (38).

Assembly of the Motor

NOTICE

Periodically, as experience indicates and always after disassembly, clean the air strainer screen in the Inlet Bushing (2). Torque the Bushing to 20 to 25 ft–lb (27 to 34 Nm).

Before assembling the Motor, wipe a thin film of oil on the Rotor (56), End Plates (55 and 58), Cylinder (52), and Vanes (57).

1. Slide the Front End Plate (58), bronze face first, over the splined hub of the Rotor (56).
2. Stand the assembled Rotor and End Plate upright, grasping the splined rotor hub with leather–covered or copper–covered vise jaws.
3. Place a Vane (57) in each vane slot in the Rotor.
4. Slide the Cylinder (52) down over the Rotor, aligning the holes in the Cylinder with those in the Front End Plate.

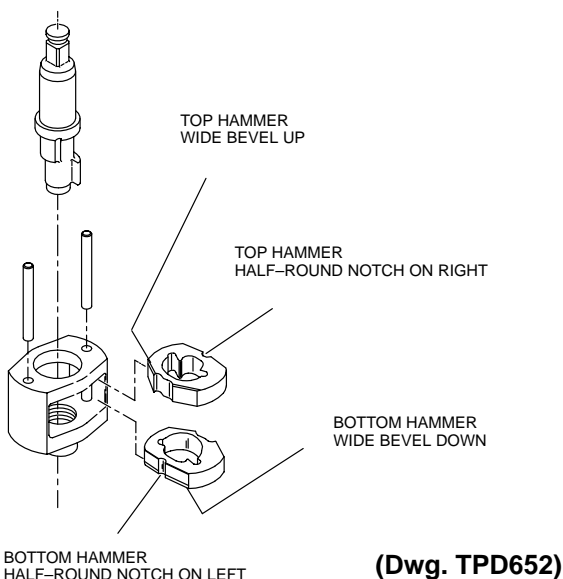
5. Using a sleeve that will contact only the outer ring of the Rear Rotor Bearing (54), press the bearing into the Rear End Plate (55).
6. Using a sleeve that will contact only the inner ring of the Rear Rotor Bearing, press the assembled bearing and end plate onto the short hub of the Rotor.
7. Before installing the Motor Assembly in the Motor Housing (1), be certain that the Air Port Gaskets (14) and Gasket Retainers (15) are in good condition and positioned with large open end down in the recess in the Motor Housing.
8. Using a 3/16" x 8" rod, insert the rod through the Cylinder Dowel Holes in both End Plates and Cylinder. This will hold all the motor parts in alignment. Allow the 3/16" rod to protrude from the Front End Plate far enough to enter the dowel hole at the bottom of the bore of the Motor Housing.
9. Put the rod into the Dowel Hole in the Motor Housing, then slide the assembled Motor into the Housing. Remove the rod and install the Cylinder Dowel (53).
10. Place the Motor Clamp Washer (51) concave side first, over the hub of the Rear End Plate so that the outer rim of the Washer contacts the End Plate.
11. Install the Motor Housing Cover. Tighten the Motor Housing Cover Cap Screws to 14 to 17 ft–lb (19 to 27 Nm).

Assembly of the Reverse Valve

1. Dampen the Reverse Valve Seal (30) and Power Regulator Seal (40) with O–ring lubricant and install the Seals in their respective grooves on the Reverse Valve Assembly (29) and Power Regulator Assembly (39).
2. Slide the Reverse Valve Assembly into the Reverse Valve Bushing (13), large end first, so that the groove on the trailing end of the Valve is upward.
3. Slide the Power Regulator Assembly into the Reverse Valve Assembly, flat end first, and position it so that the groove on the trailing end of the Regulator is aligned with the small hole in the Reverse Valve Assembly.
4. Place the Power Regulator Retaining Ball (41) in the small hole in the Reverse Valve Assembly, making certain that it engages the groove in the Power Regulator Assembly.
5. Aligning the flats on the Reverse Lever (32) with those on the Reverse Valve Assembly, slide the Reverse Lever on the Reverse Valve Assembly so that the tang on the lever is pointing downward parallel with the handle. Place the Housing Cover Gasket (50) on the Motor Housing.
6. Put the Reverse Lock Spring (34) followed by the Reverse Lock Plunger (33) in the small hole at the bottom of the Housing Cover Assembly (44).

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Assembly of the Impact Mechanism



1. Coat the Hammers (67) with a light film of Ingersoll-Rand Grease No. 100.
2. Replace the Hammers in the Hammer Frame Assembly (65) exactly as they were when you marked them prior to disassembly.

NOTICE

If you are installing new Hammers, or want to change the location of the existing Hammers to utilize both impacting surfaces, slide the Hammers in the Hammer Frame so that the half-round notch on one Hammer is located on one side of the Frame and the half-round notch on the other Hammer is located on the other side of the Frame. Each Hammer is undercut on one side. When properly installed in the Hammer Frame, these undercuts must face each other.

3. Replace Hammer Pins (66).
4. Examine the base of the Anvil (68 or 69) and note its contour. While looking down through the Hammer Frame, swing the top Hammer to its full extreme one way or the other until you can match the contour of the Anvil. Put the Anvil into the Hammer Frame and through the first Hammer. Swing the bottom Hammer in the opposite direction from the top Hammer and maneuver the Anvil slightly until it drops through the bottom Hammer.

Assembly of the Impactool

1. Secure Impactool in vise.
2. Reinstall the Hammer Case Assembly (69).
3. Secure the Hammer Case Assembly with four Hammer Case Cap Screws (72). Tighten to 20–25 ft-lb (27–34 Nm) torque.
4. Remove Impactool from vise.

— CAP SCREW SPECIFICATIONS —

Tighten the Hammer Case Cap Screws to a minimum of 20 ft-lb (27.1 Nm) torque.

Tighten the Housing Cover Cap Screws to a minimum of 10 ft-lb (13.5 Nm) torque.

MAINTENANCE SECTION

TROUBLESHOOTING GUIDE

Trouble	Probable Cause	Solution
Low power	Dirty Inlet Bushing or Air Strainer Screen and/or Exhaust Silencer	Using a clean, suitable, cleaning solution, in a well ventilated area, clean Air Strainer Screen, Inlet Bushing and Exhaust Silencer.
	Worn or broken Vanes	Replace complete set of Vanes.
	Worn or broken Cylinder and/or scored End Plates	Examine Cylinder and replace it if it is worn or broken or if bore is scored or wavy. Replace End Plates if they are scored.
	Dirty motor parts	Disassemble tool and clean all parts with a clean, suitable, cleaning solution, in a well-ventilated area. Reassemble tool as instructed in this manual.
	Improper positioning of Reverse Valve	Make certain the Reverse Valve is fully engaged to the left or right.
Motor will not run	Incorrect assembly of motor	Disassemble motor and replace worn or broken parts and reassemble as instructed.
	Insufficient lubricant in the impact mechanism	Remove Hammer Case Assembly and lubricate impact mechanism.
Tool will not impact	Broken or worn impact mechanism parts	Remove Hammer Case and examine impact mechanism parts. Replace any worn or broken parts.
	Impact mechanism not assembled correctly	Refer to Assembly of the Impact Mechanism .

NOTICE

SAVE THESE INSTRUCTIONS. DO NOT DESTROY.

NOTES